Researchers: Sandra De Urioste-Stone, Aaron Weiskittel, Linda Silka, Jane Haskell, Brooke Hafford MacDonald, Lydia Horne, Hope Kohtala, Nathaniel Burke, Asha DiMatteo-LePappe

**STAKEHOLDER ENGAGEMENT—INDUSTRY SUBSECTOR ANALYSIS**

**PURPOSE**
Enhance sustainable economic development by understanding forest industry stakeholder perceptions of risk and opportunities

- Inform Strategic Visioning Process (FOR/Maine)
- Assess Strengths, Opportunities, Aspirations, and Resources (SOAR)
- Identify resource management and business strategies to increase adaptive capacity

**RESEARCH METHODS**
Our study includes the facilitation of focus groups, and semi-structured interviews with industry stakeholders to understand and compile multiple experiences, opinions, and visions. Responses have been transcribed and analyzed using NVivo 12.

To date, 50 individuals have participated in the study, representing the following industry subsectors: (1) Land managers – those who manage timber lands; (2) Land owners – those who own timber lands; (3) Loggers – those who work to harvest timber; (4) Transportation – those who transport timber and timber products; (5) Sawmills – those who own or work in a sawmill; (6) Pulp and paper mills – those who own or work in a pulp and paper mill; (7) Bioenergy – those who own or work in biomass/bioenergy plants; (8) Professional services – those who work in mapping or surveying; and (9) Professional groups – those who lead or work in professional groups or non-profit organizations. Additionally, we have collected data from a small sample of policy makers, foresters from government agencies, and capital investors.

**MAJOR FINDINGS**
Key ideas have been grouped under three main analytical themes: strengths of the Maine forest resources industry; challenges experienced by industry stakeholders; and future opportunities.

**Strengths:** Strong collaboration across sub-sectors; recognition that the industry is important for Maine and many rural communities in the state; availability of technology that makes operations more efficient; connected forest landscape; diversity of species, forest products, and businesses; field-centered nature of the industry that appeals to people that love the outdoors and are passionate about the forest and forestry.
KEY TO SUCCESS...STRONG COLLABORATION BETWEEN PRIVATE-PUBLIC-UNIVERSITY ACTORS, AND INTEGRATION ACROSS SUB-SECTORS

Challenges: Aging population that leads to a lack in quantity of labor force; younger labor force that is perceived as less reliable and of “less quality” than the older labor force; physical strain of the job that makes recruitment of labor force harder; non-competitive wages and lack of incentives (e.g., health insurance, and other benefits); managing for multiple and at times conflicting uses of the land (e.g., recreation and tourism along with forestry operations); limited and low quality of infrastructure (roads, railroads) in several areas in the state that decreases efficiency; high energy costs and taxes in comparison to other regions in the US and abroad; finding a sustainable market for low-grade products; environmental changes.

Opportunities: Technological advances; adding value to sell products in international markets; take advantage of proximity to large markets; expanding collaboration with UMaine to take advantage of advances in wood technology and science.

According to study participants, strategies that could foster the success of the forest industry into the future, while ensuring community vitality, include:

- Invest in outreach activities to enhance the relationship between the forest industry and the public (communities, recreation users, visitors, etc.) to maintain a “social license” (approval from the public) to conduct forest operations.
- Conduct educational activities with k-12 students in Maine to encourage the youth to pursue forest resources related careers. Participants reiterated the importance of starting recruitment “early”.
- Use of new technology to develop and sell new products using low-value materials.
- Utilize integrated planning to reduce conflicts among different industries (i.e., forestry, recreation, etc.).

FUTURE RESEARCH

A group of UMaine researchers will develop a socioecological framework to assess the resilience of forest socioecosystems in Northern Maine to climate change (grant provided by United States Department of Agriculture National Institute of Food and Agriculture (USDA-NIFA) Climate and Land Use Program). The research—to be conducted in collaboration with forest industry stakeholders—will explore the impacts of climate variability on land management and land cover using multiple research methods from the social and biophysical sciences.