



A Blueprint for Success:

Ontario's Forest Sector
Strategy DRAFT

TABLE OF CONTENTS

A Message from the Minister.....	5
A Strategy for Ontario’s Forest Sector	6
ONTARIO’S FOREST SECTOR: EXPLORING OPPORTUNITIES	10
Expanding Markets for Wood Products	10
Increasing Indigenous Participation in the Forest Sector.....	11
Lowering Costs	11
Building Resilience to Manage Business Uncertainties.....	11
Promoting Forestry Career Opportunities	11
ONTARIO’S FOREST SECTOR: SEIZING OPPORTUNITY.....	12
Sustainable Forest Management	12
Wood Supply and Future Demand	13
Opportunities for Innovation	14
Spotlight: Promoting Forest Product Innovation and Diversification	15
THE FUTURE OF ONTARIO’S FOREST SECTOR	17
PUTTING MORE WOOD TO WORK	18
Goals.....	18
Initial Areas for Action.....	18
Investing in Advanced Remote Sensing Technologies	18
Removing Policy Barriers to Accessing Wood	18
A Path to Increase Forest Growth	18
Providing Wood Supply Certainty, Ensuring Use and Attracting New Investment.....	18
Future Action Areas.....	19
Harvesting Our Sustainable, Available Wood Supply.....	19
Establishing Targets for Forest Growth.....	20
Boosting Our Forest’s Productivity.....	20
Enhancing Private Land Harvesting.....	20
IMPROVING OUR COST COMPETITIVENESS	21
Goals.....	21

Initial Areas for Action.....	21
Reviewing Energy Costs.....	21
Maximizing the Use of Mill By-products to Fight Climate Change.....	21
Lowering Taxes.....	22
Making Strategic Investments in Forest Access Roads	22
Reviewing Certain Components of Stumpage.....	22
Reducing Regulatory Burden/Streamlining.....	22
Future Action Areas.....	23
Enhancing the Alignment of the Trusts.....	23
Adopting New Technologies.....	23
Realizing Benefits from Forest Inventory Investments	23
FOSTERING INNOVATION, MARKETS AND TALENT	24
Goals.....	24
Initial Areas for Action.....	24
Making Strategic Investments.....	24
Promoting Innovation	24
Increasing Wood Use.....	25
Reaching New Markets.....	25
Addressing Barriers to Trade.....	26
Making Ontario Wood the Natural Choice.....	26
Collaborating on Carbon Analysis.....	26
Growing Talent in the Forest Sector	26
Future Action Areas.....	27
Adopting New Technologies.....	27
Testing Automated Vehicles.....	27
Supporting Innovation in Construction	27
PROMOTING STEWARDSHIP AND SUSTAINABILITY	28
Goals.....	28
Initial Areas for Action.....	28
Earning Recognition for Our Sustainable Forest Management Practices	28
Conducting Applied Research and Best Science	28

Establishing and Strengthening Partnerships with Indigenous Peoples	29
Improving Collaboration in Managing Forests	29
Respecting Indigenous Rights and Protecting Forest Values	29
Future Action Areas.....	30
Responding to a Changing Climate.....	30
THE ROAD AHEAD.....	32
Working with Indigenous Communities.....	32
Advisory Committee	32
Key Performance Indicators	32

A MESSAGE FROM THE MINISTER



Consider this: Ontario's forest industry generates over \$16 billion in revenue and supports approximately 155,000 direct and indirect jobs in communities across the province. Our wood and wood products are globally recognized as coming from forests that are responsibly and sustainably managed. We are also recognized as innovators and leaders in the global industry. And yet Ontario's forest sector has not been able to reach its full potential.

That's why in September 2018, our government committed to developing a forest sector strategy to reduce barriers and costs, attract investment and innovation to promote economic growth, create jobs and demonstrate that Ontario is open for business.

To develop a draft strategy, we held seven roundtable sessions across this province. We listened to Indigenous, municipal and industry leaders, entrepreneurs and innovators, experts and people from communities across Ontario who shared their experiences and ideas.

This draft forest sector strategy is based on what we heard and presents steps we could take to support businesses in taking full advantage of the tremendous potential of Ontario's forests while ensuring high standards of sustainable forest management.

We are committed to engaging and consulting on the draft strategy and on specific initiatives and look forward to your feedback on how we can make Ontario's forest sector stronger and more dynamic than ever before.

John Yakabuski

Minister of Natural Resources and Forestry

A STRATEGY FOR ONTARIO'S FOREST SECTOR

Ontario's forests and forest products play an important role in meeting our diverse needs. In fact, wood is a part of our everyday life. For centuries now, residents of Ontario have used wood for building homes, furniture, making paper and packaging, and as an energy source. This reliance on forests has been critical for Indigenous communities who hold a significant connection to the land, they derive their livelihoods, values and medicines from these forests. More recently, we have been using wood and its components in products like toothpaste, food thickeners, toiletries, diapers, sterilized medical and food packaging, adhesives, car parts, cosmetics, chemicals, advanced construction materials and even clothing.

Globally and locally, we are seeing a definite movement in consumer preference towards using renewable, more environmentally conscious and sustainably sourced products. Wood is now seen as a viable replacement for single-use plastics. Ontario's forest sector has been providing such products for generations, and the opportunities are growing. A 2018 study commissioned for the United Nations indicates that the global demand for forest products is expected to increase by more than 30% by 2030. Ontario is well positioned to contribute to this need because of our strong record of responsible forest management.

Since 2000, Ontario's forest sector has struggled with the loss of more than 35,000 jobs and real employment income has declined by \$1.9 billion over that same period. The volume of timber harvested currently is less than 60% of what it was in 2000. That's why in the 2018 Ontario Economic Outlook and Fiscal Review, the government committed to developing a forest sector strategy that will encourage economic growth and send a strong signal that Ontario is open for business. The goal of the strategy is to sustainably grow the forest sector so that it will create opportunity and prosperity for thousands of Ontario families, while also encouraging innovation and investment in the industry.

This strategy aligns with the government's stated priorities of red tape reduction, job creation, and promoting economic growth and prosperity across the province. The strategy also works in conjunction with several other strategies of the government including the draft Made-In-Ontario Environment Plan and Ontario's Housing Supply Action Plan to help Ontario achieve its objectives to grow the forest sector while creating opportunity and prosperity for the many people who depend on it.

Together, the Ontario government and the forest industry, along with partners in the research and education sector, Indigenous communities and other levels of government, will create a business climate that fosters growth, promotes innovation, and helps the industry adapt to an ever-changing business climate.

Ontario's globally recognized sustainable forest management system is a foundation of our forest sector and of this strategy. We are committed to the long-term health of our forests and to a vibrant and dynamic forest sector in Ontario.

KEY PRINCIPLES

Leveraging
Assets

Strengthening
Partnerships

Ensuring
Sustainability

Fostering
Innovation

Growing
Markets

Vision

Ontario's Forest Sector is a world leader in making and selling forest products from renewable, sustainable and responsibly managed forests.

Ontario is a preferred location for investing in commodity and innovative forest products and advanced manufacturing.

FOUR PILLARS OF ACTION

1

Putting more wood to work

- Invest in advanced remote sensing technologies
- Remove barriers to accessing wood
- Increase forest growth
- Provide wood supply certainty
- Maintain and attract new investment

2

Improving Our Cost Competitiveness

- Reduce business costs
- Reduce regulatory burden
- Make strategic investments in critical infrastructure
- Encourage use of underutilized species and log qualities

3

Fostering Innovation, Markets & Talent

- Promote fair trade
- Expand and find new markets
- Grow talent in the forest sector
- Encourage wood use and develop new innovative products
- Enable technology adoption

4

Promoting Stewardship & Sustainability

- Enhance recognition of our sustainable forest management
- Establish and strengthen partnerships with Indigenous communities
- Respect Indigenous rights and protect values
- Apply best research and science
- Respond to a changing climate
- Improve collaboration in managing our forests

FOREST INDUSTRY

By The Numbers

2017 ANNUAL STATS

\$4.9B

contribution to the provincial GDP



\$16.6B

total revenue of the forest sector



71.4M+

trees planted



\$6.5B

forest sector exports including **\$1.2B** in wood furniture exports



155,000

direct + indirect + induced jobs



439M+

seeds in aerial seeding renewal



DIRECT JOBS



GTA	17,700
North	11,800
Central	11,100
East	5,900
Southwest	5,300

WOOD IN YOUR EVERYDAY PRODUCTS



Toothpaste

Contains wood components like cellulose gum and xylitol



Ice cream

Soft ice cream uses cellulose to help keep its shape



Nail polish

Uses nitrocellulose for strength and quick-drying



Towels

Some are made with rayon which is produced from a wood component cellulose



Gum

Uses wood chemicals like rosin esters



Mass timber

New category enabling production of taller and larger scale wood buildings

PROPORTION OF VOLUME HARVEST BY PRODUCT



56%
sawmills



29%
pulp & paper



13%
composite



2%
fuelwood



FORESTRY

By The Numbers

ONTARIO HAS...

66%

forest coverage



17%

of Canada's forests



2%

of the world's forests



ONTARIO'S FORESTS

71M

hectares of forests in Ontario is the equivalent to the combined areas of Germany, Italy and the Netherlands



Germany



Italy

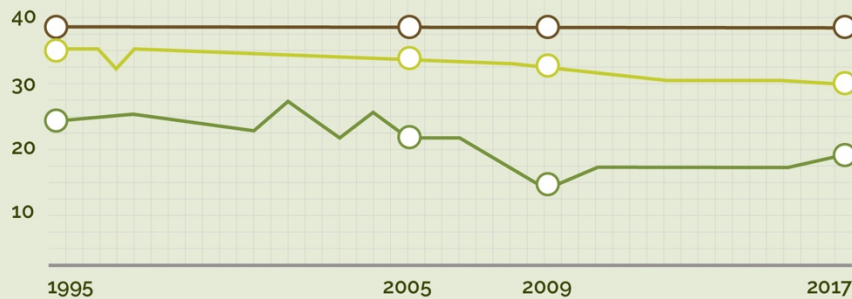


Netherlands

CROWN FOREST AVERAGE ANNUAL GROWTH

Crown Harvest Available vs. Actual Harvest

- Growth
- Available
- Actual



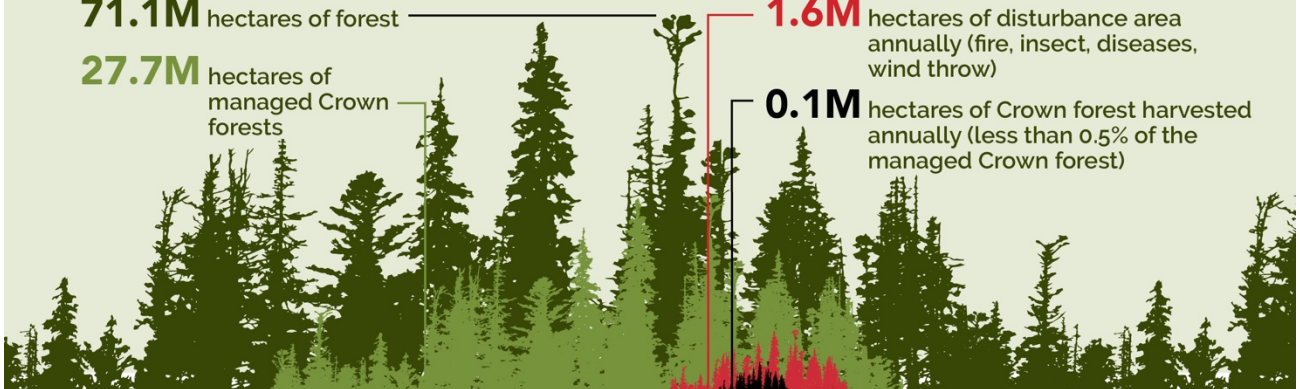
IN ONTARIO THERE ARE...

71.1M hectares of forest

27.7M hectares of managed Crown forests

1.6M hectares of disturbance area annually (fire, insect, diseases, wind throw)

0.1M hectares of Crown forest harvested annually (less than 0.5% of the managed Crown forest)



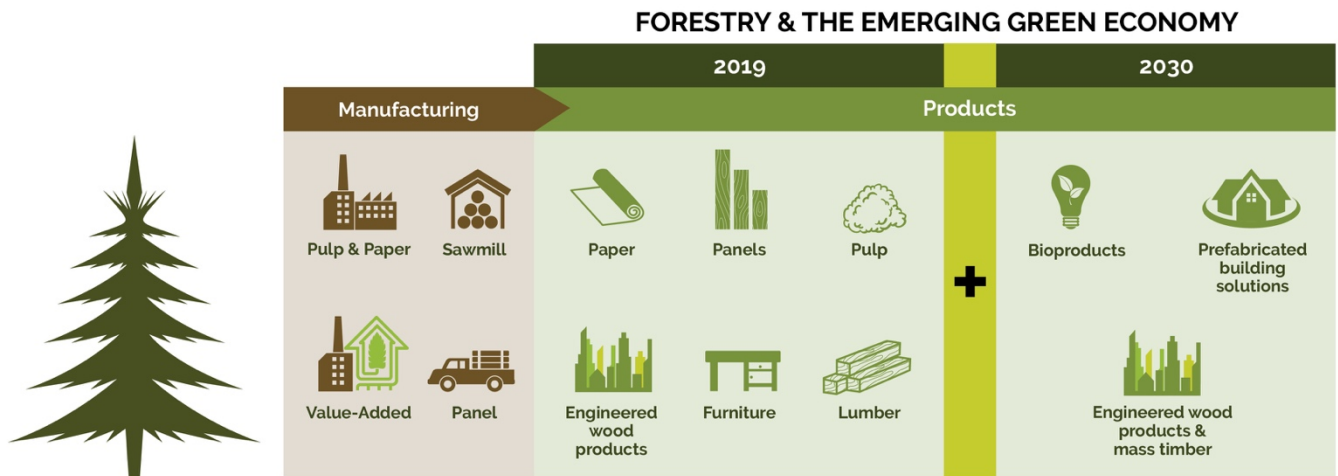
ONTARIO'S FOREST SECTOR: EXPLORING OPPORTUNITIES

Ontario's forest industry is producing innovative wood products to meet current and future environmentally-conscious consumer choices which include:

Expanding Markets for Wood Products

Ontario is utilizing only half of the wood that it could sustainably harvest. Approximately 15 million cubic metres of wood is not being used and could be available for attracting investments in new domestic and international markets. Ontario is exploring the expansion of markets while strengthening existing businesses as many new and innovative products are dependant on primary producers of lumber, oriented strand board, veneer, and pulp and become part of enhancing existing supply chains. By putting this wood to work we are providing for expanded economic opportunities for Indigenous and other Ontario communities that are dependent on forests.

Global trends indicate a movement away from the construction of single-family homes to multi-family homes greater than 3 storeys. New advances in technology and innovation using mass timber can help Ontario play a greater role in the multi-family, multi-storey homes and tall wood building construction markets, both domestically and internationally.



More and more uses are being discovered for wood fibre: from clothing to car parts, from cosmetics to chemicals to advanced construction systems and as a natural replacement for single-use plastics. As Ontario's industry innovates and transforms, new products and new markets will provide solutions to unutilized wood supply.

Increasing Indigenous Participation in the Forest Sector

Ontario acknowledges that Indigenous communities have an important relationship with the land, and exercise Aboriginal and Treaty rights in forests. Ontario is committed to continuing to build strong, mutually beneficial relationships and partnerships with Indigenous communities across the province. Indigenous communities are seeking greater involvement in the management of forests, direct economic benefits and opportunities to create more Indigenous businesses in the forest sector. There is a growing Indigenous youth population that could participate in the future labour force and provide leadership in developing new forest entrepreneurial businesses that directly benefit their communities and develop capacity within communities to participate in all facets of the forest economy. Ontario will also work with forest industry and Indigenous communities to explore opportunities to further share the benefits of sustainable forest management.

Lowering Costs

To make Ontario's forest industry more competitive, the high costs of regulatory burden, delivered wood, energy, equipment, transportation, and forest management planning need to be reviewed and where possible reduced.

Building Resilience to Manage Business Uncertainties

About 96% of Ontario's wood products exports are destined for the U.S. Ontario's dependency on exports to the U.S. is both a great advantage when prices and demand are strong, and trade is open and fair, and a major challenge when they are not. Ontario can be better equipped to manage these fluctuations by enabling innovation in manufacturing, product diversification, increasing domestic use and developing new export markets. Due to Ontario's geographic location, the U.S. will remain the largest market for our lumber, pulp and paper, veneer and composite board wood products.

Promoting Forestry Career Opportunities

To address labour shortages, Ontario must support forest education and promote opportunities that encourage young adults to pursue careers in the forest sector. Identifying training opportunities for Indigenous youth to participate in the forest sector will also be important for the sector's future. Highlighting the vast array of career opportunities within the forest sector and building awareness that Ontario's forests are managed sustainably and responsibly can lead more young people to consider forestry as a career option.

Ontario has supported forestry training through the [SkillsAdvance Ontario](#) program. It is a sector-focused workforce development program that provides employers in specific sectors with access to skilled workers that meet their workforce development needs. SkillsAdvance Ontario also provides jobseekers and workers with sector-focused employment and training services to help them obtain, succeed and advance in employment. The SkillsAdvance Ontario projects that support the forest sector include three projects: two with Confederation College, one based in the Northwest and the other based in the Northeast; and a project based in the Greenstone area, the Nishnawbe Forestry Operation and Apprenticeship Training Program led by [Oshki-Pimache-O-Win: the Wenjack Education Institute](#). Over 200 forestry workers and job seekers will be trained through SkillsAdvance Ontario projects in Northwestern and Northeastern Ontario this year.

ONTARIO'S FOREST SECTOR: SEIZING OPPORTUNITY

Sustainable Forest Management

Ontario's public (Crown) forests are diverse and resilient thanks to its robust sustainable forest management system. Wood produced from Ontario's Crown forests is sustainably sourced and renewable. Ontario's forests provide recreation, biodiversity, and habitat for wildlife. They also support a forest industry that creates jobs and forest products.

To achieve sustainable forest management, Ontario has:

1. a comprehensive system of legislation, regulations, policies, standards and guides
2. a rigorous forest management planning system
3. a compliance program and independent forest audits
4. public reporting on forest management
5. forest trusts to provide dedicated funding for forest renewal
6. a well-defined process to consult with the public and Indigenous communities
7. ongoing collection of forest information and science

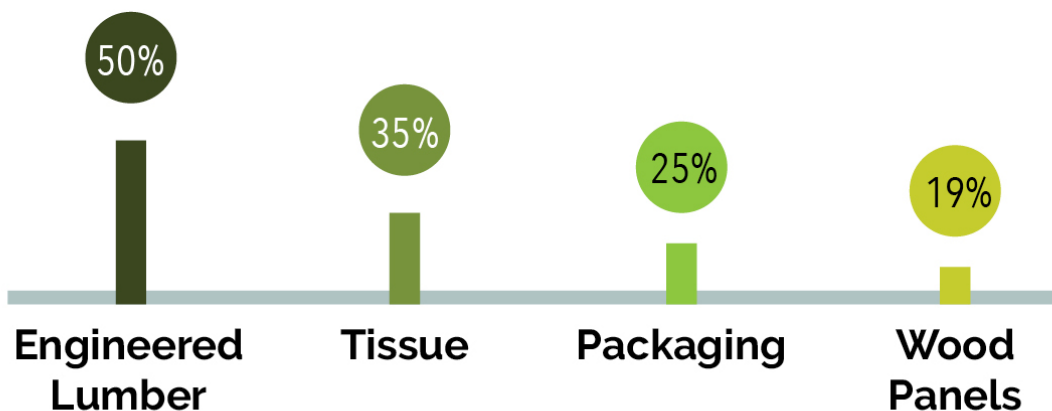
In addition to our rigorous system, there are three third party forest certification systems used by Ontario's forest industry. As of January 2018, a total of 26.2 million hectares in the province were certified. This equates to 77 per cent of the Crown forests managed in Ontario. A good portion of these Crown forests are certified by more than one system.

Wood Supply and Future Demand

Currently there is nearly 15 million cubic metres of available wood supply that existing industry is unable to harvest and that could **potentially support further investment in the forest sector.** Increasing the harvest within the limits of what can be sustainably harvested can be accomplished while maintaining Ontario's high standards for managing its forests responsibly.

Utilizing our available wood supply will allow us to expand future markets, both domestic and international, without impacting the sustainability of our forests. The future looks promising; over the next decade, **global demand for pulp is expected to increase due to the growth of packaging (25%) and tissue (35%).** Demand for **lumber and panel products is also projected to grow, especially wood panels (19%) and engineered lumber (50%).** Replacing single-use plastics with paper options is still too new to forecast but has the potential to vastly improve growth numbers in the pulp and paper sector. Further to this, a 2018 study prepared for the United Nations Forum on Forests¹ forecasted that over the next 30 years, global consumption of products derived from pulp is projected to increase by more than 100 per cent. Over this same period consumption of solid wood products is expected to grow by about 50 per cent, and bio-based products are expected to make up 50 per cent of consumer products.

Total Expected Growth in Global Forest Products Demand in Next Decade



¹ Duncan Brack, United Nations Forum on Forests and Global Forest Goals. [Sustainable consumption and production of forest products](#), April 2018

Opportunities for Innovation

Thunder Bay's forest bioeconomy cluster is home to world class research facilities, pilot manufacturing sites and demonstration facilities including: the [Centre for Research and Innovation in the Bioeconomy \(CRIBE\)](#), [FPIInnovations'](#) Bioeconomy Technology Centre (host of the Lignoforce and TMP-Bio Pilot Plants), Lakehead University's [Biorefining Research Institute](#), Green Chemistry Lab, [Wood Science Testing Laboratory](#), [Fire Testing and Research Laboratory](#), and Confederation College's [OPG BioEnergy Learning and Research Centre](#).

The "TMP-Bio" project in Resolute's Thunder Bay pulp and paper complex is adding new products such as refined lignin and sugars to this facility's product mix and revenue streams – and is the next generation of innovative products from wood.

There are many different uses from wood such as:

3D Printing: Wood fibre has the potential to play a major role in the largest manufacturing revolution of this century, by using lignin, an affordable and renewable by-product of the paper making process, as an input for 3D printers.

Cosmetics and food: Products such as lipstick, nail polish, creams and a wide range of beauty products can be produced from wood. Cellulose, derived from wood pulp, is added to many foods to provide structure and reduce breakage. Essentially, it adds fiber to the food. Other common foods that have a component of wood include liquid smoke, maple syrup, gum, fruits, medicines, and nuts.

Green chemicals: Methanol produced as a by-product of pulp mills can be used in windshield wiper fluid, plastics, glues and fabrics, or be blended with gasoline to fuel cars. There are almost endless opportunities for bio-based chemicals from wood.


New wood-based composites: Cellulose products can be used as a substitute for glass fibres in reinforced plastics, such as eye glass frames. Research is underway to find ways to make carbon fibre from lignin that could be used in high-end sporting equipment such as bicycles, golf clubs and tennis racquets. Sugar streams generated from wood can be used in a range of bio-plastics and provide alternatives to single-use plastics.

Energy Alternatives: Many forest companies have become energy self-sufficient in the form of electricity, heat, steam and fuel. This removes the need for fossil fuels by using mill by-products and residues such as bark, shavings and sawdust to produce renewable electricity and biocrude which avoids sending material to landfills. Locally sourced and sustainable wood and its by-products can be used to heat homes and buildings in northern, rural and Indigenous communities that do not have access to natural gas or depend on diesel fuel that is transported great distances at very high cost.

Spotlight: Promoting Forest Product Innovation and Diversification

Building with wood is not new; building with innovative wood products is. Through collaboration and investment, Ontario is promoting the use of mass timber. Mass timber refers to structural engineered building materials made from wood that can be used in place of steel and concrete in many kinds of building: houses, industrial, commercial, institutional and mid-rise buildings up to and over six storeys; and bridges.

Using mass timber creates new jobs for professionals and skilled tradespeople, and significantly reduces construction times leading to reduced overhead, financial and on-site labour costs. Mass timber construction sites are quieter and tidier than traditional sites. Mass timber also sequesters carbon pulled from the atmosphere by our forests and requires less energy to produce than other common building materials. Research has proven that mass timber products offer equal and sometimes superior fire performance in comparison with concrete and steel alternatives. Mass timber construction integrates both steel (fastening systems) and concrete (foundations) in construction.

The Province has supported four tall wood demonstration projects that are in various planning and development stages, including: George Brown College's 12-storey Arbour development in Toronto; the 14-storey Academic Tower at the University of Toronto; a 12-storey residential condominium building to be developed by Green-vision Developments in North Bay; and the 77 Wade Avenue development, an 8-storey office building to be built in Toronto. In addition, a wooden truss highway bridge in North Bay, originally built in 1937, is being replaced using mass timber. Ontario is working with Nipissing First Nation to create opportunities for skills development and job creation while building innovative infrastructure 



Rendering of bridge over Duchesnay Creek – North Bay



University of Toronto – Academic Tower Wade Ave development

THE FUTURE OF ONTARIO'S FOREST SECTOR

Ontario is recognized globally for our wood products that are produced from sustainably managed forests, and we will continue to work hard to maintain this reputation. This advantage supports consumer preferences to purchase our wood products, and this will only grow as more uses are discovered for wood.

This section outlines a series of actions for driving economic growth, promoting innovation, overcoming obstacles, and securing the long-term prospects of Ontario's forest sector and the communities that depend on it. These actions are grouped under four pillars:

- Putting more wood to work;
- Improving our cost competitiveness;
- Fostering innovation, markets and talent; and,
- Promoting stewardship and sustainability.



The Harbour, George Brown College's mass-timber building

PUTTING MORE WOOD TO WORK

Goals

By 2022:

- Modernize and improve our forest inventory
- Remove barriers to accessing wood
- Evaluate ways to grow more wood
- Provide wood supply certainty
- Increase use of available wood supply

By 2030:

- Harvest the sustainable wood supply
- Improve estimates of quantity and quality for unused wood supply
- Establish targets for forest growth and harvest
- Establish intensive forest management areas
- Explore ways to encourage harvest on private lands

Initial Areas for Action

Investing in Advanced Remote Sensing Technologies

Ontario will invest \$84.5 million to enhance the forest inventory. More accurate information about Ontario's wood supply will be achieved by using Light Detection and Ranging (LiDAR), an advanced remote sensing technology. The enhanced forest inventory will better inform forest management planning and decision-making. Ontario will improve the quality of forest information by capitalizing on advanced remote sensing technology to provide timely information.

Removing Policy Barriers to Accessing Wood

Policy barriers to accessing wood will be removed while maintaining the rigour of our sustainable forest management framework. This can be accomplished by **eliminating redundancy and overlap in legislation, providing a consistent interpretation of forest policy and implementation practices through training and knowledge transfer.**

A Path to Increase Forest Growth

Ontario is investing in enhanced forest resource inventory to provide better and more timely information about the status of Ontario's Crown forests. Forest managers need accurate and timely information about the growth and development (e.g. response to various silvicultural treatments) of regenerating young forest following harvest in order to make decisions about the effectiveness of renewal programs. Improved information about this public asset is also vital for identifying opportunities to increase the growth and value of our forests. This information will provide the foundation for strategic analyses to help determine the most effective means (e.g. silvicultural techniques and treatment areas) to increase forest growth rates and achieve other objectives of this strategy.

Providing Wood Supply Certainty, Ensuring Use and Attracting New Investment

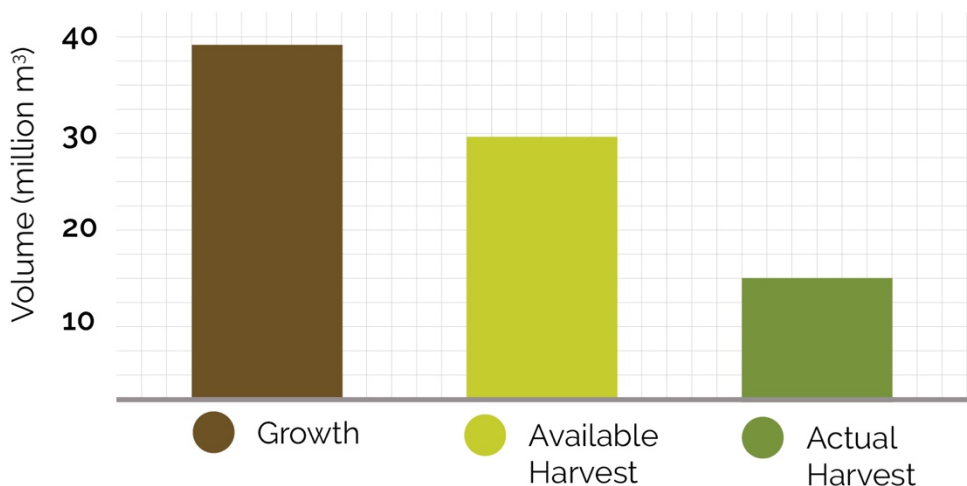
A range of actions to support existing forest operations and ensure wood is either being used or made available will be developed, including a provincial wood utilization strategy. More effective and nimble mechanisms will be considered to see wood utilized and made available in a way that supports existing mills

and forest operators, but that also attracts new business and new investment for underutilized wood supply. The feasibility of centralized processing yards will be assessed, and species restrictions on wood use at facilities will be removed to help increase wood use and attract investment while supporting existing mills and forest operators. Efforts will be made to work with forest managers and mills that have wood supply commitments to ensure wood supplies are used and available to support continued mill operations or are made it available for others to use.

Future Action Areas

Harvesting Our Sustainable, Available Wood Supply

Ontario's Crown Forest in 2018
Average Annual - Growth/Available Harvest/Actual Harvest



Approved forest management plans for Ontario's Crown forests identify about 30 million cubic metres of wood supply that can be harvested annually while ensuring our forests are managed sustainably. Recent provincial harvest levels, however, have only reached 15 million cubic metres per year. Our managed forests currently produce more than 38 million cubic metres of growth annually. The target harvest of 30 million cubic metres is significantly less than annual forest growth. There is a significant opportunity to increase harvest levels up to the 30 million cubic metres while meeting the objectives (e.g. biodiversity, wildlife habitat, species at risk, etc.) laid out in forest management plans. Ensuring the sustainability of our forests is a key principle of Ontario's forest management system.

Reaching the allowable sustainable harvest of about 30 million cubic metres by 2030 will require quantifying the types and locations of unused wood supplies by volume, location, species and quality with estimations of costs. Ontario is working with the Centre for Research & Innovation in the Bioeconomy to develop an economic fibre supply model that will help investors and communities identify options for expanding existing forest production and finding new markets.

Establishing Targets for Forest Growth

Strategic analyses of current growth, harvest and natural disturbances are required to determine the types of actions that would be most effective in increasing the growth potential of our forests. Realizing greater growth and/or product quality can take many forms: from ensuring timely and effective establishment of fully stocked stands following harvest, to protecting the forest from losses to fires and pests and investing in intensive treatments. In setting forest growth targets, Ontario commits to growing more wood, and maintaining our ability to balance biodiversity, conservation of natural resources, habitat, and cultural values while respecting Aboriginal and Treaty rights and society's growing need for wood products from sustainably managed forests.

Boosting Our Forest's Productivity

Strategic investments in intensive forest management activities are required to realize the growth potential of the forest. A strategic analysis conducted to establish growth targets would identify the type of intensive forest management activities as well as where and when conducting those activities would have the desired outcome.

Enhancing Private Land Harvesting

Ontario will consider the use of various tools to encourage greater timber production on private lands.

IMPROVING OUR COST COMPETITIVENESS

Goals

By 2022:

- Reduce costs for the forest sector
- Make strategic investments in forest access roads
- Encourage use of under-utilized species and log qualities
- Streamline forest management requirements
- Reduce duplication and modernize approvals processes

By 2030:

- A cost competitive forest sector
- A business climate that attracts investment
- Realize benefits from forest inventory investments

Initial Areas for Action

Reviewing Energy Costs

Energy costs remain a key input for the forest sector. In April 2019, Ontario launched consultations with industry stakeholders about the design and effectiveness of industrial electricity pricing and programs, including the Industrial Conservation Initiative and the Northern Industrial Electricity Rate Program.

Maximizing the Use of Mill By-products to Fight Climate Change

Ontario developed its own provincial policy as an alternative to the federal output-based pricing system to reduce carbon emissions, which recognizes the use of mill by-products (e.g. bark, small tops) to provide sources of biomass heat, steam and energy for manufacturing in place of fossil fuels. Maximizing use of mill by-products reduces the need for more carbon intensive energy-based fuels and avoids unnecessary pressures on landfills. In turn, this supports the highly integrated supply chains between pulp and paper, lumber and panel mills, where one mill's by-product (which also provides a revenue stream), supports another mill's wood supply and internal energy requirements. These mill by-products also offer an opportunity to develop new and innovative value-added products.

Since 1990, the pulp and paper industry in Ontario has reduced total emissions by 66% and the entire forest industry has reduced emissions by 48% (Source: Statistics Canada Table 153-003)

Lowering Taxes

Ontario is paralleling federal measures that allow businesses to accelerate write-offs of capital investments. These measures apply to assets acquired after November 20, 2018.

Making Strategic Investments in Forest Access Roads

Ontario invests in forest access roads because of the broad benefits to many Indigenous communities, tourism operators, cottagers, hunters, gatherers of food and medicines, the forest sector and other industries like rail, energy utilities, mining as well as emergency first responders. Ontario is reviewing the overall effectiveness of the program and will ensure that critical forest access road infrastructure continues to meet the diverse needs of many forest users.

Reviewing Certain Components of Stumpage

Ontario's timber pricing system is responsive to market trends. Elements of the timber pricing system could be strategically reviewed with our industry partners to encourage greater timber utilization and the harvest of species and lower quality logs that currently have no markets.

Reducing Regulatory Burden/Streamlining

Ontario is working to deliver further red tape and regulatory burden relief for the forest sector, including streamlining the process for permits and approvals, removing duplication, modernizing the forest management planning process and the approach to independent forest audits. All of this will reduce costs to industry and government while continuing to ensure our forests are sustainably managed.

Future Action Areas

Enhancing the Alignment of the Trusts

Ontario will leverage the silviculture funding available through the Forestry Futures Trust and the Forest Renewal Trust to further support the objectives of the forest sector strategy. We will explore ways of enhancing forest management within the province with actions that increase available wood supplies and contribute to cost competitiveness.

Adopting New Technologies

Ontario is working with the forest industry, the Centre for Research Innovation and the Bioeconomy, FPInnovations, and others to explore mechanisms for enhancing competitiveness, including the adoption of innovative tools that optimize industrial processes, harvesting, renewal, and road building operations.

In support of the government's draft Made-In-Ontario Environment Plan, cost-effective biomass energy alternatives for industry and communities will be assessed based on modelling delivered fibre costs and examining integrated solutions for heat and power.

Realizing Benefits from Forest Inventory Investments

Ontario's investment in advanced remote sensing technologies, such as LiDAR, also creates opportunities to undertake better analysis and can help automate planning and reporting requirements, which will reduce costs.

Forest Renewal Trust

The Forest Renewal Trust provides dedicated, sustainable funding for eligible forest renewal work carried out on Crown lands in Ontario.

Forestry Futures Trust

The Forestry Futures Trust serves as an insurance policy for the province, ensuring that forest renewal activities can be carried out in the event of natural depletions of the forest or when a major licensee becomes insolvent.

Both the Forestry Futures Trust and Forest Renewal Trust operate under the terms of the Crown Forest Sustainability Act. These trusts are a significant part of Ontario's forest management program.

For more information on the trusts please go to: [Forest Renewal Trust and Forestry Futures Trust webpage](#)

FOSTERING INNOVATION, MARKETS AND TALENT

Goals

By 2022:

- Redesign the business support program to modernize and innovate
- Invest in the next generation of forestry products
- Increase the use of Ontario wood in construction and heating
- Increase awareness of Ontario's forest sector and sustainable forest management
- Encourage and support mass timber and bridge projects in Ontario
- Release a carbon calculator tool

By 2030:

- Assess the use of autonomous harvesting and transportation technologies
- Grow the diversity of international markets for Ontario wood products
- Increase the use of wood in Ontario's building and bridge infrastructure
- Update the Ontario Tall Wood Building Reference and the Ontario Wood Bridge Guide

Initial Areas for Action

Making Strategic Investments

The sector's business support program has been redesigned to help make Ontario open for business, deliver maximum value and create broader opportunities for businesses, taxpayers, and communities across the province. The Forest Sector Investment and Innovation Program will support industry in building competitiveness and encourage investment in strategic projects in Ontario's forest sector. The program will advance the modernization of the industry and encourage innovation to diversify the sector and build on the integrated nature of the industry.

Ontario is also ensuring the forest sector in Northern Ontario remains open for business. Through the Northern Ontario Heritage Fund Corporation (NOHFC), Ontario will invest in projects with the private sector to develop and commercialize new technologies and to grow and diversify the sector in the region. Through these investments, Ontario's forest sector will continue to provide long-term sustainable opportunities for the region's labour force and supply and services sectors.

Promoting Innovation

Ontario is working with industry leaders, the Centre for Research & Innovation in the Bioeconomy (CRIBE), FPInnovations, and universities and colleges to support the commercialization of innovative forest products and processes. **By linking the northern fibre supply with southern biochemical producers and engineered wood products manufacturers, renewable products can be produced that displace non-renewables and support job creation across Ontario.**

To accelerate commercialization of next generation forest products and technologies, Ontario will work with CRIBE, industry, Indigenous communities, and other partners to develop value chain roadmaps.

Increasing Wood Use

Ontario is creating opportunities to increase the use of wood in construction where it has not traditionally been used before. For example, using more wood in low-rise and taller residential, commercial and institutional buildings, and to build bridges is good for the economy, the supply of available housing and the environment. By working with our partners, including the Canadian Wood Council, to align codes and standards, to develop tools, research and educational resources, we will enable a shift toward the increased use of wood in our infrastructure.

Ontario is working, through efforts such as our government's Housing Supply Action Plan, to harmonize the Ontario Building Code with national codes. Harmonization of the Ontario Building Code with the National Building Code of Canada may expand opportunities to use mass timber in Ontario buildings, opening new markets for manufacturers and providing stimulus to the broader forest sector.

We can further promote and facilitate opportunities for mass timber building systems by mapping the mass timber value chain, identifying linkages and improving integration from forest, to mill, manufacturer, developer and on to the consumer. This work supports our government's draft Made-In-Ontario Environment Plan.

Ontario is improving the business and policy environments to enable the use of sustainable and renewable biofuels for heat in Ontario. The Ontario Bioheat Initiative supports the draft Made-in-Ontario Environment Plan by promoting bioheat as a heating option for northern, rural and Indigenous communities that currently depend on fossil fuels. By using Ontario biofuels instead of imported fossil fuels, money stays in our economy supporting jobs and local communities.

What are biofuels and bioheat?

Biofuels are fuels processed from biomass, such as wood processing residues, that can be used to produce heat and/or power. Bioheat is thermal energy generated from the conversion of solid, liquid and gaseous biofuels. Today's modern bioheat systems have similarities in efficiency, performance and emissions to fossil fuel and electric heating systems.

Reaching New Markets

Ontario will enable small and medium-sized enterprises to access growing global export markets by providing strategic advice and market intelligence, and by supporting participation in trade missions in emerging markets.

Addressing Barriers to Trade

Given our geography, our ability to export forest products to the United States is of critical importance. We are working together with our industry, governments across Canada and with partners in the U.S. to ensure that Ontario promotes open and fair trade in forest products.



Making Ontario Wood the Natural Choice

Ontario is also growing the domestic market, making it easier for consumers to find and purchase local wood products. When consumers purchase a product with the [Ontario Wood](#) logo, they will be assured that it was made from sustainably managed forests that were harvested in Ontario and manufactured here in the province. Working with our partners, we will increase public awareness about how Ontario's forest industry supports local economies and the environment through sustainable forest management practices.

Collaborating on Carbon Analysis

Ontario will work with Quebec to finalize the development of a tool that can be used by building designers to estimate greenhouse gas emissions from various building designs and help them make the best use of various wood products and the inherent ability of wood to store carbon.

Growing Talent in the Forest Sector

Forestry, like many industries is suffering from labour shortages in a variety of roles – from truck drivers, logging operations and mill operations, to skilled trades and supervisors. Addressing this challenge requires collaborative efforts by associations, industry, Indigenous organizations, Ontario and the federal government. Together, we can develop and implement the required strategies that address labour shortages. This requires approaches to attract young Ontarians and Indigenous youth to forestry careers and highlight pathways into these careers. The [Specialist High Skills Major](#) (SHSM) program is offered in sectors such as Forestry, Environment, Manufacturing and Agriculture. This program reaches secondary students and exposes young adults to the opportunities available in forestry. The SHSM program, and dedicated funding support for experiential learning for students in Kindergarten to Grade 12, are key program supports for Ontario's education and career/life planning as outlined in [Creating Pathways to Success](#). With a recognized connection to the land and natural resources, Indigenous participation in growing the future forestry workforce will contribute to a strengthened forest sector.

Ontario will work with interested organizations to address gaps in training through innovative, interactive and experiential learning methods, like heavy equipment simulators and mobile or online classrooms.

Through the NOHFC, Ontario will support northern Ontario employers, including the forest sector, in addressing skilled labour shortages in the region. Through the NOHFC's internship program, employers will be eligible to seek support when hiring individuals that will be trained to fill skilled labour gaps in the region. Through these investments, Ontario will support the North's labour force to meet the needs of employers.

Future Action Areas

Adopting New Technologies

5G networks will radically affect various industries throughout our economy, including in the forest sector. It will enable the adoption of a range of automation technologies that can improve supply chain management and allow manufacturers to adapt quickly to changing market demands. Smart manufacturing technologies will enable the industry to thrive in this new environment, make the best use of our forest resources and maximize their productivity.

Testing Automated Vehicles

Ontario is facing a shortage of truck drivers to haul wood to mills and product to markets. Working with our partners, Ontario will explore the applicability of highly automated vehicles to the forestry sector and support the testing of these vehicles to help address this need. We will also review potential barriers to adoption of these technologies and seek to find solutions that could enable their use to benefit Ontario.

Supporting Innovation in Construction

Most buildings are still individually designed and constructed as one-off projects and are built almost entirely on-site. Increasing the adoption of modular building construction and prefabrication using advanced engineered wood products from Ontario's forests can help the industry innovate. As one of the largest sectors globally, a shift in the way building projects are delivered towards faster, more efficient, more cost-effective and more sustainable construction can have a major impact. This is another way that we can help to meet the objectives of the Housing Supply Action Plan.

By updating publications such as the Ontario Tall Wood Building Reference and the Ontario Wood Bridge Guide to capture enhancements to building and construction codes and scientific advancements, Ontario will highlight opportunities to increase the use of wood in applications where it is best suited.

PROMOTING STEWARDSHIP AND SUSTAINABILITY

Goals

By 2022:

- Enhance recognition of Ontario’s sustainable forest management system.
- Establish and strengthen partnerships between Indigenous and forestry businesses.
- Expand Resource Revenue Sharing with Indigenous communities.
- Improve collaboration in managing forests

By 2030:

- Modernize and adapt forest management planning process to maintain the sustainability of Ontario’s Crown forests.
- Ensure steps are being taken to help Ontario’s forests adapt to a changing climate.
- Identify opportunities for Ontario’s forests to help in our fight against climate change.

Initial Areas for Action

Earning Recognition for Our Sustainable Forest Management Practices

Recognized as a leader in sustainable forest management, Ontario’s forest sector operates under legislation and policies that work to ensure the ecological integrity of our forests while providing for economic opportunities. In global markets, Ontario collaborates with the Canadian Council of Forest Ministers’, “*Forest in Mind Program*” to address market challenges to ensure that international customers have all the facts they need about Ontario’s strong record in sustainable forest management. In Ontario, we have the third-party, “*It Takes a Forest*” initiative that is helping to make the public aware of our strong record of forest management. Our youth are Ontario’s future and we are increasingly becoming an urban province, so to support students’ understanding of Ontario’s forests and the role of the forest sector [Forests Ontario](#) has produced a series of educational tools including lesson plans and immersive educational experiences like [Forestry in the Classroom](#) and [Forestry Connects](#). Educators may choose to use these, and other resources, to help students learn about forestry in their classrooms.

Ontario will continue to work with the forest industry, Indigenous communities and other partners to maintain and adapt the forest management planning process to sustainably manage Ontario's forests and enable a strong and vibrant forest industry now and into the future. Ontario will pursue strategic alliances with ongoing third-party certification systems to take advantage of extensive marketing tools to reach key groups.

Conducting Applied Research and Best Science

Ontario will continue to support applied research and monitoring to inform evidence-based decision-making and policy using the best science and information to support forest management planning and adapting our management practices to a changing climate.

Establishing and Strengthening Partnerships with Indigenous Peoples

Ontario will continue working with Indigenous communities, organizations, and businesses, along with the forest industry and municipalities to further share the economic benefits from forestry by:

- Building the capacity of Indigenous businesses and workers to participate in the forest sector
- Increasing involvement through collaborative business partnerships
- Exploring options to expand resource revenue sharing with more Indigenous communities and Northern municipalities

Improving Collaboration in Managing Forests

Ontario will continue to implement locally supported forest tenure modernization initiatives and management unit amalgamations by working with collaborative proposals from industry, community and Indigenous partners. This action will provide greater local and Indigenous community involvement in forest management, forest business development and capacity building in the forest sector.

Respecting Indigenous Rights and Protecting Forest Values

Ontario recognizes that Indigenous communities hold Aboriginal and Treaty rights and many rely on healthy forests to exercise those rights. Ontario also acknowledges the cultural significance of forests to many Indigenous communities. Forest management will continue to be sustainable and carried out in a way that respects Aboriginal and Treaty rights and cultural values. The protection of Indigenous values identified through forest management will continue to contribute to the sustainability of Ontario's forests.

Ontario will continue to prevent and mitigate losses and minimize the economic and social disruption caused by wildfire events. Ontario's wildland fire management program seeks to balance the ecological role of wildland fire in maintaining healthy forests with ensuring public safety and protecting infrastructure. Throughout the province Ontario utilizes and supports the role of Indigenous firefighters to support its fire management programs.

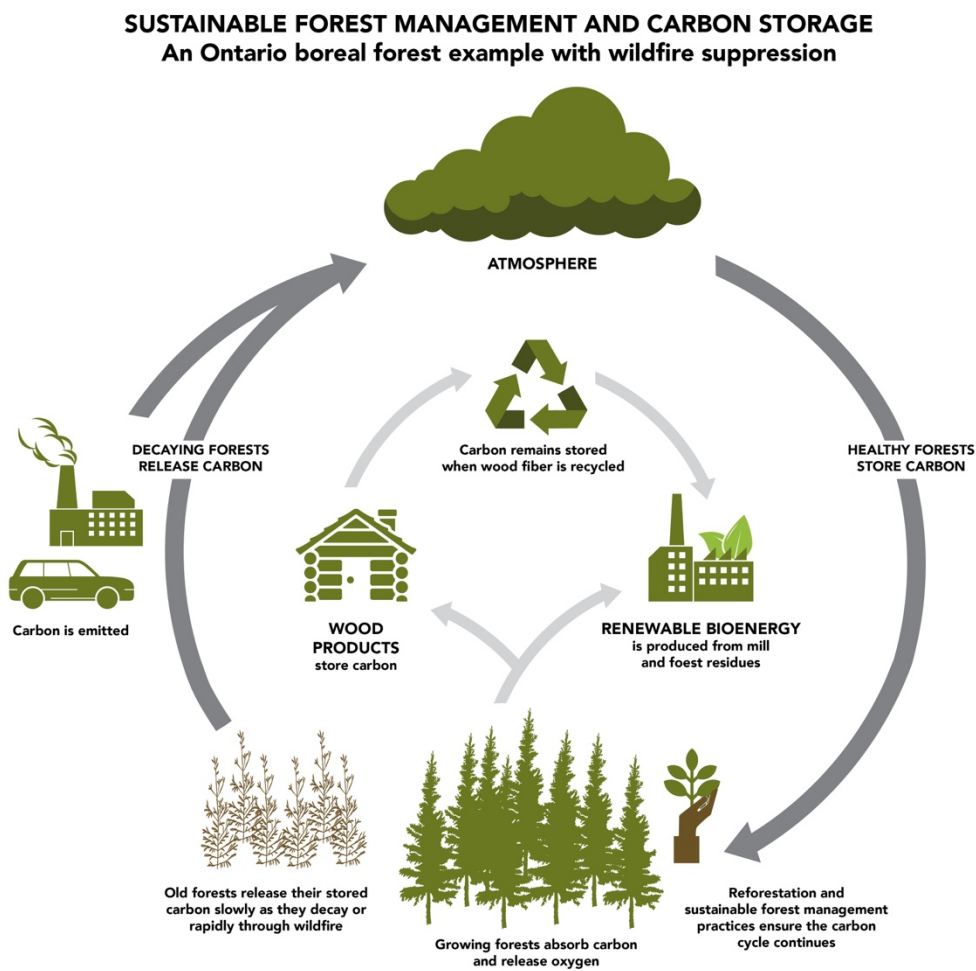
Living in Ontario means having the ability to fish, hunt, and enjoy world-class outdoor recreation opportunities. Ontario protects these values and promotes these activities and the economic opportunities they offer while continuing to be a world leader in managing Ontario's natural environment for future generations.

Future Action Areas

Responding to a Changing Climate

Ontario will continue to advance our understanding of the role of sustainable forest management in climate change adaptation and mitigation. **Ontario's sustainable forest management system provides for the long-term health of its forests by providing potential opportunities to reduce and store greenhouse gases as trees capture and store carbon dioxide.** Ontario is also committed to, adapting to and mitigating the effects of, existing and future climactic changes by helping to build resiliency in communities, and in reducing the potential impacts from wildland fires. Forest disturbance is a natural process that wildlife and vegetation have evolved to depend on. While Ontario continues to strategically manage and suppress wildfires across the province, harvesting in conjunction with strategic wildfire management is a tool that forest managers use to emulate these natural processes across the landscape.

Well managed forests can reduce the risk and severity of extreme climate change events like large wildfires. For example, biomass harvesting around communities from the U.S. has proven successful in reducing community wildfire vulnerability.



The forest carbon cycle includes: the absorption of carbon from the atmosphere by growing forests; the storage of carbon in wood products that are harvested from sustainably managed forests; and the decrease in carbon back into the atmosphere by replacing fossil fuels with energy from wood biofuels that are made from wood by-products.

We will work with industry to further increase carbon storage in forests and harvested wood products and adapt management practices to enable productive and resilient forests into the future. Ontario will also promote the use of renewable forest biomass by industry and as an energy source to provide heat and potentially both heat and power for northern, rural and Indigenous communities.

Ontario will be undertaking a Provincial Climate Change Impact Assessment that will look at how a changing climate is likely to impact the forest sector across the province. The results of the assessment will provide a basis for considering options to help the sector become more resilient and support its competitiveness and sustainability.

Ontario will develop strategic direction to protect critical forest access road infrastructure, enhance our response to forest pest outbreaks, help protect forest health, improve resiliency of Ontario's Crown forests and ensure future wood supply. The ministry will update its seed transfer policy to support the long-term success of regeneration activities in a changing climate. Exploring opportunities to encourage afforestation on private lands that are not productive for agriculture will increase forested area.

THE ROAD AHEAD

The forest sector is an important part of Ontario's history and a critical part of the province's future. That is why we will continue to work with our partners to ensure its continued growth and prosperity for many years to come. This province has a unique combination of forest enterprise, secondary manufacturing and technology expertise, giving us a major economic advantage that we will continue to build on.

This draft strategy sets out key goals and actions to transform the forest sector over the next 10 years. To achieve the goals in this strategy we will need to work with industry, Indigenous communities, municipalities, the federal government as well as research, innovation and education institutions.

Clearly our biggest asset and greatest advantage is our forests, which is why we need to ensure forest sustainability remains a key principle as we implement Ontario's forest sector strategy. There are few natural resource sectors that can grow back and replenish what they take in a manner that will ensure that our forests remain healthy and available for future generations.

Working with Indigenous Communities

Indigenous communities and their members are important contributors, economic players and leaders in the forest sector and have constitutionally protected rights that are exercised in Ontario's forests. Ontario will continue to engage and consult with affected communities as elements of the Forest Sector Strategy are developed.

Advisory Committee

A Forest Sector Strategy Advisory Committee will support the development of an implementation plan for the various actions contained within this strategy. In partnership with the ministry, the advisory committee will provide advice on the implementation of the strategy and will support the development of key performance indicators to measure the progress on implementing the actions and the success of this strategy. The advisory committee will also be responsible for reporting annually on the progress made in achieving the actions listed in each pillar.

Key Performance Indicators

To assist with monitoring progress on the strategy once it is finalized, Ontario will commit to developing key performance indicators where possible for the actions identified under each pillar. Key performance indicators will include direct measures (outputs), that monitored over time will track changes and trends to help assess how effective the various actions have been (outcomes) towards meeting the goals under each pillar.

Together, we can build a bright future for the forest sector and the many people and communities who rely on it. The best thing is that the results will come from our most important and valued asset – a sustainably managed forest.