Apply Knowledge Globally

OUTCOME: Natural resource decisionmaking is improved through the use of reliable information and applications.

Through intellectual inquiry and knowledge transfer, the Forest Service provides land managers and others with better information, applications, and tools for improved resource management and decisionmaking. By advancing our fundamental understanding of forests and grasslands, we can make better informed decisions and better achieve our goals. To increase our understanding of forests and grasslands, we are constantly improving our knowledge of complex environmental processes, biological and physical conditions, resource uses, human and social dimensions, the economic value of the resources we manage, and the interconnections among all these elements. From on-the-ground natural resource management to long-term strategic policy development, all our efforts to sustain forests and grasslands far into the future depend on new knowledge, information, and applications.

The Forest Service has a long record of land management success, even though we work in complex and changing environments. We attribute our success in part to our world-class expertise in research and development; our capacity to develop new technologies; our innovation in forest products; our ability to conduct resource assessments; and our vast collection of geospatial information, inventory data, and monitoring information. Today, knowledge from many disciplines and issues is interconnected, both within and outside the Forest Service. To continue our advancement, we foresee the need to improve knowledge-sharing globally across disciplines and jurisdictional boundaries.

The Forest Service is one of many forestry and natural resource organizations, interest groups, and knowledge centers across the United States and around the world. These entities include other government agencies, partners, collaborators, universities, the private sector, American Indian tribes, and international groups. To benefit from global knowledge, we continually interact—and share what we know—with partners worldwide. By exchanging scientific results, natural resource assessments, management trends, innovations, and best practices across natural resource management disciplines and jurisdictional boundaries, we will gain the information we need to sustain and improve the Nation's forests and grasslands. The transfer of knowledge, technology, and applications will help the global natural resource community make better management decisions in our collective effort to care for all lands and deliver sustainable benefits to people.

Strategic Objective G.
Advance knowledge

The Forest Service conducts highly integrated research at various geographic scales to address issues of environmental and social concern. Basic information gathered through agency programs, such as Forest Inventory and Analysis, Forest Health Monitoring, and our National Forest System land management planning and monitoring work, enables us to provide data, reports, maps, and consultation services to natural resource managers, landowners, policymakers, researchers, analysts, and other interested parties. Our products and services provide for timely analyses of scientifically sound information and lead to better informed management decisions.

Although uncertainty is inherent in our work, we can improve our resource management decisions and outcomes by using the best available information. Our cutting-edge research, monitoring, and assessment activities will continue to enable us to reduce uncertainty by interpreting emerging results and translating them into practical knowledge. As land managers, policymakers, and other users incorporate the scientific discoveries and new knowledge into their decision frameworks, we can expect more effective operational guidelines, forest and grassland management, land management plans, natural resource policymaking, and other constructive improvements.

At all levels of the Forest Service and in every program area, we will strive to advance our knowledge of natural and cultural resources. From data-collection projects that span the Nation to inventory, monitoring, and analysis of individual watersheds, we will communicate new knowledge and make it available and accessible. By sharing information and learning from our partners, we will continue to engage in a global conversation about forest and grassland conservation and management.

LONG-TERM RESULT

Forest Service knowledge-based products and services improve global natural resource stewardship.

Means and Strategies

- Regularly review research and development needs and set priorities.
- Continue information collection and sharing through the Forest Inventory and Analysis program and implementation of the national inventory, monitoring, and assessment strategy.
- Identify priority resource management requirements and core social, economic, and ecological information needs for the agency.
- Find effective ways of communicating resource data and new knowledge and making it widely available, using social media, publications, the Internet, and other tools that have a global reach for disseminating information.
- Identify and capitalize on opportunities to leverage resources across organizational and geographic boundaries to address shared information and technology needs with partners and stakeholders.
- Establish effective, transparent, and collaborative governing processes for agency inventory, monitoring, assessment, and information management activities.

Strategic Objective H.

Transfer technology and applications

Developing effective technologies and applications can help the Forest Service find solutions to vexing problems we face in managing forests and grasslands. By sharing our discoveries with our partners, we will continue to help others across the Nation and around the world to manage forests sustainably.

The Forest Service operates many centers of excellence that develop tools for land managers. The centers include research and development stations, geospatial and remote-sensing centers, a laboratory specifically devoted to forest product development, a multiagency agroforestry center, and technology and development centers. These centers work cooperatively with Federal and State agencies, universities, private firms, and independent research groups to make equipment, information, analysis tools, concepts, and ideas available to fulfill important needs. The centers face a common challenge: distributing their applications widely enough to realize their potential. Nevertheless, they make it possible for Federal and State agencies and other partners to better manage millions of acres of forests and grasslands.

New technology, tools, and expertise will help us identify not only new management options and their impacts but also address threats such as fire, insects, disease, and other forest disturbances, as well as the human influences that shape them. Our understanding of natural processes and socioeconomic dimensions influencing past and present conditions can help us model future conditions and guide adaptive management strategies to achieve desired results. We will help our partners use new technologies and tools, enhancing the use and value of our Nation's natural and cultural resources.

LONG-TERM RESULT

Technology and applications delivered to users meet expectations.

Means and Strategies

- Develop and use cost-effective methods for transferring scientific information, technologies, and applications.
- Develop tools for evaluating the efficiency and effectiveness of different management practices that may better achieve our management objectives.
- Develop options to ensure that agency decisionmakers acquire and apply the most appropriate scientific information, technologies, and applications.
- Implement effective communication plans to improve the distribution of technologies and applications that have been developed.

Strategic Objective I.

Exchange natural resource expertise

Experts outside the Forest Service develop vital information relevant to land and resource management. By combining their information with ours, the Forest Service generates new ideas, contributing to the global knowledge base. To maintain an engaging and cooperative environment, we are dedicated to sharing natural resource expertise, both within the Forest Service and with outside entities across the Nation and around the world. The exchange of natural and cultural resource expertise can benefit everyone, from managers in the field to national policymakers and external partners.

The Forest Service collaborates with a range of international organizations. Through international cooperation, we exchange innovative technologies, address cross-boundary challenges, and find new opportunities to hone our skills. International cooperation is necessary to conserve biodiversity and sustain the ecological, social, economic, and commercial viability of global forest resources.

Our expertise in both natural resource and disaster management uniquely positions the Forest Service to help global partners manage natural resource risks. Assistance we provide includes developing management and conservation strategies for vulnerable ecosystems and strengthening our partners' institutional capacity for adaptation and disaster management. Through our national and global leadership in dealing effectively with wildfires, international disasters, and other incidents, the Forest Service delivers many emergency response services to the American people and to the global community.

At the Forest Service, we will continue to work internally and with our external partners to share knowledge, technology, and tools across jurisdictional and cultural boundaries. Through collaboration and effective communication, land managers will help make forests and grasslands become more resilient to a changing climate, discover more effective tools for natural resource stewardship, and improve our understanding and integration of socioeconomic factors. Examples of other outcomes of collaboration and effective communication include managing projects across broad landscapes and improving collaboration with the public. By linking the skills of our field-based staff and policy experts with partners nationally and globally, we will address the most critical land and resource management issues and concerns across the Nation—and around the world.

LONG-TERM RESULT

Exchange of natural resource expertise within the agency and with external partners improves forest and grassland resource management in our Nation and in the world.

Means and Strategies

- Continue to expand information exchange within the Forest Service and externally.
- Develop collaborative tools to support internal and external exchange of information with governments at all levels, both in the United States and around the world.
- Support intra-agency personnel exchanges to provide researchers, technical specialists, managers, and other employees with alternative perspectives of the roles and challenges of different mission areas.
- Develop Internet-based tools to improve internal and external user interaction with the Forest Service and Forest Service data.