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**Abstract:** There is a strong need to increase the effectiveness of forest plan monitoring and evaluation. This need is recognized by Agency policy makers, line officers and the public. The need is even more compelling if we are to be successful in implementing ecosystem management and in managing how we deal with changing conditions and new information in an orderly manner.



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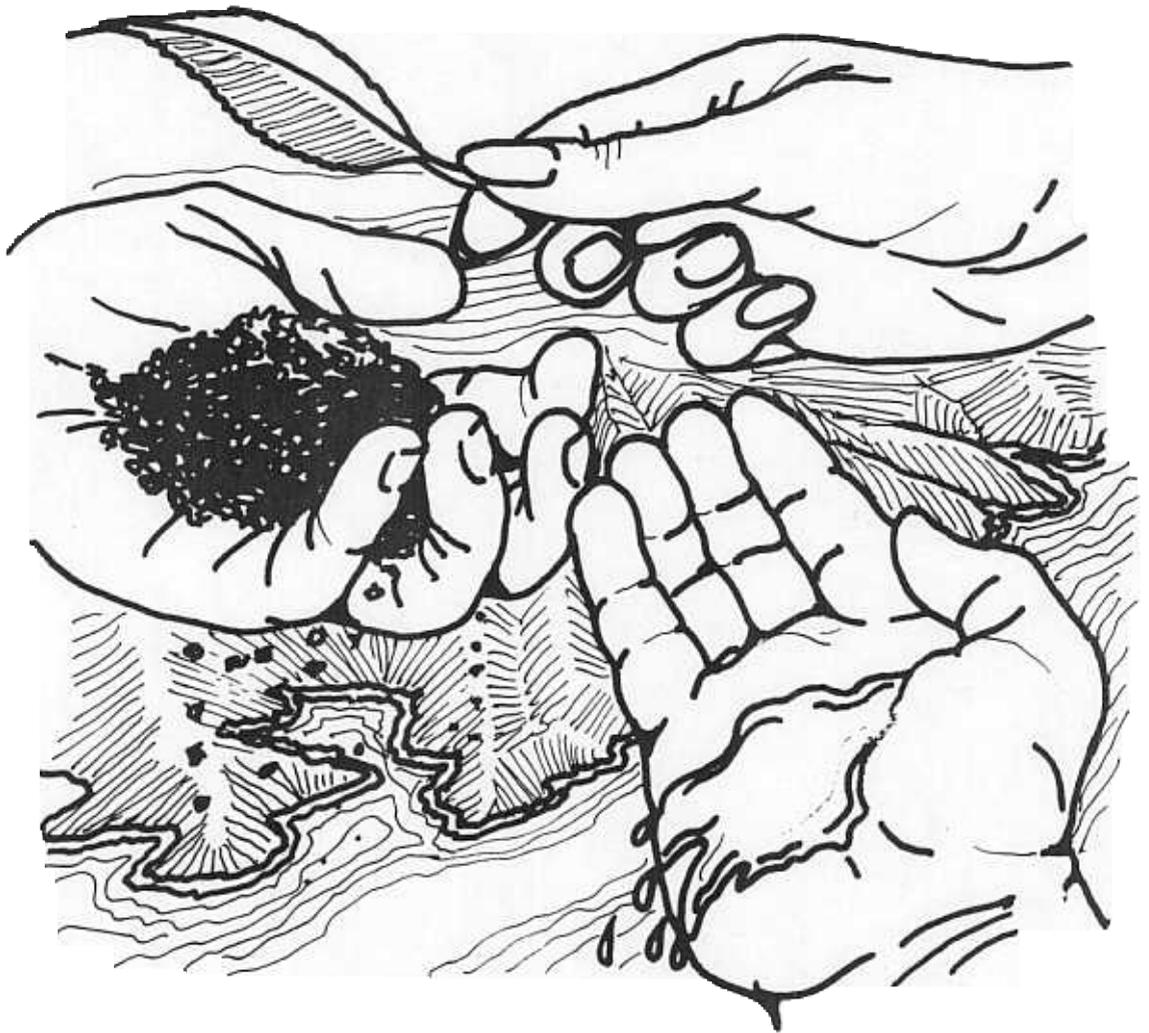
**Forest Service**

Washington Office

January 1993



# **National Monitoring and Evaluation Strategy**





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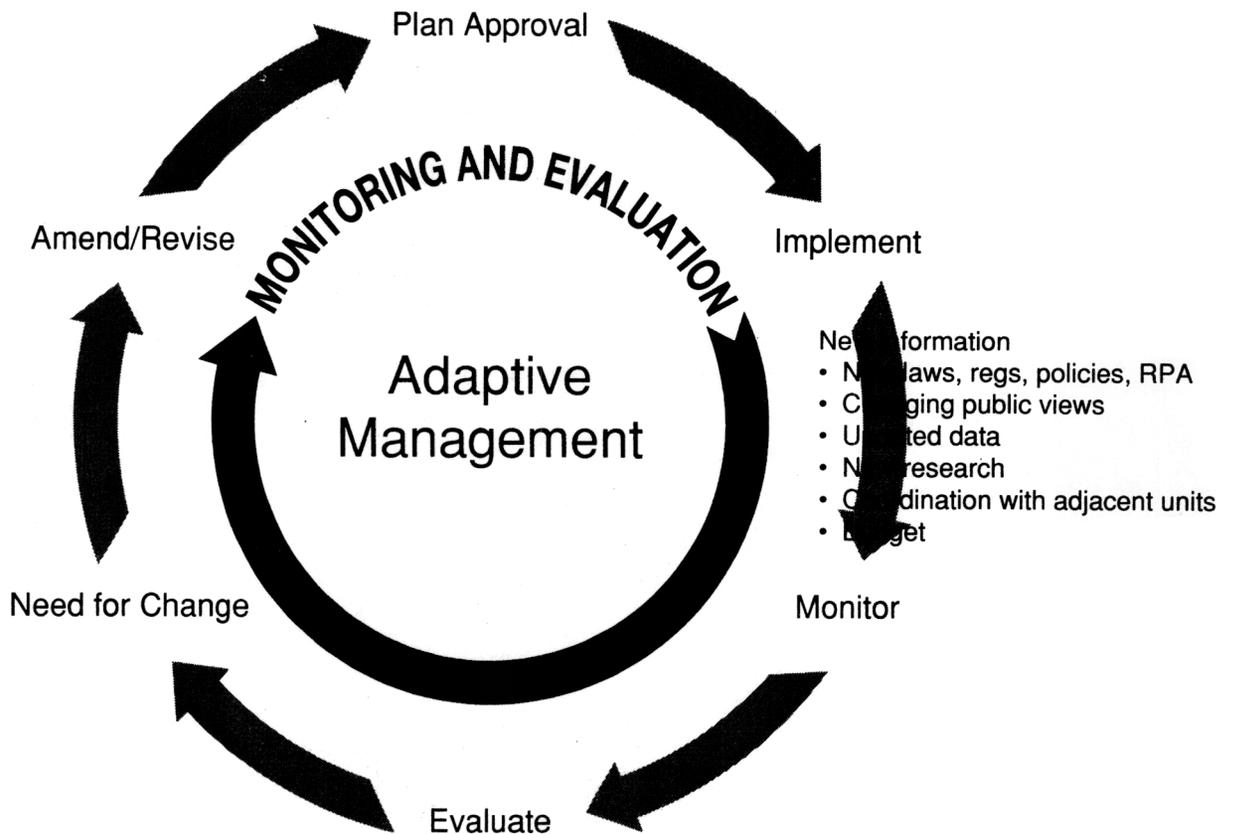
Forest Service

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# National Monitoring and Evaluation Strategy



# NATIONAL MONITORING AND EVALUATION STRATEGY

## CHIEF'S MESSAGE

The Forest Service is entering a new era in forest planning. Most national forests have developed forest plans and are in the process of implementing these plans. Forests are beginning to revise their forest plans. But there is another side to forest planning that has not been fully addressed.

We need to ensure that we are successfully doing what we set out to do. The key to keeping our forest plans meaningful and up to date is monitoring and evaluation.

Monitoring and evaluation may not be new concepts, but a systematic, proactive approach to these critical elements of forest planning is not a part of every forest's normal routine. That must change.

Some people are questioning our commitment to managing the resources entrusted to our care in a professional and sensitive manner. How are we to demonstrate our ability to honor our professional and legal responsibilities?

Accurate monitoring and careful evaluation should become integral parts of the management process. That means that a year's activities under the forest plan are not completed until the effects of those activities have been monitored and assessed, as specified in the forest plan.

In order to fulfill our mandate to provide land stewardship and forest plan implementation, we must be able to demonstrate that we are evaluating our progress in a responsible and scientifically sound manner. We need to improve evaluation of monitoring activities and work on more effectively sharing the results with the public. We should be able to demonstrate how we are meeting our own requirements and that we are doing a high quality job of forest and rangeland management.

The National Monitoring and Evaluation Strategy provides recommendations and guidance for strengthening monitoring and evaluation efforts. Using the framework provided in the national strategy, each national forest can design and implement their own monitoring and evaluation strategies tailored to assure that all plans are functioning as originally envisioned or needed changes are implemented.

It is up to all of us in the Forest Service to demonstrate that we are in the business of delivering quality service to the public through sound management practices. I am relying on your support and commitment to make the implementation of this strategy a success.



F. Dale Robertson, Chief

# INTRODUCTION

There is a strong need to increase the effectiveness of forest plan monitoring and evaluation. This need is recognized by Agency policy makers, line officers and the public. The need is even more compelling if we are to be successful in implementing ecosystem management and in managing how we deal with changing conditions and new information in an orderly manner.

## GOAL

The goal of the National Monitoring and Evaluation Strategy is to strengthen support, refine our understanding and expectations and more clearly focus our monitoring and evaluation activities. Monitoring and evaluation must play a strong, visible and scientifically-credible role in the management of the National Forests and Grasslands.

## OBJECTIVES

The National Monitoring and Evaluation Strategy is designed to focus agency attention and resources on evaluating implementation of forest plans to provide Forest Supervisors and Regional Foresters with information necessary to ensure responsive and efficient management of national forests. The Strategy is consistent with the monitoring framework which includes three levels of monitoring: implementation, effectiveness and validation.

Monitoring and evaluation provides a feedback mechanism for decisionmaking that keeps forest plans dynamic and responsive by:

- Assessing the achievement of goals and objectives and adherence to standards and guidelines established in forest plans.
- Evaluating if environmental, economic and social effects of management practices were adequately predicted in the forest plan.
- Considering new information including changing conditions, direction, and trends.
- Identifying and documenting the need for change in management practices, implementation strategies, goals, objectives and standards and guidelines.

## PRINCIPLES

Embodied in the National Monitoring and Evaluation Strategy are a few basic principles:

**Public Awareness** - The evaluation of results will be readily available to all who are interested in management of the national forests including the public; Federal, State, and local agencies; tribal governments; and special interest groups. The public is invited to participate in the actual monitoring and evaluation effort.

**Ecosystem Management** - Monitoring and evaluation will focus on ecosystems and emphasize interrelationships among biotic (e.g., vegetation, fish, wildlife, humans, etc.) and abiotic (e.g., geology, soil, air, water, etc.) components, recognizing that a change in one component will bring about some corresponding change in other components and in the operation of the whole system.

**Flexible** - Monitoring and evaluation strategies must be flexible to meet local needs while encompassing forest, regional, and national requirements.

## IMPLEMENTATION

Realizing the National Monitoring and Evaluation Strategy Goal and Objectives will require:

- Heightened commitment and support by line officers for the monitoring and evaluation process.
- Consistent monitoring and evaluation activities within the Forest Service when needed to manage national or regional issues.
- Adequate funding for monitoring and evaluation activities.
- Monitoring plans that clearly tie to forest plan goals and objectives.
- Increased commitment by all disciplines to work together in an interdisciplinary fashion to integrate information and knowledge.
- Assistance from Research in monitoring design, data collection and analysis.

## WHY CHANGE?

Reasons we should change the current way we conduct monitoring and evaluation are:

- Monitoring and evaluation is viewed as another "new" program which will require more money, more time, and more people-resources which are already stressed.
- Monitoring and evaluation requirements often are not based on clear objectives, do not address key management questions or do not address key issues.
- There is no incentive for doing monitoring and evaluation, and little or no perceived risk for not doing it.
- Monitoring and evaluation is not recognized as an integral part of target accomplishment.
- Monitoring and evaluation costs increase unit-costs which can adversely affect budget allocations.
- There is a lack of integration and interdisciplinary approach in monitoring and evaluation activities resulting in duplication of efforts and redundant or inconsistent data.
- Monitoring and evaluation techniques, methodologies, and philosophies vary widely resulting in inconsistent findings and reporting methods that affect our credibility.
- Effective teamwork within the Forest Service and with other agencies, partners, and public is not readily apparent.
- Appropriate scientific methods frequently are not used in conducting monitoring and evaluation.

# STRATEGIES FOR CHANGE

## STRATEGY 1: Line Officer Involvement

Line officers must become involved in guiding, managing and supporting monitoring and evaluation of forest plans.

### Background:

Although monitoring and evaluation of forest plans are high priority on the Forest Service agenda, in most cases, other activities are competing more effectively for limited staff time and budget dollars. This often can be attributed to a lack of personal commitment, involvement, and leadership by line officers, and can be traced to a general lack of understanding of the monitoring and evaluation process and little accountability for accomplishing high quality monitoring and evaluation.

In many cases line officers have delegated too much of the monitoring and evaluation process to the Interdisciplinary Team and functional specialists. Many line officers are not redeeming their responsibility to evaluate what our efforts accomplish, what improvements and efficiencies can be gained through alternative implementation strategies, or whether the forest plan direction is sufficient to guide management. Management is not actively involved in determining appropriate monitoring intensity and costs.

### RECOMMENDED ACTIONS:

- Regional Foresters will develop, with broad general direction from the WO, a written strategy with specific actions for achieving the National Monitoring and Evaluation Strategy and will present this strategy to the Chief. Regional strategies should incorporate the concepts outlined in this report.
- Forest Supervisors will prepare an Annual Evaluation Report to be transmitted to the Regional Forester and made available to the public.
- Forest Supervisors will annually certify that the forest plan is sufficient to guide management of the forest over the next year or propose needed changes and an approach for dealing with those changes.

## **STRATEGY 2: Link to Forest Plan Goals and Objectives**

Monitoring and evaluation must produce timely, credible information which responds to key natural resource and societal issues identified in the process of forest planning.

### **Background:**

Monitoring and evaluation is often not clearly linked to forest plan goals and objectives and does not address key issues and management questions. This is due to the lack of understanding of how monitoring and evaluation supports implementation of the forest plan, the link between monitoring and decision-making, and the monitoring process.

There are five steps to the monitoring and evaluation process. All are essential to an effective monitoring program. The five steps are:

- Set program objectives
- Design monitoring and evaluation process
- Collect data
- Synthesize and evaluate information
- Present results to the decision maker and the public

### **RECOMMENDED ACTIONS:**

- Deputy Chiefs of National Forest System and Research will develop a set of guides which demonstrate how to incorporate goals and objectives into the design of monitoring plans.
- Regional Foresters and Forest Supervisors will ensure monitoring elements in forest plans measure the Forest's progress towards achieving the goals and objectives described in the forest plan.

## **STRATEGY 3: Funding**

The priority given to monitoring and evaluation must be established and clearly understood so that adequate funds are available to accomplish the work.

### **Background:**

Perceptions differ regarding the availability of funds for monitoring and evaluation. Forest and district personnel feel that they are not getting funded for monitoring activities. Washington Office personnel, and, to some extent, Regional Office personnel feel that funds sent to forests for program activities includes monitoring activities.

In reality, while direction is sent out to spend some money on monitoring and evaluation, the amount of total funding has generally not increased. Forests are forced to choose between spending funds on activities associated with hard targets, versus quality-related activities such as monitoring and evaluation that are perceived as nonessential. The problem is aggravated by the lack of required activity codes for tracking monitoring.

Presently, budget allocations for monitoring and evaluation cannot be made and forests cannot be held accountable for funds spent on monitoring and evaluation. Without a tracking mechanism through the Program Budget, Allocation and Budget Execution processes, there is no way of knowing monitoring and evaluation costs which could be used to help formulate future budgets. Forests or regions that include estimates of monitoring and evaluation costs in their program budgets tend to have higher unit costs than those who do not include them, and thus, do not compete well for scarce dollars at allocation time.

Monitoring and evaluation skills are generally not available or are underutilized. Some forests have disbanded interdisciplinary teams after completion of forest plans and do not have personnel to carry out monitoring and evaluation. Others are not assigning adequate priority to monitoring and evaluation.

### **RECOMMENDED ACTIONS:**

- WO Directors of PD&B and LMP will evaluate barriers within the budget structure and process to identifying monitoring and evaluation needs.
- Regional Foresters and WO Directors of PD&B and LMP will identify information needs for budgeting for monitoring and evaluation. They will also develop appropriate direction and tracking mechanisms for monitoring and evaluation activities in each phase of the budgeting process-Program Budget, Budget Allocation, and Budget Execution.

## **STRATEGY 4: Consistency and Integration**

Monitoring and evaluation must be coordinated and consistent within the Forest Service to address issues which cross forest and regional boundaries. Within individual units, coordination among specialists must occur to ensure a fully integrated approach to monitoring and evaluation.

### **Background:**

There is a lack of common, agreed to expectations of what monitoring and evaluation can and should accomplish, leading to a general lack of consistency in all aspects of monitoring and evaluation. As a result, monitoring activities among adjacent national forests and regions, research stations, or Federal, State and local agencies are commonly not coordinated, and opportunities to share monitoring data, responsibilities and results are lost.

Additionally, development of independent monitoring schemes frequently leads to inconsistent design parameters and sampling intensity. The result is information that cannot readily be evaluated in aggregate or larger scale. Thus, the information cannot easily be used to evaluate issues that span forest or regional boundaries. These issues demand a broader perspective than individual forest monitoring plans can provide.

Generally, monitoring plans were not subjected to interdisciplinary team discussion or prioritization. Instead, each resource specialist listed their resource monitoring elements. The plans contain duplication of effort between resources that result in redundant or inconsistent data and conclusions. As a result, monitoring plans are very detailed, requiring enormous staff time to implement. There has been little guidance to interdisciplinary teams to prioritize elements or to integrate monitoring elements and link monitoring to forest plan goals and objectives.

Inconsistency between Forest Service monitoring plans gives the appearance of varying levels of concern or commitment for accurate monitoring and affect our credibility.

### **RECOMMENDED ACTIONS:**

- Regional Foresters and Station Directors will produce a prioritized list of monitoring and evaluation issues for which coordination is needed between and among forests, regions, and research stations.
- Regional Foresters, in cooperation with Station Directors will develop consistent monitoring and evaluation strategies with involvement of other agencies, partners and public. An annual review of the lists and strategies will be conducted and the list will be updated as necessary.
- Deputy Chief of National Forest System will develop a prototype annual Forest Evaluation Report.
- Forest Supervisors will insure monitoring elements in forest plans are developed in an integrated way by an interdisciplinary team.

## **STRATEGY 5: Partnerships and Communication**

Teamwork between agency units (State and Private, Research, National Forest System, Administration, International Forestry, and Programs & Legislation) must be effective and visible. External partners (public participants; Federal, State, and local agencies, tribal governments, universities, and special interest groups) must be invited to participate in the monitoring efforts and provided the results of evaluation.

### **Background:**

Appropriate scientific methods frequently are not used in designing and conducting monitoring and evaluation.

There are many similarities between the iterative process of monitoring research projects and forest plans. Opportunities exist for national forests to utilize the expertise of the scientific community.

Current coordination with research in developing monitoring design and data collection methods is inadequate. Research is reluctant to take on new roles or accept responsibility for the monitoring effort needed to evaluate forest plans. Currently, Research does not have positions, organizational structure, or performance evaluations to provide consultation to National Forests in the monitoring and evaluation process.

### **RECOMMENDED ACTIONS:**

- Deputy Chief for Research will provide consultation capabilities within Research to support National Forest System in monitoring and evaluation activities. Research's support for monitoring and evaluation would focus on providing expertise in monitoring design, data collection, and data analysis.
- Deputy Chief of Research will develop a career and awards system within Research to support National Forest System in monitoring and evaluation.
- Deputy Chief for National Forest System will facilitate coordination with Research for consultation in managing the development of monitoring and evaluation plans that include scientific sampling methodology.
- Deputy Chief of National Forest System, Regional Foresters and Forest Supervisors will develop or revise Memorandums of Understanding with partners and cooperators, including Research, State and Private Forestry, to include opportunities for them to participate in monitoring and evaluation.

## **RECOMMENDED ACTIONS CONTINUED:**

- Deputy Chiefs for National Forest System and Research will promote establishment of partnerships with universities and coordinate these partnerships jointly among Regions, Forests, and Stations.
- Director of Land Management Planning will develop a prototype for managers' use to strengthen public involvement in the monitoring and evaluation phase of forest planning. The prototype will be based on recommendations made by the National Public Involvement Task Group.

## APPENDIX A

### National Monitoring and Evaluation Team

Tom Clifford, Team Leader	WO-LMP
Dan Camenson	WO-LMP
Phil Janik	WO-WL&F
Katherine Jesch	WO-RPA
Dave Miller	WO-InS
Randy Moore	WO-WSA
Ed Schlatterer	WO-Range
Greg Super	WO-Recreation
Joyce Thompson	WO-LMP
Rick Ullrich	WO-PD&B
Martin Prather	Region 1, Watershed
Teresa Ann Ciapusci	Region 2, PPB
Susan Smith	Region 8, PPB
Ronnie Raum	Region 8, PPB
Beth LeClair	Region 9, Huron-Mani. NF
Bob Paddock	Region 9, Ottawa NF
Gordon Booth	Intermountain Station
Dean Knighton	Intermountain Station
Carl Edminster	Rocky Mountain Station
Tom Dell	Southern Station