



KEY ACTIVITIES – Knowledge Production



MISSION ORIENTED RESEARCH.

Since its inception NHRI has always strived towards a research model to effectively provide tangible benefits to the forest sector. Research must focus on problem-solving, be undertaken by mixed and flexible team. Quality of the work requires relevance, feasibility and timeliness. The goal is to provide user-ready knowledge that improves the financial and silvicultural sustainability of hardwood stands. In order to implement our strategy of mission-oriented research, we have put in place a model and processes to ensure that our work is focused on bringing solutions to our partners and clients.



KEY ACTIVITIES – 3 Roles fulfilled by NHRI

Knowledge creation

- Identifying needs and priorities of commercial collaborators
- Searching for existing knowledge where possible
- Supporting research collaborators with data collection and analysis
- Undertaking focused research

Knowledge mobilization

- Infomediary: summarizing and disseminating existing information
- Knowledge translators: synthesizing or repackaging information to meet specific needs and situations
- Knowledge brokers: facilitating linkages and collaboration between producers and users

Supporting innovation

- Facilitating collaboration and information exchange, including client markets
- Systematic monitoring of potential sources of new ideas and knowledge
- Promoting "thinking outside the box"



NHRI RESEARCH AREAS



RESEARCH AREAS

I – RESOURCE CHARACTERIZATION

II – IMPORTANCE OF SITE AND CLIMATE

III – IMPLEMENTATION AND IMPACTS OF SILVICULTURE

IV – EFFICIENT FOREST OPERATIONS

V – WOOD SUPPLY, PLANNING AND ANALYTICS



NHRI RESEARCH AREAS

RESOURCE CHARACTERIZATION

- Determine the state of the hardwood resource in N.B.
- Modify the inventory process in N.B. to provide the important characteristics of hardwood stands and trees required to formulate strategies at all scales.
- Create a process to allow for better prediction of the distribution of volume by species in present and future stands.
- Revise the stratification method for hardwood-dominated stands in order to attain operational and strategic efficiency.
- Develop a methodology and criteria to characterize the quality of trees.
- Produce eligibility matrices for existing stands based on these processes.
- Recommend the research needed to fill in gaps in our knowledge.





NHRI RESEARCH AREAS



IMPORTANCE OF SITE AND CLIMATE

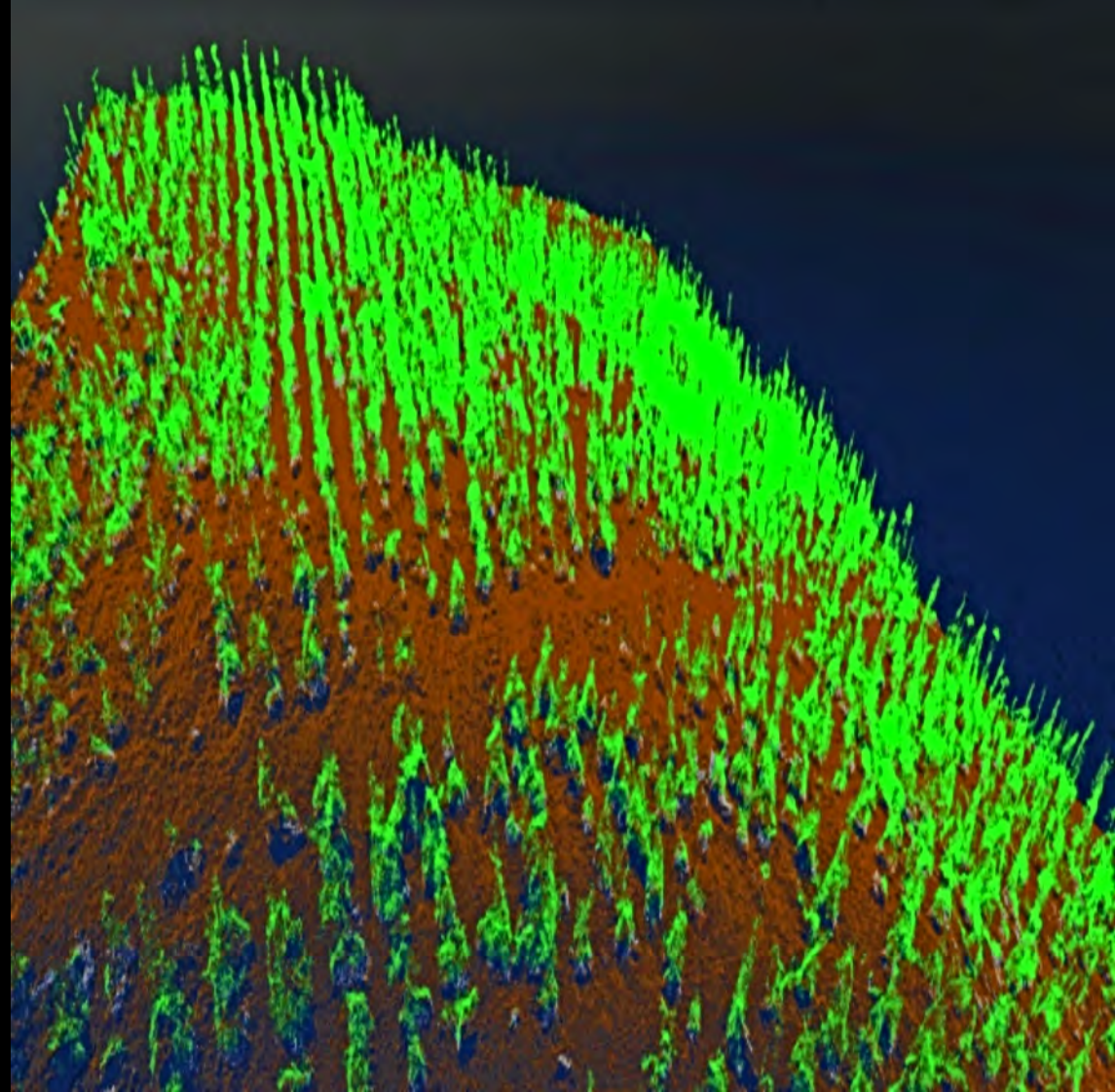
- Develop and mobilize knowledge and solutions related to the use of silviculture as a climate change adaptation and mitigation tool.
- Inform forest stakeholders of the potential impacts of climate change on forests and enable them to respond to these changes by providing them with the proper silviculture techniques and tools.



NHRI RESEARCH AREAS

IMPLEMENTATION AND IMPACTS OF SILVICULTURE

- Determine which regimes, treatments and prescriptions to model in order to increase growth and yield.
- Determine response patterns to silvicultural treatments in our region.
- Improve our capacity to model the effects of silviculture.
- Revisit silviculture systems for hardwood-dominated stands to align them with long-term economic profitability.
- Develop forestry practices and silvicultural treatments that will regenerate desired species (and discourage undesirable species like beech).
- Synthesize knowledge already gained in this area in the U.S., Quebec and Ontario.
- Quantify the effects of silvicultural treatments on growth in even-aged and uneven-aged stands.
- Better understand the dynamics of regeneration of species after treatment.





NHRI RESEARCH AREAS

EFFICIENT FOREST OPERATIONS, WOOD SUPPLY AND ANALYTICS

- Determine how to reduce the cost of forest operations during light-harvest treatments.
- Evaluate the effects of forest operations (harvesting) in terms of damage to residual stems.
- Find ways to reduce harvesting costs by treating more candidate areas in the same sector.
- Redefine silvicultural treatments based on the value chain.
- Learn how to maximize the value of stems harvested.
- Make forestry operations more profitable.

