The McIntire-Stennis Cooperative Forestry Research Program

2017 Strategic Plan



am pleased to introduce this new strategic plan for the McIntire-Stennis Cooperative Forestry Program (MS Program). This plan was developed under the leadership of the National Association of University Forest Resource Programs (NAUFRP), which represents 80 institutions of higher education across all 50 states and 4 U.S. territories. Almost all of the NAUFRP institutions participate in the MS Program, which has been an invaluable asset for building and maintaining our members' capacity for conducting research and supporting graduate education.

The last time that NAUFRP undertook a strategic planning process for the MS Program was in 2006, when 100 forestry program leaders and faculty, agency personnel, industry representatives and others convened for the two-day Forest Research for the 21st Century: Defining Strategic Directions and Rebuilding Capacity, in Shepherdstown, WV. The strategic plan that was developed at this summit was published in 2007 and has served as a guide for nearly a decade. Much has changed since then, however, in terms of the issues facing the forestry sector and the issues facing our member institutions. The timing therefore seemed right to develop a new plan.

Both the process undertaken and the final result are substantially different than our previous effort. Instead of gathering a large group in one place, we convened a much smaller working group of 30 individuals. Prior to coming together in Washington, DC in March of this year, those individuals interviewed approximately 300 other stakeholders and shared the results of those interviews during our meeting. An even bigger difference is that we have chosen to focus this new strategic plan not so much on the forestry issues that we think are important but on the goals, strategies and action steps that we believe will make the MS Program itself more effective.

The development of this new strategic plan would not have been possible without the financial support of the USDA's National Institute of Food and Agriculture (NIFA), which is the agency responsible for implementing the MS Program. We greatly appreciate the support of Dr. Sonny Ramaswamy, the NIFA Director, and his staff. The actual process of developing this plan was led by our Research Chair, Dr. Terrell "Red" Baker, from the University of Kentucky. Red devoted many hours to this and I am deeply appreciative of his work on behalf of NAUFRP, NIFA and the broader forestry community. I also would like to thank all the other members of the working group (see Pages 12-13), Dr. Mitch Owen, who facilitated our meeting in Washington, DC and contributed greatly to the whole planning process and Terri Bates, NAUFRP's Executive Liaison, who was instrumental in providing the logistical support needed to help this process run smoothly. Finally, I would like to thank Dale Greene, Sandi Martin, and Wade Newbury from the Warnell School of Forestry and Natural Resources at the University of Georgia for creating the final publication.

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The McIntire-Stennis Cooperative Forestry Research Program (MS Program) has provided fundamental support for forestry research and graduate training at colleges and universities across the nation for over 50 years. The bipartisan brainchild of Congressman Clifford McIntire (R) from Maine and Senator John Stennis (D) of Mississippi, Congress passed, and President Kennedy signed, the McIntire-Stennis Cooperative Forestry Research Act (PL87-788) in 1962.

MS Program funds are distributed to each state based on a formula that considers three factors; 1) non-federal commercial forestland area, 2) annual timber harvest volume, and 3) total non-federal forestry research expenditures (i.e., the match).

The purpose of the MS Program is threefold:²

- 1. Increase forestry research on forest productivity, utilization, and protection;
- 2. Train future forestry scientists; and
- 3. Cooperate with states in forestry research.

The original legislation specified forestry research in eight areas:

- 1. Reforestation and management of forests,
- 2. Forested watersheds and waterflow,
- 3. Forest and related rangeland for domestic livestock forage, and wildlife food and habitat.
- 4. Outdoor recreation,
- 5. Protection against fire, insects, diseases, or other destructive agents,
- 6. Utilization of wood and other forest products,
- 7. Forest policy, and
- 8. Other such studies as may be necessary.

¹ Bullard, S.H., P.J. Brown, C.A. Blanche, R.W. Brinker, and D.H. Thompson. 2011. A "Driving Force" developing the nation's forests; The McIntire-Stennis Cooperative Forestry Research Program. Journal of Forestry. 109(3):141-148.

²Rickenbach, M., A. Mohamed, C. Blanche, & E. Norland. 2013. Final report: Review of McIntire-Stennis Cooperative Forestry Research Program. USDA National Institute of Food and Agriculture Institute of Climate, Bioenergy, and the Environment final report to USDA Forest Research Advisory Council. 22 pp.

THE 2016 MCINTIRE-STENNIS STRATEGIC PLANNING PROCESS

In 2015 USDA NIFA approached the National Association of University Forest Resource Programs (NAUFRP) to update the MS Program Strategic Plan; the last strategic plan was completed in 2007³. A modest grant (\$30,000) was provided by NIFA to complete this strategic planning process. NAUFRP's Executive Committee, comprised of the officers of that organization representing all forestry programs, and many companion disciplines (i.e., wildlife, natural resources, etc.) from across the country identified a core group of individuals who were uniquely prepared to participate in a strategic planning exercise to design the next MS Program Strategic Planning process. Every effort was made to provide 1) adequate geographical representation, 2) adequate representation from large and small universities as well as from the 1890 (Historically Black Colleges and Universities) and 1994 (Native American) institutions, 3) an appropriate cross-section of federal agency personnel, 4) NGOs and other partner/stakeholder associations, 5) state forester representation from the National Association of State Foresters, and 6) a combination of senior forestry researchers and administrators who had been through previous MS-Program strategic planning exercises as well as those who were new to the process. Collectively, these individuals became the 2016 MS Program Strategic Planning Working Group (Working Group).

The Working Group first met in Baton Rouge, Louisiana at the Society of American Foresters (SAF) annual convention to design and plan the strategic planning process. This retreat was led by Dr. Mitch Owen (Mitchen, Inc.) who helped develop an interview-based data-collection process that engaged nearly 300 individuals from across the country. During the ensuing months, members of the Working Group reached out to members of forest industry, agency personnel, state foresters, students, NGOs, faculty, administrators, landowners, and VIPs (policy makers and staff who have some experience working with the MS Program in a funding context) to better understand our stakeholder community and their views of the MS Program. The following questions were asked of all interviewees:

- 1) What is your level of awareness of the MS Program?
- 2) What is the MS Program doing well?
- 3) What is the MS Program not doing well?
- 4) What are the emerging trends/issues in your forest sector or discipline that will impact you in the next ten years beyond your control (e.g. economic, social, political, technological, and scientific).

One of the primary intents, and benefits, of this exercise was to begin a dialogue with key individuals representing the broadest possible cross-section of stakeholders of the forestry community. The results of these interviews were recorded and brought to a second, two-day retreat (March 9-10, 2016) which took place in Washington, DC. During the retreat, members of the Working Group shared and analyzed the results of their interviews with fellow committee members with the final objective being to identify 3-4 key goals for the next decade of the MS Program.

The retreat identified a number of areas of historic and current strengths of the MS Program, as well as numerous areas where the MS Program is being impacted by external trends and forces; these will be addressed in the following two sections, respectively.

³Sustaining productive and healthy forests: An investment in America's competitive position in the global marketplace (McIntire-Stennis Strategic Plan); National Association of University Forest Resource Programs, 2007. http://www.naufrp.org/pdf/M-S%20Plan.pdf.



Supporting graduate education . . .

Since 1962, MS-supported research has provided critical basic understanding and applied solutions to the management of our nation's forests and related rangelands. The primary vehicle through which this occurs is graduate education. MS Program funding has helped produce thousands of forestry scientists and other research professionals – these are the alumni of the MS Program who are critical to the management of our nation's forest resources. Since its inception, over 9,400 master's degrees and 3,000 doctoral degrees were supported by the MS Program; this represents more than 30% of all graduates in the field of forestry.

Growing the economy and providing solutions to our most pressing challenges . . .

During this same time period, the challenges facing our nation's forests have grown dramatically. In an era of declining investment toward traditional and fundamentally important forestry research disciplines, capacity funds such as the MS Program are irreplaceable for keeping a critical mass of faculty, graduate students, and research infrastructure to help solve the nation's most pressing forest management problems. Supporting forestry research and graduate education promotes jobs and boosts the economy in every state, often providing important capacity funds that would not be available through other, competitively awarded programs. Forest industry and related forestry sector businesses directly employ nearly a million people and represent over \$95 billion in economic activity (contribution to GDP) to the United States. Similarly, the nation's more than 11 million forest landowners rely on trained forestry and natural resource professionals to help them manage and conserve our precious natural resources.

Cost-effective use of our nation's financial resources . . .

Given the economic importance of forest industry, as well as the ever-increasing environmental challenges facing our forests throughout the country, the MS Program provides an exceptional return on investment. Funds from the MS program are often leveraged at ratios far exceeding the required 1:1 match by states, sometimes approaching \$9 for every \$1 of MS provided (Thompson 2003)⁴. This represents a highly cost-effective investment of federal funds and helps ensure that there is a base level of capacity to conduct fundamentally important forestry research in every state and territory.

Flexibility to work at local and/or national level . . .

Though the nomenclature has been updated with advances in science since 1962, the general research priorities and subject matter remain similar to the original legislation, suggesting the visionary and timeless relevance of the MS Program. Clearly, one strength of the MS Program is the flexibility to work on national, state, or local priorities and adapt to or invest in changing circumstances on the ground. In fact, one of the original purposes of the program was to focus on state priorities and there is strong agreement this flexibility should remain. Attempting to define, or direct, research subject matter centrally may not result in the most effective use of resources or problem solving. Additionally, there is growing recognition that forestry research is often a global undertaking, with many international dimensions and issues, such as climate change, global trade and invasive pests, among others.

⁴ Thompson, D.H. and S.H. Bullard. 2004. History and evaluation of the McIntire-Stennis Cooperative Forestry Research Program. Research Bulletin FO-269. Forest and Wildlife Research Center, Mississippi State University, Mississippi State, MS. 58 p.

TRENDS AND FORCES IMPACTING MCINTIRE-STENNIS PROGRAM

Loss of purchasing power . . .

Though funding has grown since its inception, increases have failed to match the 1) increased costs of conducting research or 2) the increase in the number of institutions receiving funding. The 1962 legislation that created the MS Program authorized funding of up to one-half of the funds appropriated for federal forestry research conducted directly by the USDA (Bullard et al. 2011)⁵, which is approximately \$300 million, leaving room for a five-fold increase in MS Program funding to reach authorized levels. Moreover, funding for the MS Program has failed to keep pace with other federal research capacity funding programs. In 1964, funding for the MS Program was approximately 2.2% of funding for the Hatch Program (approximately \$41,000,000 less in absolute dollars). Currently MS Program funding is only 1.4% of Hatch (approximately \$210,000,000 less in absolute dollars). If the MS Program was raised once again to be 2.2% of Hatch, then absolute funding for the MS Program would be over \$53,000,000 (it is currently \$34 million).

Compounding the challenges associated with this erosion of dollars, the 2008 Farm Bill granted the 1890 land-grant institutions eligibility to receive MS funds, increasing the number of institutions receiving MS funds from 65 to 78, further reducing the spending power of MS funds at existing institutions. This has resulted in substantial decreases in the amount of funding received by many of the institutions that traditionally received funds, particularly in the southeastern states. In addition, the strategic planning process revealed a strong interest by some of the 1994 institutions to become eligible for MS Program funds in the near future. There is strong agreement that it is critical that existing institutions who do effectively utilize MS Program resources not lose capacity, or support, for conducting research, supporting students, and cooperating with state forestry agencies.

Communication is critical . . .

While most interviewees had some cursory level of awareness of the MS Program, few had in-depth knowledge or active engagement with MS researchers. For example, State Foresters, one of the major stakeholders of the MS Program and a sector specifically referenced in the original legislation, had little more than a perfunctory level of awareness of the MS Program, its successes, or its relevance to forest management at the state level. This was also true of forest industry for the most part. Similarly, despite being beneficiaries of the MS Program, many graduate students were unaware of the depth, breadth, and importance of the MS Program to forestry research around the country and few, if any, considered themselves MS Program alumni. Very few of the individuals interviewed knew enough to be effective advocates for the program. Despite the great work being done across the country, it is not being communicated.

⁵ Bullard, S.H., P.J. Brown, C.A. Blanche, R.W. Brinker, and D.H. Thompson. 2011. A "Driving Force" developing the nation's forests; The McIntire-Stennis Cooperative Forestry Research Program. Journal of Forestry. 109(3):141-148.



- As the challenges facing our forested landscapes continue to grow, pressure and expectations for science to solve problems only increases.
- Climate change, wildfire, sustainability, land-use pressures, growing populations, and the loss of fundamental research and teaching expertise/capacity provide examples of scientific forces affecting the types of research being conducted through the MS Program. Retaining the flexibility to adjust research to meet the needs of the state, region, or nation is critical to maintaining the strength of the MS Program.
- As technology advances, so do the tools available for understanding and managing the nation's forests and natural resources; funding and flexibility to incorporate cutting-edge technology into research and graduate education programs is critical.
- A variety of economic forces are also affecting forest management, research, and education including increasing costs of regulatory programs, increased costs of conducting research, industry consolidation and the loss of research being conducted in the private sector, globalization and import/export markets and trends, and significant changes in consumer preferences and markets related to forest products, to name a few.
- Social forces affecting forest management, research and education include changing demographics nationally and regionally, the demand for rural economic development, urbanization, landuse changes, and loss of forest cover, and a loss of connectedness to natural resources and their importance to individuals and communities.
- There are a variety of political forces exerting influence on the MS Program and forestry education and research in general including increased regulation, decreased financial resources available for fundamentally important and applied research programs, increased polarization among the public and political entities, as well as significant reductions in state investments in education nationally, which creates additional financial pressure on educational institutions, counties, and the federal government to fill in the gaps.

GOALS AND STRATEGIES

Using the information derived from nearly 300 interviews, and following in-depth analysis by the Working Group, three goals were identified for the next decade of the McIntire-Stennis Program.

- 1. Create the future generation of forestry educators, scientists, and practitioners through graduate education
- 2. Build and sustain strategic relationships that enhance overall program effectiveness and support
- 3. Communicate and educate the importance, impact, and successes of the McIntire-Stennis Program

These three goals emerged as critical for strengthening the MS Program as it currently exists and enabling it to continue serving the needs of the nation into the future. The Working Group recognizes these goals do not address specific research goals or priorities, as have previous McIntire-Stennis strategic plans. Because much work has recently been done in this regard, especially the Association of Public and Land-grant Universities (APLU) Board on Natural Resources (BNR) BNR Roadmap (http://www.aplu.org/library/natural-resources-roadmap/file), the Working Group saw no need to duplicate that exercise. Also, the Working Group recognizes one of the clear strengths of the MS Program is its ability to focus on state- and region-specific issues and priorities, as suggested in the original legislation. This enables universities and states to determine research priorities for their geographical area and circumstances. Further, the Working Group recognizes this strategic planning process does not end once the document has been printed. It was determined that focusing subsequent and continuing efforts on the goals, strategies, and action steps that follow are necessary to improve the relevance, impact, effectiveness, awareness, and management of the program.



⁶ Rickenbach, M., A. Mohamed, C. Blanche, & E. Norland. 2013. Final report: Review of McIntire-Stennis Cooperative Forestry Research Program. USDA National Institute of Food and Agriculture Institute of Climate, Bioenergy, and the Environment final report to USDA Forest Research Advisory Council. 22 pp.

GOAL 1: Create the future generation of forestry educators, scientists and practitioners through graduate education

STRATEGY:

Assure disciplinary alignment to meet demand for graduates and expertise.

ACTION STEPS:

- Develop a national assessment methodology to determine the specific fields of study and practice and the quantity of students moving through the graduate pipeline in those fields
- Assess the future demand for forestry specialists in industry, universities, government agencies, NGOs, etc.
- Use assessment data to guide undergraduate students to fields in demand for graduate school, and to fund relevant research in those fields

STRATEGY: Build strong skill sets to create work-force ready graduates

ACTION STEPS:

- Assess existing data and data gaps related to skills needed for success in the workplace
- Continue to focus on and emphasize disciplinary strengths and technical training
- Incorporate educational opportunities to enhance social and related professional skills
- Enhance cultural awareness in graduate student body
- Promote research related to undergraduate education

STRATEGY: Enhance diversity in the graduate student body

ACTION STEPS:

- Review existing reports on enhancing student diversity (e.g., the Berkeley Summit) for information and pursue recommendations of relevance in the graduate student context
- Coordinate with the SAF-led diversity logic modeling initiative to ensure that graduate student-related goals and action items are included
- Encourage and invest in research on enhancing graduate student diversity and on types of forestry-related research that may be attractive to diverse students





GOAL 2: Build and sustain strategic relationships that enhance overall program effectiveness

STRATEGY: Identify key, strategic potential partners, stakeholders, and advocates

ACTION STEPS:

- Develop continually-maintained list of potential partners, stakeholders, and advocates (including relationships, capabilities, interests, and overlapping interests)
- Foster a stronger connection between University scientists and Extension professionals to drive research results quickly and efficiently to end users
- · Conduct gap analysis of university strategic partners

STRATEGY: Engage effectively with partners, stakeholders, and advocates

ACTION STEPS:

- Identify and develop relationship-building exercises, events, opportunities
- Identify and develop engagement strategies
- Attempt to establish systematic means of communication and information sharing that does not rely solely on personal relationships to carry to message
- Understand regional differences and the importance of tailoring message relevant to those interests
- Develop review criteria and evaluate at regular intervals

STRATEGY: Identify and implement mutually beneficial actions to build trust, leverage connections, and work together for common purposes

ACTION STEPS:

- Start locally and regionally and communicate to national level
- Identify overlaps and common ground on which to build relationships and partnerships
- Share local success stories





GOAL 3: Communicate and educate importance, impact, and successes of the McIntire-Stennis Program

STRATEGY: Develop marketing plan

ACTION STEPS:

- Identify audiences (i.e., faculty, students, research partners, stakeholders, NGOs, state foresters, etc.) and what we are asking of them
- Identify what we want our audiences to know about MS (quantitative and qualitative)
- Identify common set of goals among all audiences; use words that matter!
- Create brand communication strategy
- Identify funding to assist in creation of marketing plan

STRATEGY: Create brand and success communication strategy

ACTION STEPS:

- Create MS Alumni ("network" of messengers)
- Develop annual national- and state-level reports for policy makers, partners, and other stake-holders with a focus on documenting impacts of McIntire-Stennis-sponsored research
- Create reputation assessment mechanism (similar to interviews to be repeated at "appropriate" intervals)
- Increase faculty and administrator ability to write effective impact statements (e.g., training, examples, mentors, communications specialists, webinars, etc.)



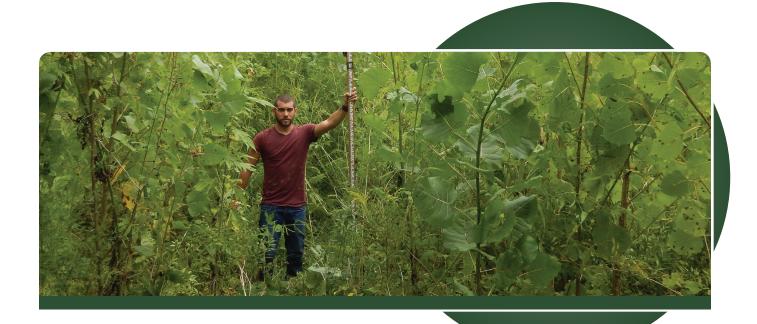


IMPLEMENTATION

Having identified the key goals for the coming decade of the MS Program, and the action items needed to accomplish those goals, the next task is to create smaller teams of individuals (Goal Action Teams) from a broad cross-section of faculty members, administrators, partners, stakeholders, and others from across the country to address action items for each goal. The Team Leaders of the Working Group, with the assistance of the NAUFRP Executive Committee, will identify individuals to participate on each of three Goal Action Teams. With the assistance and oversight of the Working Group, these teams will review their goal and strategies, execute their identified action-items, adding to these where warranted, and periodically share the results of these exercises with the Working Group and NAUFRP Executive Committee. Creating action teams to address specific goals and objectives within the MS Strategic Plan will provide the opportunity to recruit additional individuals to participate in the strategic planning process. These action teams will also reach out to various stakeholders and partners to share the results of their efforts, further expanding the reach, awareness, effectiveness, and support of the MS Program. Action teams will review and enhance the action steps under each strategy. Ideally, additional resources could be identified and made available to each of the Goal Action Teams to carry out their tasks. Action teams will report biannually to the NAUFRP Executive Committee on actions taken and accomplishments toward achieving the goal.

Using the approach described above, the 2016 MS Program Strategic Plan becomes more than just a snapshot in time or a report to be filed. Fully utilized by the Working Group, NAUFRP, and NIFA, the MS Strategic Plan will be a document which guides interactions with outside groups, partnerships, focus areas, educational and awareness campaigns, and stakeholders to increase the effectiveness, efficiency, and output of the MS Program. Further, it will provide for periodic check-ups to ensure goals and objectives are being met. It is also anticipated that the MS Strategic Plan, and the activities taken as described in the document, will be shared annually with NAUFRP membership at the NAUFRP General Assembly meeting each November at the SAF annual convention. The MS Strategic Plan will also be a useful tool for communicating to other forestry-related groups, including the broad cross-section of stakeholders originally interviewed, about current activities, shortcomings, and successes of the program.

For those interested in learning more, or participating in the implementation process, please contact Terri Bates (*naufrp@verizon.net*), Executive Liaison, National Association of University Forest Resource Programs (NAUFRP).



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