

DOCUMENT RESUME

00173 - [A0751398]

How to Improve U.S. Forest Service Reports on Forest Resources. PAD-77-29; B-125053. February 23, 1977. Released March 7, 1977. 15 pp. + appendix (2 pp.).

Report to Sen. Herman E. Talmadge, Chairman, Senate Committee on Agriculture and Forestry; by Elmer B. Staats, Comptroller General.

Issue Area: Land Use Planning and Control (2300); Land Use Planning and Control: Utilization of the Public Lands Resource (2304); Materials: Federal Role as a Proprietor of Raw Materials Resources on Public Lands (1802).

Contact: Program Analysis Div.

Budget Function: Agriculture (350); Agriculture: Agricultural Research and Services (352); Natural Resources, Environment, and Energy: Conservation and Land Management (302).

Organization Concerned: Department of Agriculture; Forest Service.

Congressional Relevance: Senate Committee on Agriculture and Forestry.

Authority: Forest and Rangeland Renewable Resources Planning Act (P. L. 93-378).

The Forest Services Renewable Resource Assessment is designed to inventory renewable forest and range resources and to analyze the supply and demand for them. The Renewable Resource Program is designed for management of these resources. Findings/Conclusions: The 1975 Assessment and Program documents were hard to read; the writing style was verbose, and statistics were not documented. Major issues were not discussed separately from the systems format. The major analytical issue in the Assessment was the quality of the forecasts. The Assessment and Program presented the results of some type of economic analysis, but they contained few regional disaggregations for information presentation, supply and demand projections, or analysis. Greater analysis of issues involving the relationship between the public and private sector is needed. Recommendations: Improvements in the Assessment should involve: better estimates of the value of recreation, better analysis of the value of Forest Service programs to the public, analysis of effects of public policy on the private timber industry, and analysis of why proposed expenditures are necessary. (RRS)

00173

...to the General
...approval



*REPORT OF THE
COMPTROLLER GENERAL
OF THE UNITED STATES*

How To Improve
U.S. Forest Service Reports
On Forest Resources

In 1975, the U.S. Forest Service issued the first in a series of documents--The Renewable Resources Assessment and The Renewable Resources Program. These analyzed the supply and demand for forest ranges and recommended a program of forest management and development. The first set of documents was sent to the Congress, and a second set is being prepared.

The organization and analysis of these documents could be improved to make them more effective.



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-125053

The Honorable Herman E. Talmadge, Chairman
Committee on Agriculture, Nutrition,
and Forestry
United States Senate

Dear Mr. Chairman:

We have reviewed the U.S. Forest Service's "Renewable Resource Assessment and Program." This report contains our observations on the reports issued by the Forest Service in 1976 and our recommendations for improving the next series of these reports. As you requested, we have not asked for written comments from the Forest Service.

This report contains recommendations to the Secretary of Agriculture, which are set forth on pages 7 and 15. As you know, Section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We will be in contact with your office in the near future to arrange for the release of the report to meet the requirements of Section 236.

Sincerely yours,

A handwritten signature in cursive script, reading "Thomas H. Starks".

Comptroller General
of the United States

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ABBREVIATIONS

GAO	General Accounting Office
RPA	Forest and Rangeland Renewable Resources Planning Act

COMPTROLLER GENERAL'S
REPORT TO THE
SENATE COMMITTEE ON
AGRICULTURE, NUTRITION,
AND FORESTRY

HOW TO IMPROVE
U.S. FOREST SERVICE REPORTS
ON FOREST RESOURCES

D I G E S T

How can the next Renewable Resource Assessment and Renewable Resource Program documents be improved? This report will help the Congress and others answer this question by suggesting ways to improve organization, presentation, and analysis of the Assessment and the Program.

The Resources Planning Act of 1974 requires the Secretary of Agriculture to provide two documents: a Renewable Resource Assessment (to inventory renewable forest and range resources and to analyze the supply and demand for them) and a long-range Program for management of these resources. The first versions of these documents were produced early in 1976, and they must be updated--the Assessment in 1979 and the Program in 1980.

ORGANIZATION AND PRESENTATION

Both the Assessment and Program contain much extraneous detail that interferes with the ability of the documents to communicate facts and ideas. The reports are organized according to "systems" (timber, range, outdoor recreation and wilderness, etc.), and five alternative goals are considered for each system. Each goal calls for a different "program" (level of Forest Service activity and budgeting). Each such program is discussed in detail and evaluated by numerous criteria. This format, while useful for background analysis, results in an extremely lengthy document because so many options are considered in detail. It is not a suitable format for discussing general policy issues that encompass several systems. The "big issues" (such as timber management and land

use allocation) should be discussed separately from the "systems" format, and the material in the "systems" analysis should be condensed. In addition, to demonstrate to the reader how planning and management is performed in practice, a detailed example of planning, data collection, etc., for one or two actual forests should be included.

ANALYTICAL ISSUES

The Forest Service's long-term forecasts of timber supply and demand are crucial to sound planning of resource management. Devoting more resources to research in this area should result in forecasts that are more useful in policy analysis.

Since many important policy questions cannot be properly discussed in national aggregates, some of the analysis and information should be provided regionally.

The Program is not only an exposition of long-run policy issues; it is also a justification of the Forest Service's budget proposals. As such, it has a number of shortcomings. Suggested improvements include:

- Better estimates of the value of recreation. (Presently, these values may be overestimated for some of the more expensive program alternatives.)
- Better analysis of the value of Forest Service programs to the public.
- An analysis of the effects of public policy on the private timber industry.
- An analysis of why the proposed expenditures are necessary to achieve the stated goals.

The Assessment and Program documents were produced under stringent deadlines, which explains some of their shortcomings. The Forest Service recognizes the need for improvement and intends to incorporate a number of the improvements that have been suggested by GAO and by others.

As requested by the Senate Committee on Agriculture and Forestry, GAO did not send the report to the Forest Service for formal comments.

CHAPTER 1

INTRODUCTION

In August 1974, the Congress enacted the Forest and Rangeland Renewable Resources Planning Act (RPA), P.L. 93-372. This act directed the Secretary of Agriculture to provide two documents: a Renewable Resources Assessment (to inventory renewable forest and range resources and to analyze the supply and demand for them) and a long-range Program for management of these resources. RPA directed that these two documents be produced by the end of 1975 and be updated in later years--the Assessment in 1979 and every 10th year thereafter, and the Program in 1980 and every 5 years thereafter.

The reports, completed in early 1976, drew criticism from various sources. (The Forest Service itself went to considerable lengths to solicit criticism at all stages of its work.) Such criticism can be expected, regardless of the quality of the reports, because the Forest Service is responsible for resources of immense value and because the relevant interest groups do not speak with one voice. In addition, the recommendations for large budget increases and the implications of possible resource shortages have caused concern in the Congress and in the executive branch.

OUR ROLE

In a letter to the Comptroller General (July 8, 1976), the Chairman of the Senate Committee on Agriculture and Forestry requested that we "* * *" to a separate evaluation of the 1975 RPA Assessment and Program from the standpoint of economics and good management of resources." In addition, the Chairman stated that "* * *" Congress must provide the agency with still more guidance as to how it should proceed in connection with the next Program and Assessment which are due to be submitted to us in 1979."

SCOPE OF REVIEW

In response to the Chairman's request, our approach has been to be as specific and constructive as possible in making suggestions for producing the next versions of the Assessment and Program. We have, therefore, tried to avoid saying merely that the analysis should be "better" without specifying just how improvements could be made. Another form of criticism (which is typical of many other reviews the Forest Service has received) is to suggest that more space should be allocated

to some particular subject. Because the 1976 documents are already so long (about 1,300 pages), we believe that criticism of this kind must be accompanied by advice as to what subjects could receive less coverage or by suggestions on how to improve the organization so as to accommodate additions efficiently.

We view the Assessment and Program as basic justifications for the activities of the Forest Service and as the means to communicate that justification to the public and to the Congress; thus, we have evaluated the documents according to the standard set forth below:

"Governments and agencies entrusted with public resources and the authority for applying them have a responsibility * * * to render a full accounting of their activities. Government managers have a responsibility to show not only the purposes for which public resources were used, but also to demonstrate the effects of their use.

"This responsibility rests first on the executive agency administering the program. Program managers need to know what the programs entrusted to them are accomplishing and whether results might be improved. Central management agencies--the Office of Management and Budget or the White House, for example, need to know if programs are working--either through their own efforts or through the review of the appraisals of managing agencies. Finally, congressional responsibility for legislation, appropriations, budgeting and priorities, and oversight and investigations indicates a need for the legislative branch to make its own appraisals of programs and to make use of appraisals made by the executive branch." 1/

Our report is divided into two parts. The first section, "Organization and Presentation," concerns how well the documents promote sound planning and communicate the results of that planning to the public and the Congress. The second section, "Analytical Issues," discusses the content of the reports and mentions a number of important shortcomings. In

1/"Evaluation and Analysis to Support Decisionmaking," GAO Report PAD-76-9, Sept. 1, 1976, p. 1.

general, we find that certain important topics and analyses are missing or insufficiently explained; we do not argue that the reports reach wrong conclusions.

In addition to the two Forest Service documents, we have reviewed voluminous critiques of those documents written by forestry experts and interested public organizations. Also, we have interviewed officials in the Forest Service who are responsible for the next Assessment and Program, officials in the Office of Management and Budget, and a number of forestry experts not in Government. As advised in the letter requesting this report, it has not been submitted for agency review.

CHAPTER 2

ORGANIZATION AND PRESENTATION

Perhaps the most basic criticism of the 1975 documents is that they are very hard to read, whether by forestry experts, interested citizens, or Members of Congress. The great length is a barrier. The writing style is verbose. It is difficult or in some cases impossible to determine where important statistics come from. To someone wondering why the recommended budget is what it is, supportive evidence is sometimes obscure. It would not be surprising to learn that few people have read more than a few pages of the documents.

Although the documents are very long and difficult to assimilate, it is obvious that they must be long in order to include all necessary information; in fact, virtually everyone who has reviewed the documents has suggested including more subjects, compounding the problem of length. We believe that the problem is not merely excessive length, but also unwieldy organization.

THE ASSESSMENT

The Assessment is organized by these categories: forest and range land base, outdoor recreation and wilderness, wildlife and fish, range, timber, water, and scientific information and data needs. (Timber and range are first described in terms of the quantities in existence and then in terms of their supply and demand.)

Within these broad headings, the organization is less clear. In each category, no train of logic or orderly development to a conclusion is apparent. There are numerous examples of extraneous detail. For example, a chart listing the age, sex, occupational status, occupation, and income of skiers, classified by region, for the year 1969 occupies a full page. (See p. 75.) Another full-page table (p. 77) reveals the "percentage of skiers taking various combinations of trips in the mid-West and West, 1964-65 and 1968-69" in order to show that "local residents accounted for about 85 percent of the days skied." If the idea were to include this detail so that skiing could be compared to hunting (in order to draw some kind of conclusion), such data might be useful. As it is, much is dispensable; and several hundred pages of such random details produce a dull, disorganized effect.

THE PROGRAM

Like the Assessment, the Program is ineffectively organized. For example, the section on "Environmental Analysis for Wildlife and Fish" (p. 127ff) contains much descriptive detail that interferes with the analysis. In considering each of the several aspects of the topic, the discussion framework entails 5 repetitions of "environmental impacts," which itself has 12 subheadings. It also results in five separate variations of a "civil rights" statement, all of which state that various programs can increase employment or provide more economical recreation opportunities for the disadvantaged--truisms that serve no analytical purpose. Many other examples could be presented. We suggest that purely descriptive material should be placed in an appendix or the Assessment, and all that is not directly relevant to the purpose of the Program should be eliminated.

One of the main problems of exposition is the organization of the Program according to "systems" (timber, wildlife, etc.) and "goals," various levels of activity in each system. Although this organization culminates in a logical choice of a recommended program at the end of the document, it is often artificial and requires too much space.

First of all, posing five goals or levels of activity for each system gives the reader less information than might be expected. In recreation, for example, the five goals are vaguely defined levels of effort and the reader may find it difficult to determine just how far apart the levels are. Are they (A B C D E) or (ABCDE) or (A BC DE) or some other uneven dispersion? Indeed, they do not appear to bear any fixed relationship to each other (see p. 31), nor do they show a consistent pattern of costs and benefits (see p. 50). In addition, in some cases the five goals are defined so that one seems obviously preferable. Goal C for timber, for example, reads, "Increase timber supplies and quality to the point where benefits are commensurate with costs." Does this not automatically rule out the other four goals as inefficient? In any case, the analytical problem would seem to be not to establish five hypothetical levels but to determine just which level does meet some benefit-cost-efficiency criterion.

Second, the Program's organization wastes space. After following the development of eight different programs for more than 600 pages, the reader finds that the recommended program is not one of these but instead a hybrid of alternative 6 and four "modified" goals. In analysis it may be

logical to arrive at a program that has not been considered initially, but there is no need to take the reader through the whole process. Considerable space could have been saved by listing the program that is finally recommended among those initially considered.

Third, the "systems and goals" format does not allow for highlighting important issues that may involve several systems or may transcend all of them. We suggest that the Program should include a section, apart from the individual systems, to discuss a number of overall issues of concern to the Congress and the general public. This addition might not increase the documents' size because, as mentioned above, the discussion of many alternative programs could be greatly condensed. However, regardless of whether the documents are thereby shortened, we believed that these changes will make them more readable and useful.

What are the "big issues" that might merit attention in a separate section of the Program? Marion Clawson has listed the following in a chapter entitled "Pressing Issues of Forest Policy" from a recent book: 1/

- How much land to devote to forests.
- How much forest land to withdraw from harvest.
- How to harvest timber.
- National forest management.
- Output from small private forests.
- Timber needs and environmental constraints.
- Export of forest products.

Other issues that might be included are the general relationship between the private and public sector in Forest Service activities, or a more centralized discussion of trends in and magnitude of the Forest Service budget.

1/Marion Clawson, Forests For Whom and For What? The Johns Hopkins University Press, Baltimore, 1975 (pp. 6-16).

Any of these issues might be phrased differently, and others might be listed instead. The point is to set off the major policy issues where they can be fully discussed outside of the "systems and goals" framework.

A fourth difficulty of the exposition is that because the data and analysis are presented at such a general level, the reader is unable to appreciate how the planning might be done locally. How, for example, are decisions made as to the allowable cut in a specific forest? How is it determined whether to build a road or to invest in facilities for public recreation? Such specific questions, it would seem, are the basis for the numbers in the Supplemental Appendix, ^{1/} which in turn are at the core of all analysis of alternative levels of activity. Clearly, however, it is infeasible to discuss planning in great detail. We suggest, nevertheless, that at least one example be presented, using one particular forest, so the reader can see what local planning entails, and how the Assessment is tied in with the Program.

Forest Service officials told us that the next Assessment and Program would include some examples. They intend to select two States (Washington and South Carolina), three land use areas (Ozarks, Northern California, and Rockies), and two national forests (Woods Canyon and Manatee). This will also help meet the criticism that the reports do not contain enough regional detail. It may turn out, however, that these particular regions are too large to handle within the space constraints or to treat in sufficient detail.

RECOMMENDATIONS

We recommend that the Secretary of Agriculture direct the Forest Service to

- place purely descriptive material in an appendix and eliminate material that is not directly relevant to the purpose of the Program;
- include a section to discuss a number of broad issues, apart from the individual systems; and
- present at least one example of detailed planning at the individual forest level.

^{1/}The Supplemental Appendix is a separate document that contains many tables of estimated costs, manpower requirements, etc., for all the alternative programs.

CHAPTER 3

ANALYTICAL ISSUES

THE ASSESSMENT

The major analytical issue in the Assessment is the quality of the forecasts. Forecasting future needs and supplies is fundamental to sound planning--shortages must be detected well in advance if anything is to be done about them; future demands for all the forest products (timber and recreation, in particular) which may require long-term investment must be anticipated.

We believe that it is very important to improve the methods of forecasting supply and demand. Devoting more resources to research in this area will, we believe, result in forecasts which are more accurate, more detailed, and which can better illustrate the effects of alternative policies.

The method behind the Assessment's forecasts is known as "timber trends analysis." In forecasting demand, the approach is to first assume that price does not change and then to estimate future changes in demand based on projections of population, income, and perhaps other measures of activity in the economy, over the forecast period. After these basic projections are made, adjustments are then made based upon assumed price changes. On the supply side, the general method is to make forecasts (by region) based on price projections and available information on the volume and growth of private forests and information on likely future allowable cut levels on public lands. If projected demand exceeds projected supply, then the price projections are adjusted upwards.

The main shortcoming of the supply projections is that they are based upon biological supply forecasts with specific institutional constraints ^{1/} imposed upon the yield from public lands. Alternate institutional constraints could result in forecasts of higher yields, but this is not analyzed. The projections also assume that the yield from private lands will follow the same institutional constraint of "sustained yield." These methods could result in underestimates of future timber supplies.

^{1/}There are several types of institutional constraint. The most important are the "sustained yield" or "even flow" criteria and the consideration of alternative uses of the land.

There are several other shortcomings of this approach. First, the final forecasts are not useful for regional analysis; a given change in National Forest supply will have the same estimated effect whether it occurs in one region or is uniformly spread over several. Second, since a great deal of judgment (expert judgment, to be sure) is involved at every stage of the analysis, it is very difficult to document or analyze the methodology. Third, it is difficult to use the forecasts to analyze the effects of policy changes, changes in the economy, or changes in world markets.

The science of commodity market forecasting is far from perfected, but it is rapidly advancing. Econometric models have been developed to forecast many economic variables and the markets for some agricultural commodities. We recommend that the Forest Service conduct or sponsor more research in this area, with the prospect of developing better methods for use in future Assessments.

THE PROGRAM

The Program might well be broadly characterized as applied economic analysis. The questions that are posed, implicitly, are how many public funds to apply to many different activities within the jurisdiction of the Forest Service. Aside from budgetary questions, there are basic policies--such as determining how much timber to be cut from public lands--that are essentially economic in nature.

Of course, economics is not the whole story. The whole question of esthetics, preservation of wilderness, etc., cannot be characterized as "economic" without an unworkably broad definition of the term. Esthetic characteristics are not measurable in dollars with any precision. In addition, the Forest Service's allowable cut is based upon the principle of maintaining a "sustained yield" which will, under some circumstances, constrain the harvest of timber. The economic effects of the constraint (and alternatives) could be evaluated.

To fully determine whether or not the economic analysis implicit in the Program is sound would be a massive job--much more than could have been accomplished with resources available for this study. One of the main difficulties is that so much of the analysis is indeed implicit--very little is explained in the documents themselves. In many cases, only conclusions are given; the reader may suspect the possibility of unsound analysis under the surface, but checking

up would have required a large research effort. We saw our role as giving guidance for future reports, not critiquing those that will soon be superseded.

The Assessment and Program appear to present the results of some type of economic analysis. At best, the reader can examine these results to see if any discrepancies are apparent. If none are, the underlying analysis is not necessarily sound; perhaps errors were made that did not show through. A good example of this is the numbers themselves--the estimates of the costs of carrying out programs to certain levels. How does the reader know that it will cost \$45.5 million in 1979 for capital investments to carry out Goal A of the recreation program? The documents do not explain how these costs were arrived at, and the budget recommendation is a myriad of such numbers.

As important as such cost estimates are, it would be impossible to justify all of them within the Program. If the documents are long now, they would then be enormous. The most realistic alternative would be to include (perhaps in the Supplemental Appendix) a better description of the process by which such estimates were made and an example of how some particular goal, in one system, was costed out. Alternatively, this could be incorporated in one of the examples which we suggested earlier in this study.

LACK OF REGIONAL ANALYSIS

The Assessment and the Program contain few regional disaggregations for information presentation, supply and demand projections, or analysis. This is an important omission, because so many of the goods and services that forests produce are local in nature.

Any good or service which is costly to transport will be consumed more intensively near its site of production, assuming that consumer demands are fairly similar among regions. Consider the outdoor recreation that the forests provide. This service must be consumed where it is produced--at the forest itself--and the transportation cost is incurred by the consumer in traveling from his home to the forest. Thus, the total cost of recreation in a western forest is higher to residents of an eastern city than to those who live near the forest.

These simple facts have important implications for policy. Each forest should be managed in accord with calculations of benefits and costs. The relative scarcity of forest

recreation near large population concentrations suggests that available forests in such areas should be managed with more emphasis on recreation than forests in remote areas--more money should be spent on roads, tourist accommodations, etc. Entrance fees might be imposed. The less the demand for recreation in a particular forest, the lower the social cost of harvesting the timber.

As simple as these propositions are, they can be difficult to put into practice, for good management requires calculations as to the levels of such variables as fees, allowable cut, and spending on recreation facilities. None of these decisions can be made solely on the basis of national data--regional analysis is indispensable.

The analysis of the timber industry also requires a regional approach. Employment is quite concentrated in certain regions, and some local economies are strongly affected by the ups and downs of timber production. Also, Federal lands tend to be concentrated in the west, and there is considerable private timber production in the southeast. Therefore, any change in Federal policy for harvesting timber from its own lands will have certain regional economic effects.

The regional concentration of recreation supplied by forests has another implication for policy. If the benefits were distributed equally and taxes to support the system were collected equally, then there would be no redistributive effects. This is not the case. The benefits are concentrated in the regions where the forests exist, but the taxes are spread over the nation. If this is considered a severe enough problem, one way to solve it would be to charge higher user fees, so that the beneficiaries would be paying more than the nonusers. This is an issue that we believe deserves further discussion, and which would require a regional approach to the analysis.

In a broader sense, a regional approach is basic to efficient planning. Ignoring the regional components of forestry is analogous to a manufacturing firm with 100 plants in different locations and of different degrees of efficiency, but all producing the same goods. In order to minimize costs of any particular level of output, production must be allocated among plants so that marginal costs (including transportation) are equal in all plants. If not, production could be switched from high-cost plants to low-cost plants, with a reduction in total cost. This analogy may be applied to all seven of the Program goals: production of timber, recreation,

etc., must be produced at the most efficient sites if costs are to be minimized. Regional analysis is required to determine whether efficiency is being achieved.

This analogy illuminates another analytical issue. Forest Service "plants" (individual forests) have different levels of productive efficiency because of site and climatic differences. Regional and national level plans mask these differences, yet the level of all forest uses depends upon whether particular sites are specialized in use or multiple use is practiced. The issue of dominant use versus multiple or uniform use needs more highlighting in the Program.

Our interviews with Forest Service officials revealed that the Forest Service is aware of this shortcoming and is working towards more specific regional analysis. The short time schedule for producing the first Assessment and Program was the major reason for the lack of regional analysis. Nevertheless, we believe that this point deserves special emphasis here because it affects so many aspects of the Assessment and Program.

RELATION BETWEEN THE PRIVATE AND PUBLIC SECTORS

The relationship between national forests and privately owned forests is a very important issue for policy. How do Forest Service policies and programs influence the behavior and welfare of private forest owners? What aid or regulation is called for? Pages 296-302 of the Program present a very general discussion of "federal programs related to timber production on private land." Such issues as Federal assistance, cost-sharing, indirect incentives, and regulation are discussed in only about four pages. On pages 300-301, it is stated that:

A complete and comprehensive analysis of this wide array of policy options has never been made. Generally, single approaches have been advocated, studied, and debated at various times--leading to a piecemeal approach. Development of a long-range national forestry program under the Resource Planning Act has sharpened the need for comprehensive analysis. Unfortunately, time and available research are not adequate to do a thorough job in this first RPA report. In the future, the program evaluations required under RPA will begin to shed more light on actual effectiveness and costs of the alternatives now being used.

We agree that more analysis of these issues is needed and that it should be presented in future programs. In addition, more attention should be paid to the effects of Forest Service management of national forests upon private landowners. Also, we believe that a distinction should be made between lumber producers with their vast land holdings and small land-holders, who face a different economic situation.

In a broader sense, more analysis is needed of the relation between the public and the private sector. The basic issue is this: When the government determines that more forest products are needed and then pursues measures to increase the harvest from public lands, this tends to reduce the market price of the products. This, in turn, reduces the incentive for private investment in expanded production, with consequent reductions in production from private lands, with consequent changes in the value of private timber lands. Anticipation of changes in government policy affects harvesting decisions of private landowners. There are several important issues involved here--both economic and political--that should be made more explicit.

Finally, a more complete treatment of the public-private sector relationship would include discussion of the tax expenditure ^{1/} which goes to timber operations. Estimated at over \$200 million in the 1977 budget, this tax benefit arises from treating income from certain timber operations as capital gains rather than as ordinary income for tax purposes.

THE PROGRAM AS A BUDGET JUSTIFICATION

The Program is perhaps best viewed as a vehicle for justifying budget requests over an extended period. The message of the Program is that this budget should be greatly increased--from about \$1 billion currently to nearly \$2 billion in 1980, increasing to \$3 billion about 30 years from now. How well is this increase justified?

^{1/}A "tax expenditure" is a reduction in tax liability for a particular group of taxpayers that results from exceptions to the "normal structure" of the individual and corporate income tax. An estimate of a tax expenditure refers to the estimated increase in tax revenues that would result from eliminating the provision of the tax code that makes the exception.

The first point--which is alluded to earlier in this study--concerns the presentation. The budget numbers are presented clearly enough in the Summary document, but in the Program where they are developed, the numbers are difficult to find. They are mixed in with all sorts of other figures, tables, charts, and text. We suggest that a clearer presentation of the budget figures would greatly enhance the Program's effectiveness in communicating its message.

The basic task of the Program should be to convince the reader that the recommended program is better than the alternatives. We agree with the general approach, which attempts to estimate costs and benefits of alternatives explicitly. Nevertheless, within this framework there occur a number of somewhat questionable procedures, and the overall effect may be to leave the reader unconvinced that the recommended budget increases are really justified. The following are examples of analysis that could be improved.

1. The Forest Service has made a commendable effort to attach dollar values to its services, notably visitor-days to national forests. The estimates of values are of necessity somewhat arbitrary, even though they might represent a fair estimate. In any case, they are presented explicitly, and the reader who disputes them can easily substitute his own figures and construct alternative estimates of benefits.

The problem with the value assumptions, however, is that they are taken as constant regardless of how many visitor-days are supplied. It is logical to assume that the demand schedule for visitor-days is downward sloping. That is, the more consumed, the less the average value ascribed to them by the consumer. Assuming that the value does not decline with increasing consumption has the effect of overestimating the value of visitor-days. We believe that the Forest Service should estimate the elasticity of demand for recreational visitor-days and then apply this to the estimates of the value of services.

2. In the timber section especially, the analysis is carried out at a too aggregated level. The reader can compare aggregate cash receipts for timber sales to total management costs but cannot tell what is happening at a regional level. High rates of return on some projects are averaged in with low returns on others. Under such circumstances,

very little can be deduced from the totals about whether sound management is taking place. 1/

3. The basic rationale for expansion of recreational facilities, wilderness, and wildlife and fishing facilities, is that people will derive benefits of a certain magnitude from them. This is related to the demand projections which, as was pointed out earlier, are based on continuations of past trends in population and income, but which do not necessarily represent the willingness of users to pay at rates that would justify the higher expenditure by the Forest Service.

Some of these problems are undoubtedly the result of the short period in which the Forest Service had to prepare the first Assessment and Program. We may, therefore, assume that improvements will be made in the analysis. Our conclusion, then, is a general one: The Forest Service should be more conscious of the readers' need to be convinced that the higher budget is justified.

RECOMMENDATIONS

We recommend that the Secretary of Agriculture direct the Forest Service to

- conduct or sponsor more research to improve economic forecasts of supply and demand for timber and related forestry products;
- present more information on how the Program's cost estimates were made;
- include more regional analysis in the next Assessment and Program; and
- provide a more complete treatment of the public-private sector relationship.

1/There is, in fact, considerable dispersion in rates of return at disaggregate levels. See Marion Clawson, The Economics of National Forest Management, Resources for the Future, Washington, D.C. 1976 (pp. 65-77).

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 WASHINGTON, D.C. 20510

July 8, 1976

The Honorable Elmer B. Staats
 Comptroller General of the
 United States
 U.S. General Accounting Office
 Washington, D.C. 20548

Dear Mr. Staats:

Under the provisions of the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), the U.S. Forest Service has transmitted to Congress an Assessment of the condition of the Renewable Resources on the National Forest System, and a Program of work, presumably based on that Assessment.

The process of developing an assessment of problems and needs, and then using that data to establish working priorities, and subsequently budgetary priorities, makes the Act unique and valuable as a Federal management tool -- if the work is carried out in a manner that provides Congress and the public with useful information and policy alternatives on a non-technical basis; similar data, in a more detailed way, directed to the scientific and technical community; and if the analysis and policy goals are developed within generally accepted economic and governmental management guidelines.

The time has passed in which Congress could disapprove or amend the suggested Program, and frankly the Program of work is fairly innocuous. It seems to say that if the Forest Service had more money and manpower it could accomplish national goals within its existing pattern of policy and work. Therefore, on the short-term, the Program is all right, especially given the short period of time Congress allows the agency to prepare the first documents.

However, the product is not all right for the future, and what Congress anticipated that this type of policy development apparatus would accomplish.

It seems to me therefore that Congress must provide the agency with still more guidance as to how it should proceed in connection with the next Program and Assessment, which are due to be submitted to us in 1979.

In this connection I last year formed an ad hoc professional task force to provide my Committee on Agriculture and Forestry with an evaluation of the report from the standpoint of non-governmental resource managers. This material will be printed shortly.

However, I wish to go farther than this. I would be deeply grateful if you would ask your Program Analysis Division to do a separate evaluation of the 1975 RPA Assessment and Report from the standpoint of economics and good management of resources.

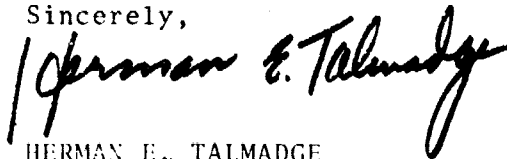
Obviously strict cost-benefit or input-output analysis often cannot be used on public lands, because of their many uses. For instance, although the Department of Interior has attempted to quantify wildlife benefits, many disagree with the approach that agency has taken. Therefore, while economic analysis is important, it must be tempered somewhat with intangibles that may not be able to be counted, but which are important to the public.

Nevertheless, there are many economic guidelines that can be followed, and it is my wish that good management be endemic within the Federal system.

I do not wish GAO to seek agency review of any report which is developed pursuant to this request, and I will appreciate your assistance with this priority request.

With every good wish, I am

Sincerely,



HERMAN E. TALMADGE
Chairman