



Faculty of Natural Resources Management

Strategic Plan 2023-2028

January 2023

The Faculty of Natural Resources Management respectfully acknowledges that Lakehead University in Thunder Bay is located on the traditional lands of the Fort William First Nation, Signatory to the Robinson Superior Treaty of 1850 and in Orillia, on the lands of the Ojibwe, Odawa, and Pottawatomi nations, collectively known as the Three Fires Confederacy.

I. Strategic Plan Development Process

A Strategic Planning Committee was created by the Faculty with the following membership: B. Leblon (Chair), A. Thomson, N. Basiliko, M. Leitch, B. McLaren, T. Sopic, R. Wilkie, QL Dang, K. Pidgen-Welyki. The committee met on Nov 8, Nov 15, Dec 2, Dec 19, Jan 11, and Jan 17. The first task of the committee was to elaborate a vision and mission statement for the Faculty. A group of three persons (B. Leblon, R. Wilkie and K. Pidgen-Welyki) elaborated a first draft of the vision and mission statement. Lead authors for each of the five Lakehead U.'s Strategic Plan (B. McLaren, K. Pidgen-Welyki, B. Leblon, M. Leitch) drafted the first version of each theme. The whole committee edited the document on Google Drive. This Plan was reviewed at the Strategic Committee meeting of January 11, 2023, and submitted to the whole faculty for comments between January 13, 2023, and January 16, 2023. It was reviewed by the Strategic Committee on January 17, 2023, and voted by the Faculty Council by February 1st, 2023.

II. Description of the Faculty and its programs

The Faculty of Natural Resources Management (NRM) replaced Lakehead's School of Forestry in 1994. A Forestry technology degree was among Lakehead University's first-degree programs at its founding in 1965. Today, there are two undergraduate degrees in the Faculty, the Honours Bachelor of Science in Forestry (HBScF) and the Honours Bachelor of Environmental Management (HBEM), as well as three graduate degrees, the thesis-based Master's in Science of Forestry (MScF), the course-based Master's of Forest Management (MFM), and the Ph.D. in Forest Sciences. After a shared first and second year, the students select either the HBScF or HBEM degree program. They further have the choice between three specializations in each degree program. The specializations for the HBScF degree program are Forest Management, Forest Health and Protection, and Forest Products and Marketing. The HBEM degree program has three specializations: Wildlife Conservation and Management, Conservation Planning and Management, and Sustainable Land Use.

The HBScF program is nationally accredited by the Canadian Forestry Accreditation Board, meaning upon graduation, the graduates are eligible to receive the Registered Professional Forester (RPF) designation and are welcomed by the Canadian Institute of Forestry into the profession by receiving the *Silver Ring*, a national symbol representing the commitment to upholding the ethics and best practices of the profession. Thousands of students have graduated from our programs and gone on to have fantastic careers in the forestry and environmental sectors in Canada and around the world. The Faculty is also active in continuing education and with international degree programs.

Our Faculty is unique in many regards. It offers the only accredited HBScF program in Ontario and the only Forest Health and Protection specialization in Canada. Our HBScF program is the only forestry program in Canada where students are trained in photo-interpretation. The Wildlife Conservation and Management specialization has a curriculum designed so that graduates are ensured, with membership and application to The Wildlife Society, a certification of Associate

Wildlife Biologist, one of only four Canadian universities offering this kind of curriculum. The employment rate of our graduates is 100%, a statistic reflecting the strong professional and skills-based approach to learning. The Faculty is a recognized champion in experiential learning through field schools, internship placements, and helping facilitate summer job opportunities. Students also have access to a variety of extracurricular activities. The Faculty is recognized for its world-class research and scholarship activities. It has an extended national and international network of industry, government, and NGO partners. The Faculty manages a forest ecology complex including five greenhouses, five off-campus forested properties, and state-of-art teaching and research equipment and facilities. The Faculty also has an off-campus drone training area recognized by Transport Canada as an RPAS flight centre, which we also use for geomatics research.

III. Faculty’s vision, mission, and values

The Faculty’s vision is as follows: *“The Faculty of Natural Resources Management aspires to be a local, national, and global leader in the science and management of forest ecosystems and the environment. Through education, research, and outreach, we contribute to a better world where balanced stewardship integrates ecological sustainability, economic viability, cultural values, and societal needs”*.

The Faculty’s mission is as follows: *“(i) To train high-quality professionals and scientists through a student-centred approach, using a blend of experiential and theoretical learning; (ii) To advance research in renewable resources management, informing best practices and ecosystem management policies; and (iii) To create innovative solutions for environmental and societal challenges such as climate change, developing local, national, and global partnerships.”*

We share the following Lakehead University’s values:

- Honesty
- Respect
- Acceptance
- Effort
- Scholarship
- Innovation
- Independence
- Individuality
- Community

IV. Purpose of the Strategic Plan

The purpose of the Strategic Plan is to describe NRM's key goals for the following five Lakehead University's strategic themes that are listed in the 2018-2023 Lakehead University's Strategic Plan

- [1] *Academic Excellence*: "Lakehead University will stimulate a lifelong quest for knowledge through unique, high-quality, transformational undergraduate and graduate teaching, learning and research experiences that encourage critical thinking and positions students for success beyond the University"
- [2] *Entrepreneurship and Innovation*: "Lakehead University will be a leader in entrepreneurship and innovation in Northwestern Ontario and Simcoe County in support of culturally appropriate and environmentally sustainable social and economic objectives"
- [3] *Social Responsibility*: "Lakehead University is committed to social justice and will make a significant contribution to our communities and society as a whole through our programs, research, and the wide range of activities undertaken by our faculty, staff, students and alumni"
- [4] *Capacity Development*: "Lakehead University will be recognized as a high-performing, efficient and innovative academic environment that supports world-class scholarly activity"
- [5] *Local and Global Partnerships*: "Lakehead University will develop informed education, research and service strategies and opportunities through connections with local and global partners, and relationships with Indigenous partners"

The Strategic Plan will also list the human and infrastructure resources that are needed to fulfill these goals

1. Academic Excellence

Our faculty offers unique, high-quality, transformational teaching, learning and research experiences to undergraduate and graduate students as well as those enrolled in continuing education. The Faculty is proud to have professors who have been recognized with several teaching awards.

The Faculty is a recognized champion in experiential learning through hands-on course labs, annual week-long field schools, and internships. Notably, in Year 4, the field school may be done outside Ontario and even internationally. We also encourage our students to use the "cooperative education" model which encourages and assists them in finding summer employment in their discipline. Other experiential learning opportunities include extracurricular activities that train them in areas of communication, organization, fundraising, and team and social activities. For example, the students run a TimberWolves team for traditional forestry activities and organize an annual Forestry Symposium, where external speakers make presentations followed by a Symposium Dinner.

We train undergraduate students in research through opportunities for senior theses and summer employment with professors and graduate students. In addition, our undergraduate students benefit from modern equipment and expertise. We strengthen our mentoring opportunities by virtue of

several outside partnerships and adjunct faculty who are engaged in our student's projects, which they see as meaningful contributions to their research, and which our students see as gaining "outside" and "outside-the-box" perspectives on their progress and as inside glimpses into careers.

We are also well-recognized for our continuing education activities. We are leading the Ontario Professional Forester accreditation program as well as teaching students located across Canada for professional forester training.

A critical component of academic excellence is the student experience. We are recognized to provide an excellent experience to our students, thanks to our small class sizes, the overall excellent support our students received, the dedication of our professors and staff to the success of students, and the numerous unique opportunities offered to the students. The student experience is also well monitored with regular meetings with student representatives.

Our plan for academic excellence will continue to stress experiential learning, provide excellent student experiences and offer new training opportunities with the **following key Faculty's goals:**

- To increase the domestic and international undergraduate and graduate student enrolment, for example by investigating options for first-year dual-credit courses with high schools, pathways programs with colleges outside Ontario, new specializations in the undergraduate programs, bilingual dual-degree programs with Québec universities, dual-degree programs with European universities, as well as the certification of the HBEM program and the course-based Master of Forest Management program
- To increase opportunities for foreign exchange and international field schools
- To improve the student experience, for example by improving the accessibility and technology in our classrooms and laboratories and offering unique training opportunities
- To increase access and make other improvements to our off-campus forest properties
- To increase training opportunities in continuing education, for example through an online certificate in geoinformatics with the Department of Geography.

2. Entrepreneurship and Innovation

Forestry and environmental management are two of the most important economic sectors in Ontario and Canada. The Faculty has a long reputation for developing innovative technologies and research, including in social sciences. Students are exposed to the entrepreneurship world through cooperative education and internships. The Forest Products and Marketing specialization of the HBScF program offers courses in forest product marketing and entrepreneurship. Many of our graduates created their own businesses and have an entrepreneurial career. Our goal is to continue to improve and strengthen this long history.

Key Faculty's goals:

- To increase the entrepreneurship skills of our graduates, for example by pairing our programs with the MBA degree program offered by the Faculty of Business at Lakehead University
- To continue developing innovations in both the natural and social sciences in the area of forest and environmental management

3. *Social Responsibility*

As a leader in natural resources management, we have both a duty and desire to ensure fair and equitable management among all stakeholders in natural resources management, including preservation, recreation and enterprise. In today's world, we find ourselves tasked with understanding and maintaining the myriad benefits and components of natural systems as well as the needs of society at large. As scientists and managers, we strive to understand and value the ecosystem services provided by forested and other ecosystems.

Key Faculty's goals:

- To increase collaboration, education, and research with Indigenous communities.
- To seek ways in which we can serve other stakeholders (government, industry, NGOs) through training and research collaborations.
- To investigate the development of streams of training and course offerings that provide theoretical and practical knowledge in the social aspects of natural resources management within our program.
- To investigate the development of accessible certificate courses designed to provide general or specific knowledge related to natural resources management.
- To host local and remote delivery of events and workshops in our areas of expertise for our community and society at large.

4. *Capacity Development*

The Faculty has a long history of creating world-class knowledge and technologies that advance the science and management of forests and the environment. Our research spans natural sciences, social sciences, and engineering. Indeed, our faculty has expertise in remote sensing, genetics, forest operations, plant pathology, fire/hydrology, entomology, wildlife ecology, soil science, wood science, and tree ecophysiology. We are currently hiring a Research Chair in lignocellulosic material development attached to the Biorefining Research Institute. Our research activities have built and will continue to build partnerships with industry, NGOs, federal and provincial governments, and Indigenous communities. These activities are funded through various sources, such as NSERC, SSHRC, MITACS, and contracts.

We seek to increase our research and scholarly activities, by recruiting top-level professors, developing new collaborations, particularly with the Indigenous communities and at the international level, and engaging more with our Adjunct professors.

Key Faculty's goals:

- To increase the number of thesis-based graduate students (Master's and Ph.D.)
- To increase research productivity and scholarly efforts of our professors
- To increase our revenues from our research and scholarly endeavours
- To increase the number of research chairs
- To enhance research and scholarship collaborations with Indigenous communities and researchers
- To develop new international research and scholarship collaborations
- To enhance our communication about our research and scholarship endeavours through social media, seminar series, etc.

5. Local and Global Partnerships

Our faculty has a long history of local, regional, national, and global partnerships. These partners frequently help to deliver the field schools which are a distinctive feature of our programs. On the global level, our students benefit from international study exchanges with overseas universities and have the chance to participate in international field schools in various parts of the world. We have participated in the Finnish chair program whose fellows contributed to our teaching and research. Our other international initiatives include delivering a 3+1 HBScF degree program with Anhui Agricultural University (China). We have a transfer agreement for the Master of Forest Management with an agricultural university in India. We have a well-established partnership with five partners in Ghana and one partner in Ecuador. This year, we hope to join two international Master's degree programs with European universities. The first one is TRANSFOR-M, a dual-degree Master's program between Canada and Europe. The second one is MedFOR, an ERASMUS-MUNDUS+ Master program.

Our goal is to continue to develop new partnerships across all areas of expertise within our Faculty, as well as collaboratively with other Faculties and Departments (including from Orillia) where interdisciplinary approaches are best. We strive to develop new partnerships with industry, government institutions, NGOs, indigenous communities and businesses, northern communities, and other educational institutions. We will also continue the strong partnerships we currently have and develop new partnerships and opportunities at the international level.

Key Faculty's goals:

- To increase the number of partnerships locally, regionally, nationally, and globally
- To promote interdisciplinary partnerships within LU, particularly with the Orillia campus
- To develop partnerships with Indigenous communities
- To increase academic collaborations with other universities, for example, Daniel's Institute of Forestry and Conservation at U. of Toronto or Université du Québec
- To increase international student enrolment, for example by promoting our programs to our global partners as well as through pathway programs with Indian forestry schools, with other Chinese forestry schools such as Beihua U., and with UK and African universities

- To increase international opportunities for our students and faculty, for example by facilitating student semester exchanges with our international partner universities, by promoting staff and faculty research or teaching exchanges and by participating in international programs such as Erasmus-Mundus + programs.