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Hanna J. Cortner

Dennis L. Schweitzer

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INSTITUTIONAL LIMITS TO NATIONAL PUBLIC PLANNING FOR FOREST RESOURCES: THE RESOURCES PLANNING ACT

HANNA J. CORTNER* and DENNIS L. SCHWEITZER**

PLANNING EXPECTATIONS AND RESULTS

During the last 15 years, there has been a strong trend in the United States toward centrally controlled long range planning for publicly owned forest resources. The first legal mandate for such planning at the national level occurred in 1974 with the passage of the Forest and Rangeland Renewable Resources Planning Act (RPA).¹ This act requires that the United States Forest Service make periodic national assessments of the current and expected resource situation on all of the nation's approximately 1.6 billion acres of forest and range lands, and that the agency prepare national plans of work to guide its own management, research, and cooperative activities. The senate report on the act summarized the intent of Congress. Each of the periodic reports that was to be submitted to Congress would include "[a] n analysis of the present situation, of how things came to be as they are, and what the outlook may be as to where the present course will take the nation. Beyond that, it will display the opportunities for the future, and what measures will be required to realize those opportunities."² In addition, there was to be developed a "comprehensive picture of the sum of public and private activities and expectations."³ Given this information, it was presumed that the combination of federal, state, and private sector activities that would take place in the future would best meet the nation's needs for forest resources.

The scope of the Resources Planning Act was further extended in

^{*}Research Associate, Forestry-Watershed and Landscape Architecture Programs, School of Renewable Natural Resources, University of Arizona, Tucson, Arizona.

^{**}Research Forest Economist, USDA Forest Service, Rocky Mountain & Range Experiment Station, Fort Collins, Colorado.

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^{1.} Forest and Rangeland Renewable Resources Planning Act of 1974, Pub. L. No. 93-378, 88 Stat. 476 (codified at 16 U.S.C. §§ 581h, 1601-1610 (1976)), as amended by 1976, Pub. L. No. 94-588, 90 Stat. 2949. This was one result of an evolutionary process that also produced the Budget Control Act and several legislative attempts to introduce national economic planning.

^{2.} S. Rep. No. 686, 93rd Cong., 2nd Sess. 10 (1974).

^{3.} Id. at 11.

1976 by passage of the National Forest Management Act (NFMA).⁴ Technically an amendment to RPA, NFMA requires that the Forest Service also prepare comprehensive plans for each administrative unit in the 187 million acres of the National Forest System.⁵ NFMA and its implementing regulations⁶ are thus designed to link the planning and budget allocations at the forest and regional levels to the national planning, programming, and budgeting activities mandated by RPA.

In terms of geographic area, ecological complexities, and interactions between social and physical systems, the challenge posed by the Resources Planning Act and its sequent act NFMA has no precedent, at least in the western hemisphere. We believe it has no precedent at all in terms of the scale of public involvement and requirements for the full public documentation of rationales, the bases for decisions, and the decision processes themselves. Although other agencies have national planning responsibilities and although there is a long tradition of detailed planning at the project level in the water resources field, in no other instance is there a statutory requirement to plan and carry out a long range multiresource program in the context of national resource and environmental needs.⁷

The type of national public planning for forest resources represented by RPA/NFMA attempts to assure an orderly progression toward objectives derived from a rational and comprehensive assessment of a desired future. That is, in the idealized rational and comprehensive model of the professional planner which is legislatively endorsed by RPA/NFMA, planning is a process in which objective estimates of truth are presented as a basis for decisions about what kind of future resource situation the nation will have so that a series of reasoned actions can then be deliberately taken to assure that the desired change occurs. Implicit in this type of planning are assumptions that it is possible to (1) define the current situation in terms of land capabilities and societal preferences for goods and services; (2) define what the future will be under alternative courses of events; (3) discriminate among those alternative futures in terms of relative desirability; and (4) control events well enough to lead toward a relatively desirable future. These assumptions are most likely to be satisfied under circumstances where (1) a complete and accurate understanding of the present situation exists; (2) the future of concern is short term; (3)

^{4.} National Forest Management Act of 1976, Pub. L. No. 94-588, 90 Stat. 2949 (codified at 16 U.S.C. §§ 581h, 1601-1614. (1976)).

^{5.} Id. § 6, 90 Stat. 2952 (codified at 16 U.S.C. § 1604(c)-(m) (1976)).

^{6. 44} Fed. Reg. 53,983 (1979) (to be codified in 36 C.F.R. § 219).

^{7.} Telephone interview with Prof. Frank J. Convery, School of Forestry, Duke University, Durham, N.C. (May 8, 1980).

the criterion of desirability is obvious and simple to apply; and (4) events can be tightly controlled.

Unfortunately, these circumstances do not characterize public planning for forest resource production and management. Applying a rational, comprehensive model to an uncertain and uncontrollable world creates a situation which can lead to the development of unrealistic plans and the raising of expectations about what planning can actually achieve.

Planning promises (or leads us to expect) better decisions, a more systematic and informed decision process, and the ability to identify and implement comprehensive and integrated solutions to multifaceted, long term national resource problems.⁸ Decisionmaking, and consequently management, will be more rational and efficient, it is argued, because it is future oriented, based on more accurate information, on improved technical and analytical aids for analysis, and on reason and logic rather than emotion and self interest.⁹ Past patterns of piecemeal and fragmented decisionmaking will be replaced with a systematic and integrated approach.

Many of these expectations probably will not be realized. It is likely that decisionmaking still will be characterized by constrained objectiveness and incremental analysis, and that decisionmakers will continue to "muddle through," changing policy direction as new knowledge becomes available and circumstances change.¹⁰ Decisions frequently may be based on factors totally unrelated to the planning analysis.¹¹ Moreover, requirements that all planning include coordination with other governmental units and be responsive to public involvement suggest that "logical" results will be adjusted at each level of planning.¹² Decisionmaking will probably neither be more rational nor easier. It may not even be better.

There are also significant costs potentially associated with national public planning programs for forest resources. Scarce resources-time, tax dollars, expertise-may be wasted if an agency's attention moves away from field operations and toward the generation of voluminous

^{8.} For discussion of the expected benefits of RPA, see S.R. No. 93-686, supra note 2.

^{9.} Roberts, Principles of Land Use Planning, in PLANNING THE USES AND MANAGE-MENT OF LAND 47, 48-49 (M. Beatty, G. Petersen, & L. Swindale eds. 1979).

^{10.} D. BRAYBROOKE & C. LINDBLOM, THE STRATEGY OF DECISION 61-143 (1963); Lindblom, Still Muddling, Not Yet Through, 39 PUB. ADM. REV. 517 (1979).

^{11.} B. ACKERMAN, S CREPMAN, J. SAWYER, & D. HENDERSON, THE UNCER-TAIN SEARCH FOR ENVIRONMENTAL QUALITY 190-207 (1974). See also A. WIL-DAVSKY, SPEAKING TRUTH TO POWER: THE ART AND CRAFT OF POLICY ANAL-YSIS (1979).

^{12.} Culhane & Friesema, Land Use Planning for the Public Lands, 19 NAT. RES. J. 43, 72-73 (1979).

planning documents and stacks of computer printouts with little value to anyone.¹³ The low morale such fruitless planning efforts create can spread throughout an agency and affect the conduct of other agency programs. Faulty planning may also skew planning results and lead to choices that may be far from socially optimal in the long run, or that may harm the very forest resources planning was intended to protect.¹⁴ Unnecessary and nonproductive political controversy may also be generated, especially since any failure to achieve planned objectives and output targets has a tendency to become *ipso facto* evidence of inadequate forest planning and management.¹⁵

In the remainder of this paper, we examine why national public forest planning is likely to encounter difficulties in living up to frequently expressed expectations. While any planning for forest resources must deal with numerous technical difficulties, we are only incidentally concerned with traditional technical problems such as those related to inventory and analysis. Our focus is on the particular institutional factors inherent in national public forest planning that influence agency perceptions of, and responses to, the charge to conduct national public planning. We hope to alert planners to possible pitfalls and contribute to the development of a more realistic understanding of what can be expected from public planning.

While we purposely focus only on the problems of planning, our intent is not to negate the value of planning. We believe that the true advantages of any planning endeavor can only be captured if we cast aside false hopes and begin to acknowledge and understand the limitations imposed by the institutional context in which such planning occurs. Moreover, we do not suggest that there is anything abnormal or wicked about the way the planning agency, the Forest Service, deals with its specific RPA planning mandates, for any agency charged with such a complex planning task would find itself faced with similar problems.

Since there are very few instances where we have specific empirical or experiential evidence that defines what the Forest Service will do or has done in regard to its RPA planning charge, our approach is to first define the specific planning situation of the Forest Service and then to see what the general literature on administrative behavior and planning has to say about what is likely to happen in generally similar

^{13.} S. Fairfax, RPA and the Forest Service (Spring 1980) (unpublished paper prepared for the Conservation Foundation's Institutes on RPA, Washington, D.C.).

^{14.} See generally A. WILDAVSKY, supra note 11.

^{15.} Notwithstanding legal and political attempts to link improved public forest resource planning to improved forest management, there is no empirical evidence that a cause-effect relationship exists.

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situations. Accordingly, we first briefly review the general tasks required to complete the RPA planning process. We then discuss the kinds of factors that are likely to hinder the development of an adequate basis for preparing such plans. We categorize these factors as (1) those inherent in the bureaucratic and political context in which national public forest planning takes place; and (2) those arising from the shared perceptions and traditions of the foresters who largely comprise agency planning teams.

THE RPA PLANNING PROCESS

Each of the periodic national assessments of RPA is supposed to provide a picture of the present and prospective situation regarding all of the nation's forest and range resources. Specifically required are definitions of national needs, the prospective ability to meet those needs, and actions that could be taken to better meet those needs. Within this context, a set of national goals and a national program of work for the Forest Service are to be defined. Plans for administrative regions and individual forests are to be subsequently formed by weaving together the national goals and program with local needs and preferences.

The major specific steps in the national public planning process are (1) defining national goals or directions for forest and range resources; (2) defining alternative Forest Service programs of management on the national forests, programs of research, and programs to assist other forestry sectors; (3) selecting and implementing a single plan for each Forest Service program area; and (4) monitoring the results of implementation and, when appropriate, beginning a new planning cycle. The entire process is iterative and continuous. Information concerning resource production capabilities and specific decisions is continuously exchanged among hierarchical levels, and analyses and decisions are continuously made at each level.¹⁶ The planning steps at each level are conceptually the same; they differ primarily in respect to the level of detail and geographic specificity.

Defining National Goals and Directions

Planning requires the ability to decide what kind of future is most desirable so that the necessary steps can be taken to get there. Making the decisions on where the nation should go requires defining the consequences of alternatives in a credible manner and reaching agreement

^{16.} This implies that there will never be a simultaneous solution to planning at all levels; there will always be a sequencing "problem."

among the often conflicting desires of a variety of interest groups. In part, this process was institutionalized through implementation of the National Environmental Policy Act (NEPA)¹⁷ and by requirements for extensive public involvement in decisionmaking.

Defining Alternative Forest Service Programs¹⁸

This step first requires representing the real world by an abstract set of data which can be manipulated so that inferences can be drawn about the nation's ability to produce goods and services from forest lands. Based on current understanding of existing constraints on potential production activities, such as those imposed by minimum resource protection standards, alternative sets of production possibilities are defined. Either one set of assumptions about the future is made and then alternatives generated to correspond to that set, or several sets of assumptions about alternative futures and plan alternatives for each set are developed.¹⁹ Whatever approach is used, current legal requirements specify that a wide range of fully feasible alternatives be included, each promising a different mix of goods and services.²⁰

Intertwined with these largely technical tasks is the politicalphilosophical task of defining the appropriate role of the national public sector. Given a particular national goal, what should be the Forest Service's responsibility, as contrasted with the responsibilities of other public sectors and the private sector? In the United States, the appropriate level of public intervention in the market place is a particularly thorny issue.

Implementing a Forest Service Program

Each alternative is evaluated by an imposing array of biological, economic, social, and environmental criteria to estimate its implica-

^{17. 42} U.S.C. §§ 4321, 4331-4335, 4341-4347 (1976).

^{18.} Up to now, only the programs of the Forest Service have been directly tied to the national assessments of the nation's current and future forest situation. It seems likely that the action programs of other national public agencies affecting those resources eventually will be linked to those assessments.

^{19.} There are problems with either approach. Planning for electrical energy, for example, used to extrapolate present consumption patterns into the future. To assure that customer demand increased sufficiently to utilize the increased supply capability, heavy investments were made in advertising and in reduced prices for heavy usage. The energy crisis of the mid-1970s brought these planning methods increasingly into question and they were eventually defined as part of the energy problem. It is not unimaginable that similar forecasting by projection for forest resources could lead to a similar result. Building alternative futures, however, presents no fewer problems. In addition to problems we discuss later, there are technical limitations on the number of variables that can be included in any future scenario before it becomes unmanageable.

^{20. 44} Fed. Reg. 53,987 (1979) (to be codified in 36 C.F.R. § 219.5(f)).

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tions. Extensive technical and public reviews form the basis for revisions, selection, and implementation. While the image of dusty plans on unreachable shelves is all too familiar, the act intends Forest Service plans to fit neatly into the budgeting and decisionmaking structure of the agency. Indeed, each plan is a decision document; it is ultimately the manager's product and can be viewed as his or her contract with the agency as well as the agency's contract with the public.

Monitoring and Replanning

At the level of the individual forest, continuous monitoring of results is used to ensure that minimum standards are not being violated and that plan implementation is proceeding as intended. Whenever significant problems arise, adjustments are made or replanning is initiated.²¹ While replanning is expensive, it provides opportunities to rectify errors of implementation and to adjust planning for changing values and improved technical information. By law, RPA plans are updated every five years.

While monitoring can point up specific problems and replanning can correct them, neither activity can provide a satisfactory basis for judging the feasibility of a particular plan. Because most objectives are to be reached many years in the future, they will frequently be modified in subsequent planning cycles. Therefore, it is seldom possible to judge a plan by whether or not its objectives are, in fact, ever met.² Instead, the realism or success of a plan must be judged on the basis of whether credible progress toward those goals is being made.

Having completed our brief review of the planning process, our discussion now turns to the institutional factors which impose limitations on the planning process. We begin by examining limitations inherent in the bureaucratic context in which planning occurs. We then focus on limitations which can arise from the nature of the shared perceptions and traditions of foresters in the planning agency.

^{21.} This process gives rise to the argument that the accuracy of long range planning is not critical, for errors will be periodically corrected; that is, the propriety of expenditures might not be particularly sensitive to such plans. Verification of this assertion would require determining the wastage of expenditures and incurred opportunity costs in both public and private sectors due to faulty planning projections and assumptions. There could also be a loss of credibility of the planning process and of the planning agency.

^{22.} In the absence of accomplishments by which to evaluate planning, the usual way of justifying formal planning is to shift the discussion to the beneficial effects of the processes through which planning is done. Subjective judgments of process and effort replace empirical measures of products. Moreover, because objectives are changed as basic information and circumstances change, it becomes increasingly difficult to distinguish planning from the processes of *ad hoc* decisionmaking it was supposed to supplant. See Wildavsky, If Planning is Everything, Maybe It's Nothing, 4 POL'Y SCI. 127 (1973).

THE BUREAUCRATIC CONTEXT OF NATIONAL PUBLIC FOREST RESOURCE PLANNING

The behavior of any public bureaucracy is influenced not only by the formal rules, laws, and regulations which constitute its basic mission, but also by the internal goals and informal rules the organization has established to secure its own institutional survival, maintain its political hegemony, and protect its organizational autonomy. A first and fundamental source of such bureaucratic survival is an agency's ability to attract and maintain outside political support.²³ The organizational equilibrium each agency develops over time by balancing the demands of its support groups with its own internal needs provides important opportunities for the bureaucratic entrepreneur and at the same time imposes significant constraints. Planning cannot escape becoming enmeshed in the push and pull of the larger bureaucratic environment within which it must operate. The imperatives of organizational behavior in the context of national political and bureaucratic processes constrain the number and nature of the assumptions and alternatives that are included in the planning analysis, and affect how the agency views the process and results of planning.

Limits on Planning Assumptions

No agency can serve everyone or provide benefits equally to everyone. Rather, each agency serves its own set of clientele, and its programs are of greater benefit to those groups and individuals than to others. Because substantial social and individual costs may be imposed upon those who are not program beneficiaries, agencies are hard put to make a candid public accounting of the costs and benefits of their programs to different segments of society. Politically, they must act as if what is done and proposed has a generalizable net public benefit, just as interest groups must couch their demands in terms of "the public interest."²⁴ Open and frank discussions of the external social and political factors most likely to affect the agency's ability to implement proposed plans and programs may alienate agency support

^{23.} F. ROURKE, BUREAUCRACY, POLITICS AND PUBLIC POLICY 1, 11 (1969).

^{24.} Friesema & Culhane, Social Impacts, Politics and the Environmental Impact Statement Process, 16 NAT. RES. J. 339, 348 (1976). Helen Ingram and Joyotpaul Chaudhuri put the matter bluntly: "The tendency in natural resources policy is to gloss over injustices and to minimize adverse effects-or to pretend that these things do not exist... natural resources policy-makers have been blind to the indirect implications of their acts and, therefore, have often been insensitive and inhumane." H. Ingram & J. Chaudhuri, The Concept of Equity and Its Expression in Natural Resources Policy (unpublished paper, Department of Political Science, University of Arizona). As the authors note, this tendency is reflected in the reliance upon efficiency analyses and the near neglect of equity analyses.

groups as well as mobilize critics. To avoid generating new controversies, or further aggravating old controversies, such factors seldom appear in the planning analysis. The very fact that planning is a public process, that is, open, is sufficient to guarantee that its content will differ dramatically from what would be possible in a private, confidential plan.²⁵

Because planning by a public agency will also be taken as the posture of the national administration, it may not be possible for the agency to consider seriously the possibility of certain future situations.²⁶ For example, although possible changes in legal institutions, reversals in international relations, or failures of current employment or monetary policies all may significantly change public demands and preferences in regard to resource allocations and use, a full airing of the implications might be far too sensitive to discuss publicly. It is thus not surprising that most assumptions about future conditions are positive and growth oriented.

Moreover, any program of work that would lead-even in the distant future-to a significant change in the balance of resource outputs would create immediate political confrontations among various resource advocates. Typically, a carefully cultivated set of constituencyagency-congressional committee relationships surround agency programs.² ⁷ Modifications which threaten to disturb those relationships or the vital stake each participant has in its favored program are likely to be strongly resisted. Hence to avoid political turmoil, agencies project the future as stable and manageable, and present the case that continuation of ongoing activities will ensure or increase the desirability of the future.²⁸

The dollars spent by the federal government in the United States on forestry matters amount to less than one-half of one percent of the total federal budget, or a small percent of the federal discretionary budget. As a consequence, the planning agency has little leverage onindeed, may not command enough resources or political leverage to be fully aware of-current and prospective programs intended to in-

28. It has been postulated that in addition to seeking to maximize budgets, multi-product public agencies such as the Forest Service over invest in projects having distant payouts and seek to supply an ever widening variety of services desired by separate clienteles. See W. NISKANEN, BUREAUCRACY AND REPRESENTATIVE GOVERNMENT 106-12 (1971).

^{25.} Scott, National Economics Planning, in BUSINESS DISCLOSURE: GOVERN-MENT'S NEED TO KNOW 212, 218 (H. Goldschmid ed. 1979).

^{26.} Id. at 220-22.

^{27.} Theodore Lowi terms these relationships self-governing triangular units because the relationships form a system that has a vigorous capacity to maintain itself and to isolate its decisionmaking autonomy from outside scrutiny. See T. LOWI, THE END OF LIBERAL-ISM 74-75 (1979). See also Lowi, How the Farmers Get What They Want, 11 THE RE-PORTER 34 (1954).

fluence other significant sectors of the economy. When this factor is added to the usual array of technical problems, planning assumptions about the efficacy of future agency programs become especially tenuous. When they deal with the future of international trade in forest products or center upon the likely responses of nonforestry sectors to the traditional listing of possible forest centered public programs, they approach sheer speculation. The inability to anticipate or control a host of exogenous variables outside the agency's own bureaucratic policy system means arbitrary boundaries must be placed on the factors included in the planning analysis.

Limits on Planning Alternatives

Agencies are also reluctant to discuss program alternatives that fall outside their jurisdictional boundaries. While NEPA and the Council on Environmental Quality's regulations for the preparation of environmental impact statements require agencies to include in their plans and analyses a wide range of alternatives, including a "no-action" alternative,²⁹ any agency is reluctant to give serious consideration to alternatives having little relationship to its own goals and programs.³⁰ As a competitor with other agencies for scarce budget dollars, an agency also may be loath to propose solutions to issues which would benefit a sister agency at its own expense. Even if most of the feasible alternatives fall within the agency's general areas of expertise and responsibility, traditional solutions are still likely to remain favored solutions.³¹ Current program budgets gain political support because of agency ability to convince others that its traditional programs fully justify public expenditures.³² Changes in direction would bring previous justifications into doubt and lose hard won credibility and clientele.33

Because a no-action or even a status-quo alternative could mean foregoing an increase in budget or giving up a portion of current budget and political support, an agency is particularly reluctant to give full consideration to such an alternative. It is much more appealing to

^{29.} Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act 40 C.F.R. § 1500 (1978), at § 1502-14. 30. Hill & Ortolano, NEPA's Effect on the Consideration of Alternatives: A Crucial Test,

¹⁸ NAT. RES. J. 285, 296 (1978).

^{31.} Id. at 309.

^{32.} See generally A. WILDAVSKY, THE POLITICS OF THE BUDGETARY PROCESS (2d ed. 1974).

^{33.} In a political sense, continuing public agencies do not treat their past expenditures as sunk costs that are irrelevant when considering future expenditures. Instead those past expenditures are discounted, with their influence shrinking with the passage of time, individual bureaucrats, and political administrations.

redefine no-action so it is compatible with agency goals and objectives. For purposes of land management planning, the Forest Service, for example, defines no-action as "the condition expected to exist in the future if current management direction would continue unchanged."^{3 4} The current (generally expanding) trend is the basis for evaluating alternatives.

Plan alternatives do not challenge current programs, but rather rationalize current agency enterprises and reflect upward shifts in program levels and expenditures.³⁵ Unless restrained by efforts of the administration to match proposed agency program levels with projected total federal budget priorities, the selected alternative (the plan or program) may call for activities that will never be funded. At a minimum, the administration will then find itself in the politically costly position of having to refute annually the plans of one of its component agencies.³⁶

It is also difficult for planning to shift program priorities within an agency. Over time, each unit of an agency develops its own internal goals and objectives and its own political constituency.³⁷ Because all units seek to protect their present roles in the organization and to build expanding roles in influencing the future, planning becomes a vehicle to "sell" staff programs and to obtain additional visibility and influence within the organization. Significant reductions in any traditional area of emphasis can be achieved only at a substantial internal cost to the agency.

Tension Between Planning and Management

National public planning asks agencies to monitor and evaluate objectively their programs without regard to current agency commitments to specific policies and organizations.³⁸ But programmatic agencies exist largely to implement programs. To question the very underpinnings of an agency's *raison d'etre* strikes at the heart of its survival as an institution. There is thus an inherent tension built into agencies which have mandates both to do long range planning and to carry out basic program missions.

Organizations historically have dealt with the tension between planning and management by treating planning as a distinct and separate

35. See generally J. NIENABER & A. WILDAVSKY, THE BUDGETING AND EVALUA-TION OF FEDERAL RECREATION PROGRAMS, OR, MONEY DOESN'T GROW ON TREES (1973).

38. A. WILDAVSKY, supra note 11, at 213.

^{34. 44} Fed. Reg. 53,987 (1979) (to be codified at 36 C.F.R. § 219.5(f)(1)(ii).

^{36.} See generally Gremillion, McKenney & Pyburn, Program Planning in the National Forest System, 40 PUB. ADM. REV. 226 (1980).

^{37.} See generally A. DOWNS, INSIDE BUREAUCRACY (1976).

activity to be completed quickly and put on the shelf so that agency staff groups can "get back to business." Often a separate "planning team" is created, isolated from other functional staff units, and set off in a corner to do "its work." While we believe the Forest Service is trying with some success to avoid this trap, it remains to be seen whether organizational structures can be devised to integrate planning with on-the-ground decisionmaking.

While RPA/NFMA planning dictates that Forest Service managers play a larger role in the planning process—because plans will now be legally binding management documents—their participation may well place limits on the scope and direction of both analyses and proposed program changes. It is, in the first instance, difficult for managers to be self-evaluating and to look critically and objectively at the programs for which they will be held accountable. Hence, objectiveness may be constrained. Even if managers could evaluate their own programs and activities objectively, bureaucratic needs for stability would limit the managers' ability to adopt any major changes in direction.³⁹ As Aaron Wildavsky has pointed out, the analyst's responsibility to speak truth to the power of line officers is not easy.⁴⁰

Short Term Political Horizons

While a long term perspective is indeed required to manage forest resources that may take decades to produce, our political process encourages elected decisionmakers to focus on short term problems and to favor solutions with immediate payoffs and delayed expenditures. Opting for long term solutions which may not show quick results or which may impose hardships in the short term requires too enormous a political risk. To be politically feasible, future benefits must be heavily discounted compared to current benefits.⁴¹ Yet, as we know, what is feasible in the short run may have detrimental effects in the long run,⁴² an especially disturbing fact when attempting to plan

^{39.} See generally A. DOWNS, supra note 37; H. KAUFMAN, THE LIMITS OF ORGA-NIZATIONAL CHANGE (1971). For a case study of exceptions to these generalizations, see D. MAZMANIAN & J. NIENABER, CAN ORGANIZATIONS CHANGE? ENVIRON-MENTAL PROTECTION, CITIZEN PARTICIPATION AND THE CORPS OF ENGINEERS (1979).

^{40.} A. WILDAVSKY, supra note 11, at 321.

^{41.} D. ERVIN, J. FITCH, R. GODWIN, W. SHEPARD & H. STOEVENER, LAND USE CONTROL: EVALUATING ECONOMIC AND POLITICAL EFFECTS 59 (1977). As Niskanen illustrates, continuing agencies try to invest in the future in order to assure continuity. See W. NISKANEN, supra note 28, at 106-112. Politicians, because of relatively short tenures, want quick payoffs.

^{42.} See generally Forrester, Counterintuitive Behavior of Social Systems, 2 THEORY & DECISION 109 (1971).

management practices whose benefits may not be captured for many decades.

An additional peculiarity of public forest resource planning in the United States is that the legally mandated planning schedule is not synchronized with the timing of presidential elections. National plans must be completed every five years while Presidents are elected (and political operatives are appointed) at four-year intervals. Consider: the 1980 RPA plan was produced in the last year of a presidential term; the 1985 plan is due as a new presidential term begins; and the 1990 plan is due half-way through a presidential term. While no one is certain what this will mean in practice, it is likely that some plan alternatives will be judged infeasible at the last minute (in spite of the continuing influence of permanent civil service staff), as "feasibility" is redefined to be consistent with election year practicalities. The moment of truth for any plan occurs annually in the budgeting process. and no administration wants to be locked into long term plans that were politically negotiated by others. Administrations want flexibility to respond to real but changed needs. They also want flexibility to shift commitments, or trade program budgets for political support.43

If it is to be implemented, planning must be politically pragmatic and consider the short term political horizons of those who ultimately will determine budget priorities. But pragmatism in the short term promises to limit the ability of planning to serve as a sound basis for the development of programs that will resolve long term problems. At best, it seems clear that political efficacy will limit the analytical integrity of national public planning for forest resources.

SHARED PROFESSIONAL PERCEPTIONS AND TRADITIONS OF PUBLIC FORESTERS

The imperatives of organizational maintenance interacting with factors in the external political environment explain many agency responses to new policy initiatives. But while bureaucracies do, in a sense, take on lives of their own that are separate from the actions of individuals within the organizations, the perspectives and professional norms shared by agency employees can by no means be overlooked. They become intertwined in the basic organizational fabric of an agency, helping to define and explain its role, differentiating it from other bureaucratic agencies and private organizations, and accounting

^{43.} A. WILDAVSKY, supra note 32, at 189.

for its behavior when confronted with new directives and program responsibilities.

Because most public foresters, who are responsible for long range planning in agencies such as the Forest Service, share a similar formal education, belong to the same professional societies, and share a common legacy of information and analytical techniques, many of their perceptions are similar. These shared perspectives, with a long and rich tradition, have been identified as principal strengths of the Forest Service as an organization.⁴⁴ At the same time these perspectives contribute to building a rather insular bureaucracy, and limit agency flexibility to respond to new conditions and to accept innovation.⁴⁵ Long range forest planning with its emphasis on issues and public involvement calls for changes in the perspective of foresters of the manner in which public forest resources are to be managed. These changes must be accompanied by significant shifts or reversals in organizational behavior. To the extent such changes are not achieved, the traditional orientations and professional characteristics of public foresters can also be expected to limit the achievement of planning in the short term.

The Supply Focus

Any intensive planning process requires large quantities of data. When a charge to do such planning is given to any agency such as the Forest Service, which has concentrated on supplying goods and services for many years, it is natural that attention would be focused on data regarding the current and potential supplies of resources.

The Resources Planning Act and the National Forest Management Act, however, are distinctly anthropocentric or demand centered. The RPA requires comparing potential demands with potential supplies as the rationale or context for formulating national programs of work. Similarly NFMA requires that plans for individual forests be issue oriented and that alternatives be designed to resolve issues of current concern. In brief, demands, rather than supplies, are to drive planning. Yet foresters have a stronger tradition of being concerned with the supply side of the supply-demand balance equation.⁴⁶

^{44.} See generally H. KAUFMAN, THE FOREST RANGER: A STUDY IN ADMINISTRATIVE BEHAVIOR (1967).

^{45.} Id. See also G. ROBINSON, THE FOREST SERVICE: A STUDY IN PUBLIC LAND MANAGEMENT 259-65 (1975).

^{46.} It is philosophically and economically debatable, of course, whether public agencies should attempt to satisfy all demands. Should the national forests, for example, be used to meet the nation's demand for gasoline and fuel wood through more intensive wood use for

The agency's traditional focus on physical supplies of resources has led to developing inventory techniques from the ground up-that is, the typical starting point is to define what resources are available. But when demands change, the questions change, requiring different kinds of data. Relying on traditional approaches to inventories or focusing first on trying to capture the holy grail of "answer-everything" data, instead of on the development of analytical models specifically oriented to demand questions, can lead to problems. Traditional forest inventory techniques, for example, are unable to provide critical information about mobile resources, such as water and wildlife.^{4 7}

To the extent that what is being demanded is incorrectly specified, estimates of supply capabilities will be wrong. A serious limitation is introduced by failures to recognize that the desires of people frequently can be satisfied in a variety of ways. Information that some number of people hunt deer in some location is not an adequate basis for defining substitute species or experiences or locations that might serve the hunters as well. Similarly, gathering firewood may well be a substitute for recreational experiences. Given increasing pressures on all resources, the ability of the agency to identify equivalent substitutes becomes increasingly important; failures lead to overly restricted estimates of supply capabilities and, perhaps, to a less-than-optimal allocation of scarce resources to production.⁴⁸

For public foresters whose professional roots can be traced to a Germanic tradition in which present conditions of the forest coupled with an understanding of biological processes and the availability of budgets defined what should be done, the philosophical and socioeconomic nuances of supply-demand assessments present a new and alien set of questions. To the extent these are not adequately addressed, it will be extremely difficult to develop satisfactory rationales for national programs of work.⁴⁹

energy, or should the diminishing supplies and accelerating costs of oil based energy be relied upon to induce conservation as an alternative national response to the energy crisis? In a slightly different vein, to what extent should these national resources be used to alleviate unemployment problems in the Pacific Northwest?

^{47.} See generally Hirsch, Krohn, Schweitzer & Thomas, Trends and Needs in Federal Inventories of Wildlife Habitat, 44 TRANS. NO. AM. WILDLIFE & NAT. RESOURCES CONF. 340 (1979).

^{48.} This issue has been addressed elsewhere both by M. H. Krieger, very generally, and by John Hendee and Rabel Burdge in terms of outdoor recreation. See Hendee & Burge, The Substitutability Concept: Implications for Recreation Research and Management, 6 JOUR. LEISURE RESEARCH 157 (1974); Krieger, What's Wrong with Plastic Trees? 179 SCIENCE 446 (1973).

^{49.} See generally Behan, Political Popularity and Conceptual Nonsense: The Strange Case of Sustained Yield Forestry, 8 ENVT'L LAW 309 (1978).

Planning as a Technical, Objective Enterprise

A long history of concentrating on physical resources is probably responsible for the widely shared belief that inventory and data manipulation activities are objective, value free processes, dependent only upon sound forestry practices. They are not, of course. Supplydemand estimates are not only reflections of objective, measurable phenomena, but also of the socio-political context in which the forest resource manager operates and of his or her professional and personal value structure.⁵⁰ Both explicit and implicit choices are made about the data and information to be collected. Further choices are made in choosing the analytical methodologies that will be used to manipulate and display the data.

Moreover, whenever constraints to protect sensitive resource conditions are placed on the formulation of alternatives, values enter in. Both laws (e.g., protect water quality) and administrative fiats (e.g., do not cut timber along highways) are translated into prohibitions against possible management practices. But because adequate empirical data seldom exist to support such technical translations, collective judgments are made by interdisciplinary teams and rules of thumb are defined. These are subject to the vagaries of any decision-by-committee, including that of being dependent upon the relative power of individual team members. Excessive prohibitions or safety margins may lead to underestimates of the potential ability to produce nonprotected resources and result in significant opportunity costs. Too few prohibitions may lead to plans that cannot be implemented and objectives that cannot be reached.

To evaluate the tradeoffs among alternative packages of goods and services, professional foresters must assign values to nonmarket resources. Considering the functional specialization among most forestry professionals, it is not surprising that many act as advocates and insist on relatively high values for their particular resources. The lack of a strong empirical basis for establishing such values not infrequently leads to relying on intuition or trying to use as high a value as others will permit—or at least not vocally contest.⁵¹

The entire process of developing and evaluating alternatives com-

^{50.} See generally M. LEE, POLITICS AND PLANNING: A NATIONAL STUDY OF AMERICAN PLANNERS (1979); Mitroff, The Myth of Objectivity or Why Science Needs a New Psychology of Science, 18 J. MANAGEMENT SCI. B-163 (1972).

^{51.} Given the legal mandate to work in cooperation with a host of functional agencies and interest groups, establishing acceptable values is extremely difficult. Marion Clawson notes a similar tendency among those who benefit from the production of non-market resources to exaggerate those benefits. See Clawson, The Concept of Multiple Use Forestry, 8 ENVT'L LAW 281, 296 (1978).

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bines formal technical rules and informal, professional value structures.^{5 2} Given the agency's diminishing ability to satisfy all forest users and the ease of access to federal courts to challenge the basis of professional criteria and standards, sooner or later many of those values will have to be defended. To the extent they cannot be defended, the analytical heart and the credibility of planning can be destroyed.

Decisionmaking as Localized and Decentralized

A strong tradition within the Forest Service speaks to the paramount role of local interests and concerns in forestry. Secretary of Agriculture James Wilson addressed this issue at the establishment of the Forest Service in 1905. He wrote to Gifford Pinchot, Chief of the Forest Service: "In the management of each reserve local questions will be decided upon local grounds.... General principles... can be successfully applied only when the administration of each reserve is left largely in the hands of local officers, under the eye of thoroughly trained and competent supervisors."^{5 3} To achieve this goal, a decentralized administrative structure with considerable decisionmaking discretion lodged at the field level was established.

The trend in the past few years, however, has generally been toward centralized control. National planning and program budgeting are just two of these centralizing forces.⁵⁴ Yet, despite the intrinsic centralizing tendencies of RPA/NFMA planning and current direction to the contrary, many foresters still reaffirm the dogma of decentralization by perceiving planning as largely a bottom-up activity. National supply capabilities are perceived as aggregated upwards and national plans are viewed as largely the sum of individual forest plans. But to the extent that local plans or locally balanced alternatives could be relied upon to define national supply capabilities, local rather than national criteria would drive the planning process. Under these circumstances. national planning becomes a reporting process rather than a decision process. While some argue that forest planning decisions should or must still be made locally, such an approach conflicts with a central premise of national planning: wherever possible, resources will be efficiently used to meet national goals because the utilization of

^{52.} Anderson, The Place of Principles in Policy Analysis, 73 AM. POL. SCI. REV. 711, 714 (1978).

^{53.} H. KAUFMAN, supra note 44, at 84.

^{54.} S. Fairfax, supra note 13. On the centralization implicit in rational planning, see Scott, supra note 25. On the centralization bias of program budgeting, which is a central feature of RPA and NFMA planning, see Wildavsky, The Political Economy of Efficiency: Cost-Benefit Analysis, Systems Analysis, and Program Budgeting, in POLITICAL SCIENCE AND PUBLIC POLICY 55 (A. Ranney ed. 1968).

nationally owned resources will be subject to decisionmaking by elected representatives of all citizens in Washington.⁵⁵

Forestry as Nonpolitical

The new long range planning process defined by RPA/NFMA is explicitly a political process. Requirements for interagency and intergovernmental coordination to determine shares of responsibility, and for public involvement to ensure that societal demands and preferences are considered, assure that political influence will enter the planning and decision processes. National programs and forest plans will reflect the bargains struck among contending groups during each step of the planning process. They will also reflect the planner's ability to deal not only with technical questions of supply-demand and land conditions, but also with value laden questions of who benefits and who pays. To deal with the political nuances of long range public resources planning, political competence as well as technical competence is required.

Political comptence requires knowing the principal political actors, their beliefs, values, motivations, the intensity with which they hold their preferences, the resources they have available to press their demands in the political arena, and possible areas of policy conflict and consensus. Plan alternatives must be examined to determine how they affect local values and customs, the prerogatives and jurisdictions of other governmental units, and the legal and nonlegal relations between political actors salient to the agency's political survival.^{5 6} The ability to achieve pragmatic compromises among divergent views is critical.^{5 7} Political feasibility must be a central decision criterion. More than just developing technically correct methods of collecting and displaying socioeconomic and political information is required—although that too is important. Learning how to utilize such information in a

^{55.} Efficiency would suggest taking advantage of the comparative advantages of forests in the production of nationally significant resources; this route would permit a greater total production than is possible when the production of each forest must be balanced among all uses. In contrast, "[w] hen efficiency leads to a loss of adaptability, and information leads to illusions of certainty, and centralization leads to both of these, we have a magnificent design for extinction." Boulding, *Reflections on Planning: The Value of Uncertainty*, 77 TECH. REV. 8, 8 (1974).

^{56.} The analytical and practical political skills needed to assess the political-institutional impacts of alternative policy proposals are discussed in Huitt, *Political Feasibility*, in POLI-TICAL SCIENCE AND PUBLIC POLICY 26 (A. Ranney ed. 1968); Majone, *Political Feasibility*, in POLICY STUDIES REV. ANNUAL 80 (S. Nagel ed. (1977); and Meltsner, *Political Feasibility and Policy Analysis*, 32 PUB. ADM. REV. 859 (1972).

^{57.} Behan, Para-politics and Natural Resources Administration, Or, What to Do While Waiting for the Sierra Club to Arrive (April 27, 1972) (unpublished paper presented to the USDA Forest Service Conference on Organizational Improvement, Boise, ID.).

politically sophisticated manner and relating the nature of politics to everyday planning and management is essential. For most public foresters, this way of proceeding requires a new orientation and perspective.

Most foresters are trained in and are comfortable with the language and methods of the physical-biological sciences. But few are familiar and comfortable with the language and methodologies of the social sciences and of politics. Problems are often defined in technical terms when in fact they are political problems requiring political solutions. Indeed, being political is frequently regarded as inherently distasteful or in conflict with agency perceptions of professionalism.^{5 8} The agency prides itself on its political independence and on the fact that it has always been headed by up-through-the-ranks professional resource managers whose tenures (11 chiefs in 75 years) have transcended the frequent rotations of the political appointees who head most other agencies. The agency has effectively used its apolitical posture to gain considerable technical credibility and political clout and to build a strong professional *esprit de corps*.

Achieving a new awareness of, and sensitivity to, political factors and securing the requisite political skills cannot be expected to occur without significant organizational costs. Yet if the old attitudes and perceptions persist, the agency will be unable to reap fully the political benefits of planning or avoid its political pitfalls. Moreover, lack of these political skills can increase the likelihood that control of the planning process will slip from the agency. Planning results, as measured in terms of programs and budgets, could become overly responsive to special interests and actors better attuned to the exigencies of the political arena.

SUMMARY AND CONCLUSIONS

Any effective national public planning process requires that an assessment be made of current land conditions and public preferences, that a range of futures be projected, that a decision be made regarding which direction the nation should take, and that it is possible to influence events to move in that direction. Planning for forest resources encounters obstacles in all these tasks. In addition to a host of technical problems, major institutional factors impose significant constraints. These institutional constraints emanate both from the bureaucratic context in which planning operates and from the perceptions and traditions shared by public foresters in the planning agency.

^{58.} Id.; S. Fairfax, supra note 13.

We have been concerned with these potential problems in this paper both because they can lead to unrealistic or less-than-optimal plans and because those interested in such planning might expect more than can be delivered.

Few of the problems associated with the bureaucratic context can be resolved by the planning agency. They are inherent in the warp and woof of the political system of the United States. This system is not amenable to strong centralized control. Planning does not follow a totally satisfying rational model, in part, because it takes place within the context of a broader, institutional framework that does not follow such a model.

Perhaps the most important point is that public planning is not a neutral, objective process. It is, instead, a highly politicized process. As such, it is likely to be used by various groups to negotiate important concessions from the agency, and by the agency to promote and expand its program base. While the legislatively mandated, rationalcomprehensive model of the professional planner assumes full objectivity and at least admits the possibility of large scale change, the characteristics of the combined planning-management agency constrain objectiveness and limit change to marginal and incremental deviations from the current program base. If not explicitly recognized, the lack of a fit between the theoretical model and the type of RPA plan that is realistically possible to present to the public can lead to a distrust of all planning. Then the goals of public national planning for forest resources will remain elusive and its accomplishments ephemeral.