THE UNIVERSITY OF MAINE

MAINE EPSCoR

NSF Award 2241675

Forest-based Opportunities for Resilient Economy, Sustainability, and Technology (Maine-FOREST)

NSF EPSCoR Track 1 Planning Grant: Sector Experts' Inputs

Knowledge Sharing, Collaboration Opportunities, & Recommendations

The Maine Planning Grant team for the National Science Foundation (NSF) Established Program to Stimulate Competitive Research (EPSCoR) Track 1 proposal engaged in knowledge-sharing conversations with 11 subject matter experts in the field who spoke about forest industry opportunities, workforce education, research, conservation, policy making, and Indigenous engagement.

The goal of conversations for the EPSCoR proposal team was to help develop and deploy insights on wood fiber-based products and markets, forest AI and sensors, carbon solutions, and tourism, as well as the workers and communities that participate in the forest-related sectors.

Experts hailed from industry coalitions, manufacturing organizations, government, land conservation, non-university research institutes, non-degree training organizations, and universities.

"I would love to see how we could combine initiatives, raise funds, put the pieces together, and maximize collective impact."

DATA / AI

ECONOMICS

INCLUSION

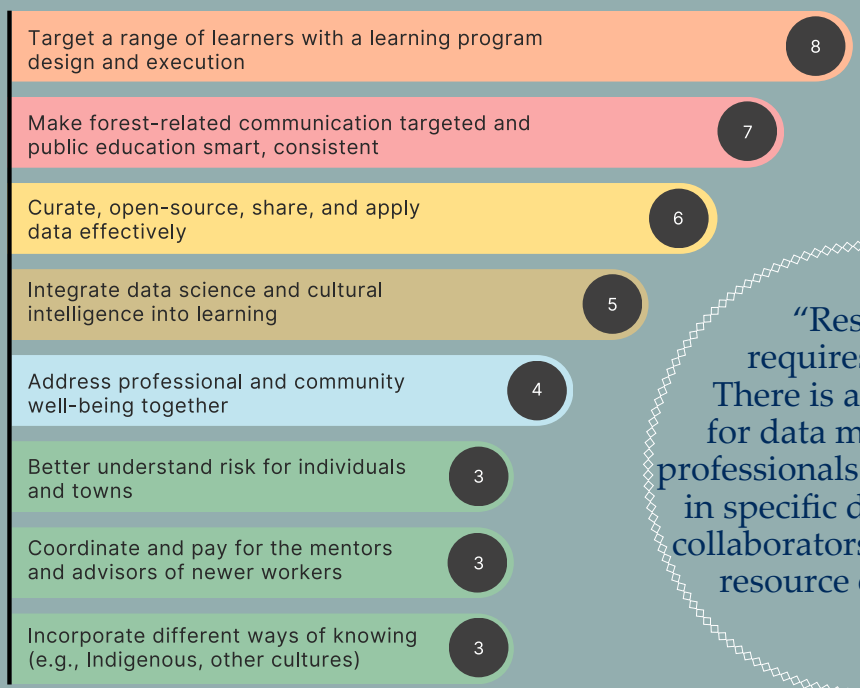
LEARNING

The Experts...

- Identified gaps they saw in research and workforce capacity (e.g., skills and staffing). They described solutions they and their peers were undertaking.
- Shared their aspirations for the social and scientific dimensions of the EPSCoR grant.
- Articulated how collaborative research and action would expand capacities, awareness, investment, community well-being, and policy-innovation.
- Proposed how a network model could address the (often fragmented) responses coming from institutions, nonprofits and industry players.

Wish List for EPSCoR Track 1 Research Program

Numbers in circles indicate how frequently experts mentioned these eight items



"Research requires data. ... There is a huge need for data management professionals with expertise in specific domains, and collaborators with natural resource expertise."

Center for Research on Sustainable Forests

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Sector Recommendations

Experts shared insights about seven categories

- Category
- Workforce Development
- Data Management / Analysis / Application
- Public Education & Communication
- Livable Communities & Affordable Housing
- Industry Attractiveness
- Network Strategy
- Direct Partnering Strategy

Collaborate and translate: Opportunities discussed cut across data/AI, economics, inclusion and learning categories. These need to be framed and translated to have a positive impact.

Pilot, adapt, and spread: This group showed a strong bias for action, as most experts advocated for moving into or expanding pilots quickly and iterating.

Manage knowledge, big and small: There are promising developments for the forest sector workforce and economics, but we need a multi-pronged campaign to project the forest sector's brand as "green economy" and "climate or carbon friendly." At a local scale, 1:1 and small group mentoring of learners improve worker's self-confidence and affinity for the sector.

Forest professional learning gaps: Initiatives coming from institutions, nonprofits and industry players are fragmented. Traditional degree-based education needs to be supplemented by non-degree, on-the-job, apprenticeship and "stackable" content — all using innovative delivery modalities, coupled with more transparency into careers and development options.

Public perceptions and misinformation, coupled with policy and investment-return uncertainty, may be drivers of conflict, investor-hesitancy, and professionals' reluctance to enter (or stay in) forest-related careers. Experts pointed to government, non-profit, and industry efforts to address these information issues, but feared that a lack of coordination may be limiting impact.

Data science, along with environmental science applications, should attract many young digital natives. Data science without forest domain knowledge is incomplete, and experts called for well-managed partnering across disciplines. They also advocated for data science to include both natural and social data.

Networks are essential to resolving issues related to planning, coordination, messaging, and content fragmentation. Networks require timely investments in facilitation, knowledge-sharing, and participation.

Networks & Collaboration

- A component of the solution to these complex gaps is nimble networks (or "communities of practice"). Networks are widely viewed as valuable for achieving scale, reach, transparency, and belonging.
- Experts felt networks would be essential to resolving planning, coordination, messaging, and content fragmentation. However, experts pointed out that networks require systematic and persistent investments in design, convening, and communication. For the EPSCoR program, experts recommended leveraging existing network(s), rather than establishing new networks.
- Those collaborative knowledge networks—comprising members from research, green economy, Indigenous, landowner/manager, and conservation groups—will sustain growth and innovation for this project.
- Collaborate early and intentionally. Strategically connect the EPSCoR research with forest landowners, interdisciplinary schools and departments across Maine universities and colleges, Indigenous communities, commercial partners, state and federal agencies, and secondary-school educators.

Access the complete report: crsf.umaine.edu/maine-forest/epscor-planning-grant
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