Stakeholder Needs Assessment: Research Priorities

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Stakeholder Needs Assessment

- Two online PINEMAP stakeholder surveys conducted December 2013-February 2014:
- Members of one or more of the southern university-corporate forest research cooperatives (Timber Investment Management Organizations, Real Estate Investment Trusts, forest products manufacturing, public land management, large private landowners)
  - Sent to 129 individuals, 51% response rate
  - Extension forestry specialists and state forest agency foresters
    - Sent to 138 individuals, 47% response rate
- The two surveys varied slightly, but covered the same topics, including research priorities, preferred delivery mechanisms, and barriers/limitations

Survey Objectives

1. Determine which PINEMAP research would be of most use to industry cooperators and Extension forestry specialists and state agency foresters.
2. Gain an understanding of stakeholder needs and how information should be tailored for specific audiences.
3. Determine the most effective mechanisms for information delivery to meet stakeholder needs.

Corporate Landowner Survey: Respondents

Organization Type	n	%
Consulting	10	18%
REIT	17	30%
TIMO	7	12%
Vendor	4	7%
Forest Products Manufacturing	8	14%
Public Land Management	8	14%
Large Private Landowner	3	5%
TOTAL	57	

Acreage owned or managed	n	%
0-100,000 acres	20	36%
100,001-1,000,000 acres	15	27%
> 1,000,000 acres	20	36%
TOTAL	55	

Research Needs: Impacts of climate variability & climate change

- **Research cooperative survey:** Please rate the importance to your organization of research on the following potential impacts of climate variability and climate change.

- **Extension/state agency survey:** Please rate the importance of incorporating new knowledge on the following potential impacts of climate variability and climate change into your educational and professional development programming activities.

Research Needs: Impacts of climate variability & climate change

	Important or Very Important	
Research	**Research cooperative members**	**Extension/ state agency**
Changes in ***forest growth and productivity***	91.67%	60.94%
Changes in ***timber supply***	79.31%	64.62%
Changes in ***land values and land use options***	70.00%	61.54%
Changes in forest management risk associated with the ***intensity, severity, or magnitude of forest insect or disease outbreaks***	64.41%	72.31%
Changes in ***abundance and ranges of invasive species***	49.15%	80.00%
Changes in forest management risk associated with ***intensity, severity, or magnitude of forest fires***	44.06%	64.61%
Changes in ***phenology***	41.38%	33.85%
Changes in forest management risk associated with ***extreme weather events (heavy winds, lightning, hurricanes, drought)***	33.89%	70.77%

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Research Needs: Silvicultural activities

PINEMAP aims to support preparedness for climate variability and change….

- Please rate the importance to your organization of research on the following silvicultural activities.

  (Research cooperative survey)

- Please rate the importance of incorporating new knowledge on the following silvicultural practices into your educational and professional development programming activities.

  (Extension/state forest agency survey)

	Important or Very Important	
Research	**Research cooperative members**	**Extension/ state agency**
Planting genotypes that are tolerant of drought, insects, and/or disease	74.57%	65.08%
Breeding for enhanced yield	71.67%	60.31%
Silvicultural techniques to promote forest productivity and increase stand vigor (i.e., partial cutting or thinning) to lower the susceptibility to insect attack or disease outbreaks	71.66%	85.94%
Species and/or genotype selection	68.34%	59.38%
Fertilization to enhance forest growth	67.80%	27.42%
Breeding for pest resistance and for a wider tolerance to a range of climate stresses and extremes	66.67%	59.38%
Managing forest insects and diseases	65.00%	73.01%
Long-term seedlot trials to test improved genotypes across a more diverse array of climatic environments than in previous tests	52.54%	51.62%
Control of undesirable plant species that will become more competitive in a changed climate	51.72%	73.44%
Movement of seed stocks from one area to another	50.00%	48.44%
Vegetation management to offset drought impacts	47.46%	46.87%
Selective removal of suppressed, damaged, or poor-quality trees to increase resource availability to the remaining trees (precommercial thinning)	44.06%	54.69%
Density management through initial planting spacing or thinning to offset drought impacts	42.37%	54.69%
Inclusion of climate variables in growth and yield models	40.67%	37.50%
Adjusting schedules to harvest stands most vulnerable to natural disturbances (e.g., insect or disease outbreaks or fire)	39.65%	59.68%
Sanitation cuts that remove infected trees to reduce disease losses	28.81%	48.44%

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Research Needs: Assessments, models, projections, etc.

- **Research cooperative survey:** Please rate the importance to your organization of research in the following areas.

- **Extension/state forest agency survey:** Please rate the importance of incorporating new knowledge about the following modeling and assessment areas into your educational and professional development programs.

Research Needs: Assessments, models, projections, etc.

	Important or Very Important	
Research	**Research cooperative members**	**Extension/ state agency**
Assessment of future productivity on forest land being considered for acquisition or sale	45.00%	**55.55%**
Economic impact of climate variability and climate change for the southeastern U.S.	30.00%	52.38%
Climate data and future climate projections for the southeastern U.S.	28.34%	46.03%
Assessment of risks associated with climate variability and climate change on forest land being considered for acquisition or sale	27.12%	44.44%
Information models or processes necessary for participation in carbon markets	15.25%	19.05%

Barriers/Limitations

- **Research cooperative member survey:** To what extent do the follow factors affect your organization's ability to incorporate climate information into management planning?

- **Extension/state forest agency survey:** To what extent do the following factors affect your ability to incorporate climate information into your education and professional development programming activities?

Barriers/Limitations

	To a large extent or To a very large extent	
Factor	**Research cooperative members**	**Extension/ state agency**
Limited availability of scientific information on climate change impacts on southeastern forests	40.67%	46.67%
Limited availability of policy or financial incentives to change practices	37.29%	**50.00%**
Limited organizational consideration of climate-related adaptation issues in forest management and planning	28.81%	31.66%
Limited organizational understanding of options to adapt to climate change	25.42%	46.66%
Limited organizational investment in training, education, capacity building, knowledge exchange, or technology transfer	25.42%	43.33%
Limited ability to change forest management practices in response to new information	25.42%	31.67%
Limited organizational understanding of the potential impacts of climate change	23.73%	38.33%

Stakeholder Feedback: Research Priorities

- Do these identified research priorities meet the needs of your organization with regard to climate and planted pine management?

- What additional climate-related research priorities does your organization have?