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A scientist with Defence R&D Canada examines a radar image of a forested area. Collaborative research between Natural Resources Canada and Defence R&D Canada improves knowledge of forest conditions and military reconnaissance techniques.



Up **Front**

An Overview of Canada's Forests

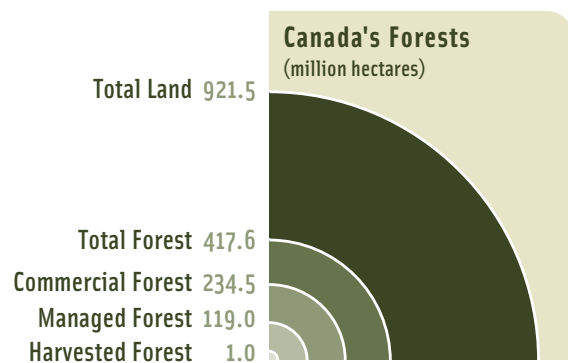
Canada extends over 997 million hectares in total, of which 921.5 million hectares is land area. Temperate and boreal forests cover nearly half of Canada's land mass.

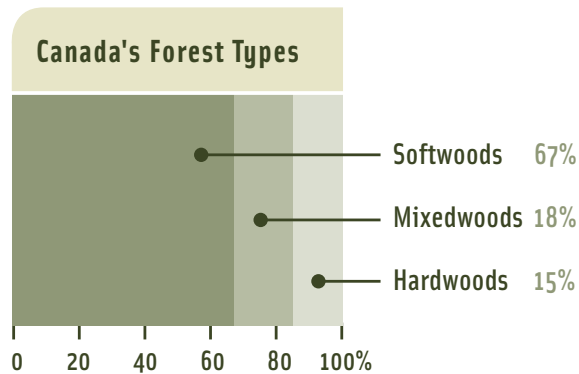
With about 10 percent of the world's forests and nearly 25 percent of the planet's fresh water (much of it in forested areas), Canada's forests play critical roles in moderating our climate and filtering our air and water, and offer a place of sanctuary and recreation. Forests provide diverse habitats for about two-thirds of Canada's estimated 140 000 species of plants (180 species of trees), animals, and micro-organisms.

There are 15 terrestrial ecozones within Canada, containing forest types ranging from the towering coastal rainforests in British Columbia to the sparse and slow-growing forests at the Arctic tree line (approximately 60 degrees North latitude). Based on age, approximately 18 percent of Canada's forests can be classified as "old growth". Based on whether the forest has ever been harvested, the percentage may reach 70 percent.

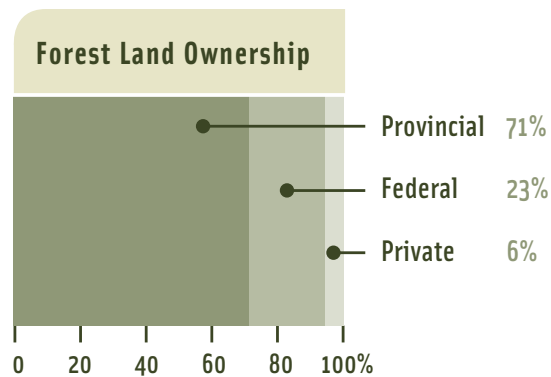
Of the 417.6 million hectares of forests in Canada, 234.5 million hectares are considered "commercial forests"—capable of producing commercial species of trees as well as other non-timber benefits. Currently, 119 million hectares of these commercial forests are managed primarily for timber production, while the remaining area has not been

accessed or allocated for this purpose. Nineteen percent of Canada's commercial forest land is classified as being under "policy constraint". This area includes land that will not be harvested due to policy or legislative guidelines: land, for example, that serves as buffers along watercourses or is owned by or managed through agreements with conservation agencies. The non-commercial forest land (183.1 million hectares) is made up of open forests comprising natural areas of small trees, shrubs, and muskegs.





Roughly 0.4 percent, or about one million hectares, of Canada's commercial forests are harvested yearly. Each province/territory establishes Annual Allowable Cut levels (see pages 24-30), which are based on the average volume of wood which may be harvested under sustained yield management. More than half of the area harvested is left to regenerate naturally, usually after some form of preparatory site treatment. The remaining areas are seeded or planted. Roughly 0.5 percent of Canada's forests are affected by fire, insects, and disease each year (see page 24) and they are also left to regenerate naturally.



Canada is unique in that 94 percent of the nation's forests are publicly owned. Under the Canadian Constitution, the provinces have ownership and

legislative authority over most publicly owned forest land—71 percent of the total forest land. The federal government's responsibility for forests is based on its ownership of 23 percent of Canada's total forest land, most of it in the territories. (The federal government devolved responsibility for management of forests within the Northwest Territories in 1986. A similar transfer is being finalized with the Yukon. Responsibility for the management of forests previously within the Northwest Territories, prior to the creation of Nunavut, was included in the 1999 agreement under which Nunavut was created. The federal government still owns this land.)

Six percent of Canada's forest land is owned by an estimated 425 000 individuals, families, communities, and forest companies. These privately owned forests, of which 80 percent are located east of Manitoba and mostly in the Maritime provinces, are generally productive and of high quality. These private forests are the source of 19 percent of Canada's industrial roundwood production (i.e., logs, bolts, and pulpwood), 77 percent of maple products, 79 percent of fuelwood and firewood, and virtually all of the nation's Christmas trees.

Today, each province and territory has its own legislation, regulations, standards, and programs through which it allocates forest harvesting rights and management responsibilities. In addition, many provinces and territories have legislation that requires public participation as part of the forest management planning and allocation processes. The broad spectrum of forest users—the public, forest industries, Aboriginal groups, and environ-

mental organizations—are consulted to ensure that recreational, cultural, wildlife, and economic values are incorporated into forest management planning and decision making.

Canada's forests also play key roles in meeting the cultural, spiritual, and material needs of Aboriginal people. Approximately 80 percent of Aboriginal communities are located within the forest regions of this country, and roughly 1.4 million hectares of forest land located on Indian reserves is suitable for sustainable, consumptive resource use, such as timber, hunting, trapping, fishing, and gathering herbs and medicinal plants.

In 1995, roughly 7.6 percent, or 32 million hectares, of Canada's forests were located in protected areas. This was in addition to the forests protected by provincial policies and operational guidelines. Recent additions that have not yet been compiled nationally have significantly increased the area of protected forest (see pages 13-16).

A NATIONAL FOREST INFORMATION SYSTEM FOR CANADA

The Canadian Council of Forest Ministers (CCFM) recognizes that improving access to timely, accurate and authoritative information relating to Canada's forests is essential. In that regard, the CCFM has agreed to the establishment of a Steering Committee mandated to assess the relevance and feasibility of developing a National Forest Information System (NFIS). The NFIS is seen as a first step to enhancing Canada's ability to better assess the current state of the nation's forests and to meeting Canada's national and international obligations to report on forest sustainability.

Agreements between interested governments, and ultimately non-government parties, will need to be developed, to acquire and integrate the data needed for better analysis and reporting on Canada's forests. The forest-related economic, social and environmental information contained within the NFIS would be made available world-wide through the Internet.

The NFIS initiative is being undertaken through a multi-phased approach. Phase I, which began in the fall of 2000, is aimed at developing a governance model to address policy issues; clarifying the infrastructure of the Internet site; defining the information needed to better respond to Canada's commitments relating to sustainable forest management; and investigating opportunities for cooperation and coordination between government departments and agencies.

The Steering Committee report on Phase I, and a proposal for Phase II, will be presented at the CCFM annual meeting in September 2001.

Year in Review

2000-2001

Canada's forests and forest sector continued to garner national and international attention throughout 2000-2001. At home, there have been significant changes to provincial policies and legislation regarding the use and conservation of forest resources—Quebec having revised its forest legislation and British Columbia having achieved the United Nations' Food and Agriculture Organization's recommended objective of protecting 12 percent of its landbase. The Canada-United States Softwood Lumber Agreement expired earlier this year and much attention was devoted to the implications of that event and the possibilities for a successor arrangement. But despite the diversity of issues and achievements, common trends remained evident: public participation in decision making is increasing; partnerships are flourishing; and sustainability of the resource is the overarching consideration.

Progress Toward Sustainability

With a view to improving visual landscapes and biodiversity protection, **British Columbia** has shifted its harvesting practices away from traditional clearcuts to clearcuts with reserves and other silviculture systems. Clearcuts with reserves leave individual or groups of trees in a cutblock to provide both habitat for wildlife and visual screening. Traditional clearcut harvesting has decreased from



87 percent in 1998-1999 to 60 percent of the total area harvested this past year and clearcuts with reserves increased from 3 000 to 66 000 hectares.

British Columbia is also trying to improve its regulatory framework for forest practices, which comes under its Forest Practices Code. Seven pilot projects are underway to test a range of different approaches to planning. These projects typically replace a number of operational plans (forest management plans prepared by forest

companies licensed to operate on Crown lands) with a single results-based forest stewardship plan. This change in approach is intended to save both the government and licensees money by streamlining planning efforts to improve market adaptability, and to allow for forest management certification by improving public participation and environmental protection.

Also in British Columbia, the Ministry of Forests has established an advisory council on forest certification that brings together a variety of stakeholders to advise on how certification can work to maximum benefit in British Columbia. (For more information on forest certification, see pages 78-79).

The cumulative impact of rapid industrial growth and farmland conversion in the boreal forest is being studied in **Alberta**. To assess these impacts, Alberta has created research partnerships between companies and universities. These partnership groups will also be undertaking related wetlands studies.

Alberta is also taking steps to improve its reforestation policies. To that end, the Reforestation Standards Science Council is drawing on a wide range of expertise in the fields of forest management and silviculture.

Partners in **Saskatchewan's** Prince Albert Model Forest approved a new Ecosystem-based Integrated Resource Management Plan to guide the management of the Model Forest's



landbase and promote its long-term sustainability. This Plan brought together forest users and multiple levels of government, including four First Nations governments, as well as municipal, provincial and federal governments.

In **Manitoba**, the Department of Conservation continues to advance its sustainable development strategy. The central element of this strategy is the Consultation on Sustainable Development Implementation (COSDI) report, which makes recommendations on land use, resource allocation and environmental decision making. Also included in the strategy is the creation of an Aboriginal Resources Council to ensure the development of partnerships with the Aboriginal community. A broader advisory committee was established to provide advice on all matters relating to sustainable development.

The Ontario Forest Accord, which was developed under the Living Legacy initiative, called for an independent review of **Ontario's** 34 forest management guidelines. The independent review was completed and 80 recommendations were made and accepted. An action plan was developed to consolidate these 34 guidelines into six, which will cover landscape, stand, site-specific, tourism and recreation, and cultural heritage values, as well as silvicultural practices.

In February 2001, Ontario endorsed a Memorandum of Under-



XII WORLD FORESTRY CONGRESS

Canada has been chosen by the Food and Agriculture Organization (FAO) of the United Nations to host the XII World Forestry Congress. Held once every six years (the most recent having been hosted by Turkey in 1997) the Congress is the largest international forum in the field of forestry.

Over 5 000 participants are expected to gather for the XII World Forestry Congress in Québec City in 2003. As host country, Canada will be a focal point in forestry and will have the unique opportunity of being able to showcase, to representatives of governments, the public, non-governmental organizations and Aboriginal groups, the quality of forest management in Canada and to demonstrate that our forest policies and practices include the principles of sustainability.

Mr. Jean-Louis Kérouac has been nominated Secretary General for the XII World Forestry Congress. Actions are underway toward the creation of the organizing committee, the establishment of the organizational structure, and the promotion of the Congress in Canada and abroad. A theme for the upcoming Congress has been proposed and is under consideration by the FAO.

Further information on the XII World Forestry Congress is available at <http://www.wfc2003.org>

standing that signals a new era of cooperation between the tourism and forest industries in the province's north. Under the MOU, locally negotiated Resource Stewardship Agreements will provide assurance to resource-based tourism operators that tourism values which are important to their operations will be protected, and will also streamline planning associated with resource-based

tourism. These agreements will also provide forest industries enhanced predictability of wood supply.

The Ontario legislature passed a new Professional Foresters Act, which came into effect in May 2001. The new Act recognizes the role of the Ontario Professional Foresters Association in regulating and governing the practice of professional forestry in Ontario. The Association will be responsible for licensing professional foresters, promoting, establishing and enforcing standards of professionalism among members, ensuring competency, providing continuing education, and enacting disciplinary measures for unprofessional conduct. The Association's counterpart in Nova Scotia, the Registered Professional Foresters Association, was proclaimed in February 2001.

Following a three-year revision process, which included public consultation at various steps, Quebec has passed a new Bill intended to improve the current forest management system in that province. The amendment to the Forestry Act is designed to increase the participation of Quebecers in the forest management process, provide better protection of Quebec's forests, and improve forest management and operations planning.

Also in Quebec, a group of forest engineers, geographers and cartographers have developed SIFORT, an information tool that provides rapid geographical and spatial representations of the province's forest lands. SIFORT is able to analyze an infinite range of data used for general forest management activities in Quebec.

New Brunswick developed an action plan that included legislative amendments, expanded monitoring initiatives and enhanced prevention measures to address, for example, growing public concern over wood theft on private and Crown lands.



Nova Scotia's Forest Sustainability Regulations became law in April 2000. These regulations are designed to ensure a sustainable timber supply on all private forest lands. Starting in 2001, all registered buyers who acquire 5 000 cubic metres or more of wood from private lands for processing or exporting from the province are affected by these regulations as they are now required to either carry out a silviculture program or contribute to the Sustainable Forestry Fund, which has been established to ensure that silvicultural work is carried out on private lands.

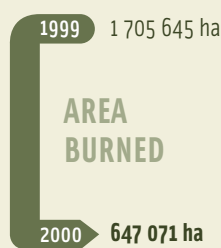
Nova Scotia has also proposed an integrated resource-management land-use strategy for provincial Crown (i.e., public) land. Such a strategy would be based on strategic planning designed to ensure a balance of diverse uses of land resources. Public sessions were held across the province in September 2000 to provide an opportunity for comment on this proposed strategy.

Province-wide consultations with the public, the forest sector and local communities were recently held in **Prince Edward Island** to exchange views on the management of Crown forest lands. In this same vein, Prince Edward Island proclaimed a Public

Forest Council Act in April 2001. This Council will serve to encourage and facilitate, through community development initiatives, the development of non-consumptive and non-traditional products from public forest lands.

Prince Edward Island has also established a Forest Improvement Advisory Council and developed a Private Land Program to address the public's concerns about the impact of current softwood lumber harvests on private lands across the province. The advisory council provided the government with recommendations for the mandatory licensing of harvest contractors and the obligatory reporting of all harvest sites and wildlife management standards. Through the Private Land Program, resources and materials are being developed for the Woodlot Owner Education Initiative—an initiative to provide land owners with information to enable them to make informed harvest and management decisions for their forest lands.

Work has also begun on Prince Edward Island's Comprehensive Land Use Inventory with the upgrade of equipment and software, and the acquisition of high resolution aerial photography. This extensive inventory process will update the 1980 and 1990 forest inventories. The inventory will also provide benchmark data for a wide range of agriculture, urban, and natural resource considerations. A public report on the updated inventory and benchmark data is slated for release in 2002.



And in the **Northwest Territories**, a classified satellite-based vegetation map of the forest land is scheduled for completion in March 2002. A composite image will be produced to allow northern forest managers to answer questions about the condition of the northern forest. The work is in its final data-gathering phase and will be subjected to analysis in the fall of 2001.

With a view to progressing toward sustainable forest management, the **Yukon's** amended Timber Regulations were put into effect in May 2001. Key provisions in the amended Regulations include: a market-driven system for collecting stumpage fees, reforestation, scaling and grading, tenure, security and forest protection. The amended Regulations have also increased the flexibility of the Yukon's timber permit issuing process.

Safeguarding Nature

In 2001, **British Columbia** became the first Canadian jurisdiction to achieve the United Nation's goal of protecting 12 percent of its landbase. British Columbia now has 12.95 percent of its landbase designated as parks, protected areas, recreation areas and ecological reserves.

Also in British Columbia, an agreement was reached between conservation groups, the forest industry, First Nations and the government regarding land use and



forest management issues in a central coast area of the province. The area, which has recently acquired its now internationally recognized designation as the **Great Bear Rainforest**, has strong cultural significance to First Nations people, in particular, and is the habitat of a rare white subspecies of black bear

known as the Spirit Bear. Under the agreement, 96 458 hectares have been protected to safeguard the region's unique environmental, cultural, tourism and resource values. A short-term economic package is being developed to soften the direct economic impact of these land-use changes. It is anticipated that government, the forest industry and the environmental community will share in the costs of longer-term community transition strategies.

This past year **Alberta** created 24 new parks and protected areas, and expanded another six, contributing over 540 000 hectares to the province's network of parks and protected areas under the Special Places Program. Since the Program was established in March 1995, 76 new sites have been designated and 13 sites expanded, adding more than 1.2 million hectares of land to the province's parks and protected areas network. To date, approx-

imately 11.4 percent of the province has been legislatively designated as parks and protected areas, including 5 national parks.



The **Saskatchewan** government is developing an action plan aimed at guiding biodiversity conservation efforts in that province over the next

five years. To this end, Saskatchewan has made available for public comment a discussion paper entitled, *Conserving Saskatchewan's Natural Environment: Framework for a Saskatchewan Biodiversity Action Plan*. A steering committee has also been established to coordinate this initiative.



Saskatchewan has made strides in expanding its Representative Areas Network. Seven new ecologically important areas in the central and eastern regions of the province, totalling 121 000 hectares, have been added to the network. These sites, which are exempt from logging, mining and major road developments, ensure the conservation of wilderness areas in Saskatchewan and provide an environment for conducting ecosystem research. This addition brings the total area protected under the network since its inception to 1.7 million hectares.

Manitoba has released its action plan for the province's Network of Protected Areas. The three-year plan outlines new, broader goals that define the focus of the protected areas initiative, identifies target areas, and provides for the continued participation of First Nations in the establishment and management of new areas.

During the past year, Ontario's Rideau Waterway, Saint Mary's River and Thames River became part of the **Canadian Heritage River System** (CHRS). The CHRS recognizes rivers that are outstanding examples of Canada's natural heritage, that have played a role in Canadian history, and

that offer significant opportunities for recreation. The Canadian Heritage River Board, which oversees the CHRS, has also approved Newfoundland's Main River designation (to be proclaimed shortly) and accepted the nomination of Hayes River, the largest river in Manitoba, to the CHRS. Over the next two years Manitoba intends to develop a management plan for the conservation of this river that will lead to its designation to the CHRS.

One year after its launch, **Ontario** has announced the expansion of the Living Legacy initiative—an initiative which serves to enhance the long-term protection of the province's natural environment. This expansion will provide funding for greater protection of species at risk, fish and wildlife as well as their habitats, and will support efforts to regulate the 378 new parks and protected areas created in Ontario in 2000. Additional support for resource-based tourism, and the implementation of youth programs and the Ontario Forest Accord, are also included in this expansion. Also, Ontario has taken action to protect and promote the Great Lakes Heritage Coast, which encompasses 2 900 kilometres of shoreline and is the centrepiece of the Living Legacy initiative.

In July 2000, **Quebec** announced a commitment to develop a strategy for protected areas in that province. The goal of the strategy is to increase their network of protected areas from the 1999 level of 2.8 percent to about

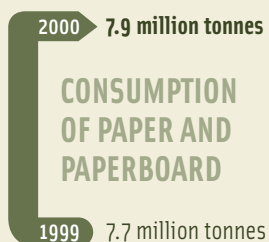


eight percent of the Province's total area by 2005.

New Brunswick has established 10 new protected areas, as part of its Protected Areas Strategy. Recreational activities, along with scientific research, will be encouraged in these new protected sites, which have a combined area of about 150 000 hectares.

And in Nova Scotia, the government and the Nature Conservancy of Canada formed a partnership in November 2000 to preserve ecological and natural areas in that province. The Campaign for Conservation is a three-year partnership that will result in the purchase and protection of ecologically significant lands in Nova Scotia. The government and the Nature Conservancy have worked together over the years on several projects, including the acquisition and protection of other ecologically significant areas. Currently, more than eight percent of Nova Scotia's

LA MAURICIE, designated the Forest Capital of Canada for 2001, is a concrete example of the key role forests play in the development of Quebec's regions. The forest capital title has been awarded annually since 1979 by the Canadian Forestry Association and highlights the valuable role that forests play in the economic and environmental health of our communities. A forest capital is a 12-month celebration of historic community/forest relationships, with a focus on the future through public awareness and education on forest conservation. The Forest Capital for 2002 is Corner Brook, Newfoundland.



landbase is protected (almost 300 000 hectares), which represents approximately 20 percent of the Crown land (i.e., public land).

The United Nations has designated Mount Arrowsmith in British Columbia and Lac Saint-Pierre in Quebec "world biosphere reserves". Biosphere reserves are areas of terrestrial and coastal ecosystems that promote solutions to reconcile the conservation of biodiversity with its sustainable use and are internationally recognized within the United Nations Educational, Scientific and Cultural Organization (UNESCO) Man and the Biosphere program. As of March 2001, there were 393 biosphere reserves in 94 countries, 10 of which are located in Canada.

The Mount Arrowsmith biosphere reserve is located on the east coast of Vancouver. Despite continuous urban development pressures, the area still nurtures a range of unique species, including the endangered Vancouver Island marmot and remnants of the Douglas-fir ecosystem.

The Lac Saint-Pierre biosphere reserve includes a major waterway in an industrialized area. It is considered a unique ecosystem, important for migratory birds and essential for the protection of the biodiversity in Quebec and Canada.

In a study released in February 2001 at the World Economic Forum, Canada ranked third in the world behind Finland and Norway in the "environmental sustainability index". This new index, devised by researchers associated with Columbia University,

Yale University and the World Economic Forum, compares environmental conditions and performance across countries.

The Perils of Nature

Manitoba has established a Sustainable Development Innovations Fund to provide support for projects aimed at reducing the impact of climate change. Over a four-year period, the fund will endorse projects related to education and outreach, impact and adaptation research, technological innovation and energy efficiency, as well as alternative forms of energy.

And in **Nunavut** a strategy to address energy management and impact/adaptation measures has been developed as part of the territory's climate change initiatives. This strategy is based in part on stakeholder consultation, collection of Inuit knowledge and testing renewable energy supply technology.

A major and prolonged **forest fire** that burned more than 150 000 hectares in the western United States resulted in a call for international fire fighting assistance during August and September 2000. Under the Canada/United States Reciprocal Forest Fire Fighting Agreement, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia and the Northwest Territories responded to the request by providing fire



personnel (more than 1 300 Canadians) and equipment.

Last year some 647 000 hectares of forests were lost to fires in Canada.

Over the past year, a mountain pine beetle outbreak in the west-central plateau of **British Columbia** has increased fourfold, affecting slightly less than 300 000 hectares of forest in the area. This tiny black insect, native to North America, burrows into lodgepole pines and transmits blue stain fungi that can destroy the connective tissues within a tree and lower the grade of the lumber, which reduces its market value. Government and industry are investing in surveys, single-tree treatments, and redirection of timber harvests to infested areas in a bid to limit the spread of infestation and to salvage the threatened timber.

The same beetle has appeared in **Alberta**, affecting about 700 trees. Provincial and federal officials there are also establishing methods to control the beetles and to prevent increased infestation.

In **Nova Scotia**, efforts to eradicate the brown spruce longhorn beetle from the Halifax area have led to the removal and incineration of approximately 3 600 spruce trees during the past year. This is the first established population of this foreign pest discovered in North America. Following the confirmed identification of this beetle in 1999, a task force was created in Spring 2000 to address issues related to its eradication. The task force includes repre-



representatives from municipal, provincial and federal agencies, along with local academics and experts in forestry. A restricted wood movement zone has also been established around the city, making it illegal to transport any wood across city boundaries unless previously inspected. Intensive tree-by-tree surveys, monitoring, removal and incineration of infested spruce trees are ongoing in an attempt to eliminate this pest from North America.



Endangered Species

There is a long history of cooperation on species at risk among federal, provincial and territorial governments. Through the designation of protected areas, implementation of international wildlife agreements and a commitment to the conservation of biodiversity, governments continue to work together on many nature issues.

Following the federal elections in November 2000, the government re-introduced its federal endangered species legislation in the House of Commons in February 2001. Bill C-5, entitled the **Species at Risk Act (SARA)**, was debated in the House during February and was then referred for review, in March 2001, to the House of Commons Standing Committee on Environment and Sustainable Development. Over the past year the federal government, in consultation with the provinces and stakeholders, has been active in developing a compensation policy that, upon completion, will guide development of

compensation regulations governing loss of land use under the implementation of SARA.

In **Nova Scotia**, recovery plans are underway for nine of the 10 wildlife species protected under their new Endangered Species Act (a plan for the tenth species is being prepared).

The 10 species listed include seven endangered, one threatened and two vulnerable species, all currently listed “at risk” nationally by the Committee on the Status of Endangered Species (COSEWIC). The new Act was proclaimed last year and is part of the province’s national commitment to the protection of species at risk.

Nova Scotia also released, in April 2001, an Internet-based report and searchable Web site on the status of wildlife species. The report contains the general status information for 748 species of plants and animals found in the province, with a view to expanding reporting to 1 600 species by the end of this year.

Aboriginal Participation in Forestry

In March 2001, the **National Aboriginal Forestry Association (NAFA)** released an action plan to improve the capacity of Aboriginal communities in forestry. The plan focuses particularly on ways to increase the number of Aboriginal registered professional foresters (RPFs) in Canada. NAFA’s goal is to have 500 Aboriginal RPFs join the forest sector within the next decade.



FIRST NATION FORESTRY PROGRAM: FIVE YEARS OF PROGRESS

Canada's First Nation Forestry Program (FNFP), initiated in 1996 for a period of five years, was a \$24.9 million federal government program. In April 2001, the Program was extended for one year at a funding level of \$4.5 million. Designed to improve the economic conditions in status Indian communities, with full consideration of the principles of sustainable forest management, the FNFP has been remarkably successful in creating opportunities for First Nations' workers and their communities.

The broad objectives of the FNFP have provided the flexibility necessary to support initiatives that best meet community needs while respecting varying regional forestry circumstances and needs of First Nations. For example, the FNFP recognizes that many First Nations are at different levels of developing their capacity to manage forests; that First Nations, in some regions, have relatively few, although large, forests, while other regions have many smaller forests; that provincial policies relating to First Nations' access to off-reserve forests differ widely; and, that the forest sector differs in scope and nature from region to region.

The FNFP is managed through a relatively new concept for federally sponsored programs. A National Management Committee and provincial and territorial committees were put in place to administer and deliver the Program. The National Management Committee has representation from First Nations, Indian and Northern Affairs Canada and Natural Resources Canada, and is accountable for the overall management of the Program. The provincial and territorial committees, composed of First Nations, Indian and Northern Affairs Canada and Natural Resources Canada, and in some cases provincial and territorial governments and the forest industry, approve projects and deliver the program at the regional level. By the last year of the program, over 80 First Nations representatives participated in these Provincial/Territorial Management Committees and it has become evident that such representation has helped advance First Nation forestry leadership in every region of Canada.

SUCCESS IS EVIDENT

Overall, during the first five years of the FNFP, 1 480 applications for project funding, valued at \$152.4 million, were received. Of these, 966 projects valued at more than \$70 million were supported. The FNFP contributed \$21 million toward these projects while First Nations and their partners contributed \$27 million and \$22 million, respectively. These projects provided on-the-job training for 3 961 First Nations workers.

As an economic development program, communities are encouraged to investigate forestry business opportunities, prepare business plans and develop forest management plans. During the first five years of the FNFP, 72 feasibility studies, 99 business plans and 84 forest management plans were prepared. Many of these initiatives led to the establishment of a number of forestry-related companies and other employment activities that created a substantial number of part- and full-time jobs, both on and off reserve.

An important communication activity of the Program is capacity building through the development of forestry skills, knowledge and on-site training. In this regard, the FNFP supported 216 conferences, workshops, and training sessions to promote and encourage outreach activities. These activities gave participants the opportunity to learn from experts and exchange information and viewpoints, while networking with colleagues from across the country.

The one-year extension of the FNFP is allowing the continuation of longer-term projects while also permitting first-time entrants to become involved in initiatives that will allow them to explore forestry opportunities in and around their communities. Perhaps most importantly, the extension will support continued First Nations leadership that resulted during the first five years, thus fostering new opportunities for First Nations to become more involved in Canada's forest sector.

For more information on the First Nation Forestry Program visit <http://www.fnfp.gc.ca>

NAFA has also assisted in the implementation of the Aboriginal Junior Forest Rangers Program in northern Ontario. This program is a summer employment opportunity for Aboriginal youth aimed at extending capacity building in forestry to youth. Eighteen rangers, between the ages of 16 and 18, were introduced to the principles of sustainable forest management through tours, classroom instruction, labs and hands-on training in tree planting, thinning and other practical skills. NAFA is currently marketing this concept across the country to promote forestry education and awareness to Aboriginal youth and to create working relationships with industrial partners.

A recent agreement between the Innu Nation and **Newfoundland and Labrador** provides for the full participation of the Innu Nation in the

In 2000, the **PICTOU LANDING FIRST NATION** received Forest Stewardship Council certification (FSC—see page 78) of their 384 hectare woodlot. According to the announcement made by the Pictou Landing First Nation, their woodlot was only the fifth certified woodlot in Canada—the first to be certified in Nova Scotia—and at that time was the only Native-owned woodlot in Canada to have been certified. In 1999, the Pictou Landing First Nation completed a new forest management plan that provides the blueprint for the sustainable development of the woodlot. Their long-term goal is to restore the woodlot to pre-colonization conditions. These efforts resulted in certification by the FSC as a sustainable forest that is properly managed from a social, economic and environmental perspective.

management and sustainable development of Labrador's forest resources. The Innu Nation's involvement encompasses management planning, designing practices and prescriptions for ongoing operations, and exploring models for co-management of the resources.

Communication and Innovation

In February 2001, the former Canadian Pulp and Paper Association changed its name to the **Forest Products Association of Canada** (FPAC). This name change will better enable Canada's forest industry to speak with a more united voice on national and international issues, including public policy, communications, environment, and sustainable forest management. FPAC will represent members that include makers of pulp, paper and wood products across Canada who currently have annual revenues of at least \$60 billion. The new association will play a key role in promoting Canada's forest policy and forest management practices around the world.

Hundreds of Canadian and US wood companies and their allied associations have banded together under the umbrella of the **Wood Promotion Network**. These companies and associations employ an unprecedented and powerful voice to enhance the reputation of wood among builders, retailers and consumers, in North America. The three-year, US\$45 million marketing and education campaign aims to reinforce the virtues of wood as a superior building material. A parallel effort focuses on raising awareness of the growth, abundance and sustainability of the forest resource.

UNITED NATIONS FORUM ON FORESTS

Following the United Nations Conference on Environment and Development (UNCED) in 1992, the international forest policy dialogue resumed in the United Nations with the establishment of the Intergovernmental Panel on Forests (IPF) in 1995 and, subsequently, at the Intergovernmental Forum on Forests (IFF) in 1997. Discussions resulted in more than 250 proposals for action that countries and international organizations committed themselves to implement to improve sustainable forest management at national, regional and global levels. However, during final deliberations at the IFF in February 2000, agreement could not be reached to launch negotiations for a legally binding framework for forests.

Recognizing the need for further deliberations, the Economic and Social Council of the United Nations established the United Nations Forum on Forests (UNFF) in October 2000. Over the next five years, the UNFF will, among other tasks, facilitate the implementation of the IPF/IFF proposals, enhance international coordination and cooperation in addressing forest issues and strengthen political commitment for sustainable forest management worldwide. The UNFF will also consider the parameters of a mandate for developing a legal framework on all types of forests and devise approaches toward financial and technology transfer support to implement sustainable forest management. The UNFF's first substantive session is scheduled for June 2001, when it is expected to adopt a multi-year program of work and develop a plan of action to implement IPF/IFF proposals.

Additional information on past and current forest discussions in the United Nations can be found at <http://www.un.org/esa/sustdev/forests.htm>

Forintek Canada Corp. has been active in securing a foothold in China for Canada's wood industry. Forintek, Canada's applied research institute for the solid wood products industry, participated in the revision of China's Timber Structural Design Code (building code). This information will, for the first time, allow Chinese design professionals to use Canadian woods in structural applications. China is expected to build over five billion square feet of residential housing annually for the next 20 years. The Chinese government is particularly interested in energy-saving, low-environmental impact materials as a substitute for traditional concrete and bricks.

FERIC, the Forest Engineering Research Institute of Canada, celebrated 25 years in 2000 with the launch of a book, which showcases 25 of the most successful projects it has accomplished over this period. FERIC is a private, non-profit research and development organization whose goal is to improve Canadian forestry operations related to the harvesting and transportation of wood, and the growing of trees, within a framework of sustainable development. Over the past 25 years, FERIC has undertaken more than 1 000 research projects.

The year 2000 also marked the 75th anniversary of the **Pulp and Paper Research Institute of Canada** (Paprican). A number of special events were held to commemorate this milestone in the Institute's history. Paprican's mission is to enhance the technical competitiveness of its member pulp and paper companies through research and educational activities.

Indications are that the much anticipated growth in **forestry e-business** has been slow to take off in Canada. A recent e-commerce study stated that although some forest companies are becoming more knowledgeable about the Internet, only 32.8 percent of the enterprises use the Internet and only 5.7 percent of the industry has corporate Web sites on which they advertise themselves and their products. This same study asserted that only 1.1 percent of Canada's forest industries are investing in the global business-to-business electronic marketplace.



The **Canada Research Chairs Program** announced last year has the goal of creating 2 000 new research Chairs across Canada by 2005. It is administered by the three federal granting councils, the Medical Research Council (MRC), the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Social Sciences and Humanities Research Council (SSHRC), along with the Canada Foundation for Innovation (CFI) and Industry Canada.

Under the program, two of these newly created Chairs are assigned to the Faculty of Forestry and Geomatics at Laval University in Quebec. One is a Chair in forestry and environmental genomics, under the banner “protecting and building the forest”, and another is a new Chair in geomatics, titled “Cognitive geomatics-Spatial reference at a crossroads”. A third industrial Chair was created by the faculty, in collaboration with Forintek Canada Corp., NSERC and industry.

MERGERS AND ACQUISITIONS IN THE FOREST SECTOR 2000 - 2001

As reported in *The State of Canada's Forests 1999-2000*, the first half of that year was unprecedented with regard to corporate mergers and takeovers within the Canadian forest sector. Consolidation was the trend. That trend continued into 2000-2001, as shown in the following table, but at a slower pace and with less financially dramatic manoeuvres.

Industry analysts have suggested that the reduced pace of mergers and acquisitions within Canada's forest sector in later 2000 and into 2001 are the result of a variety of factors: as a result of their major acquisitions completed in 1999-2000, the industry required some time adapt to these new arrangements and to integrate their newly acquired capacities; drops in value of industry-related stocks, from the highs of early spring 2000 to the lows of the fall that same year, have resulted in mergers and acquisitions being less advantageous and self-investment (by buying back their own stocks at their lower values) the better strategy; and factors such as the expiration of the Softwood Lumber Agreement between Canada and the United States, as well as anticipated downturns in the United States' economy and its effects on their housing starts, were cause for the Canadian forest sector to pause and adopt a 'wait and see' attitude.

Some forest sector analysts are predicting that mergers and acquisitions within Canada's forest industries are not yet complete. However, these analysts generally agree that future activity will likely not be as aggressive or involve as much money as experienced in 1999-2000. One explanation for the predicted slowdown in activity is simply that the number of big Canadian forestry companies still available for acquisition or mergers is now very limited, given last year's activity. Experts further suggest that there will be mainly mid- to smaller-sized companies involved in the next round of activity.

DATE	INITIATING COMPANY	AFFECTED COMPANY	ACTION	FINANCES	DETAILS OF ACTIONS
March '00	Olsen Management Group	> West Fraser Timber Co. Vancouver, BC	Sale	Undisclosed	North coast of BC forest licence
June '00	Weyerhaeuser Inc. United States	> Coast Mountain Hardwood Delta, BC	Sale	Undisclosed	BC: 1 hardwood lumber mill
July '00	Nexfor Inc. Toronto, ON	> Juniper Lumber Company Ltd. Miramichi, NB	Sale	Undisclosed	NB: 1 I-joist plant
Aug. '00	UPM - Kymmene Finland	> Repap Entreprises Inc. Prince George, BC	Sale	\$160 million	NB: 1 fine paper mill 2 sawmills
Sept. '00	Tembec Inc. Montréal, QC	> La Société La Rochette France	Sale	\$155 million	France: 2 Kraft pulp mills
Oct. '00	West Fraser Timber Co. Vancouver, BC	> Plum Creek Timber Company United States	Sale	\$60 million (US)	US: 2 sawmills
Feb. '01	West Fraser Timber Co. Vancouver, BC	> Ainsworth Lumber Co. Ltd. Coquitlam, BC	Sale	\$22 million	BC: 1 sawmill - Chasm
March '01	Tembec Inc. Montréal, QC	> Excel Forest Products Ltd. United Kingdom	Sale	\$12 million	ON: 1 sawmill - Opatatika
<i>(This represents the purchase of a 50% interest in Excel Forest Products Ltd.)</i>					
March '01	Interfor Vancouver, BC	> Primex Forest Products Inc. Delta, BC	Sale subject to regulatory approval	\$110 million as of April '01	BC: 2 sawmills Interests in 3 lumber remanufacturing mills
March '01	Norske Skog Canada Ltd. Vancouver, BC	> Pacifica Papers Inc. Vancouver, BC	Sale subject to regulatory approval	\$1.5 billion	BC: 2 paper mills producing lightweight coated paper, telephone directory paper and newsprint
March '01	Pope & Talbot, Inc. Portland, OR	> Norske Skog Canada Ltd. Vancouver, BC	Sale subject to regulatory approval	\$163 million	BC: 1 pulp mill
April '01	Bowater Inc. Greenville, SC	> Alliance Forest Products Inc. Montréal, QC	Sale subject to regulatory approval	\$1.2 billion	QC: 2 fine paper mills 8 sawmills NB: 1 sawmill US: 1 newsprint mill 1 sawmill
June '01	Georgia-Pacific Corp. Atlanta, GA	> Domtar, Inc. Montréal, QC	Sale subject to regulatory approval	\$2.5 billion	US: 4 fine paper mills

Profiles

Across the Nation

The family of 10 maple species is Canada's arboreal emblem.



CANADA

Population (2000)	30.9 million
Total area	997.0 million ha
Land area	921.5 million ha
Forest land	417.6 million ha
National parks	24.5 million ha
Provincial parks	24.5 million ha

FOREST RESOURCE

Ownership		
Provincial		71%
Federal		23%
Private		6%
Forest type		
Softwood		67%
Mixedwood		18%
Hardwood		15%
Annual allowable cut (1998) ^a	232.8 million m ³	
Harvest (volume) –		
industrial roundwood (1998) ^b	176.6 million m ³	
Harvest (area) (1998)	1.08 million ha	
Status of harvested Crown land (1998) ^c		
Stocked (86%)	13.9 million ha	
Understocked (14%)	2.3 million ha	
Area defoliated by insects (1999) ^d	6.3 million ha	
Area burned (2000) ^e	647 071 ha	

FOREST INDUSTRY

Value of exports (2000)	\$47.4 billion
Softwood lumber	24%
Other paper and paperboard	22%
Wood pulp	21%
Newsprint	15%
Waferboard	4%
Major export markets (2000)	
United States	77%
European Union	8%
Japan	7%
Others	8%
Balance of trade (2000)	\$37.5 billion
Contribution to GDP (2000)	\$20.8 billion
Value of shipments (1997)	\$69.6 billion
Exported	56%
Sold domestically	44%
Number of establishments (1997)	
Logging	8 920
Wood (1998)	2 326
Paper and allied (1998)	669
Direct jobs (2000)	373 326
Wages and salaries (1997)	\$11.8 billion
New investments (2000)	\$4.3 billion

a, b, c, d, e see page 31



NEWFOUNDLAND AND LABRADOR



BLACK SPRUCE (*Picea mariana*)

Population	538 823
Total area	40.6 million ha
Land area	37.2 million ha
Forest land	22.5 million ha
Provincial parks	439 400 ha

FOREST RESOURCE

Ownership		
Provincial*		99%
Private		1%
Forest type		
Softwood		91%
Mixedwood		8%
Hardwood		1%
Annual allowable cut (1998) ^a	2.7 million m ³	
Harvest (volume) (1998) ^b	2.4 million m ³	
Harvest (area) (1998)	17 414 ha	
Status of harvested Crown land (1998) ^c		
Stocked (80%)	293 000 ha	
Understocked (20%)	72 000 ha	
Area defoliated by insects (1999) ^d	35 121 ha	
Area burned (2000)	148 820 ha	

FOREST INDUSTRY

Value of exports (2000)	\$684.8 million
Newsprint	95%
Softwood lumber	4%
Major export markets (2000)	
United States	57%
European Union	24%
South and Central America	13%
Other countries	6%
Balance of trade (2000)	\$666.6 million
Value of shipments (1997)	\$710.0 million
Number of establishments (1997)	
Logging	103
Wood (1998)	42
Paper and allied (1998)	8
Direct jobs (2000)	4 121
Wages and salaries (1997)	\$114.0 million
New investments (2000)	not available

*Timber and property rights for 69% of the Crown land on the island of Newfoundland has been conveyed to pulp and paper companies through 99 year licences issued under the 1905 Pulp and Paper Manufacturing Act and 1935 Bowater Act. Therefore, the Province's financial and legal system treats this licensed land as private property.



PRINCE EDWARD ISLAND



RED OAK (*Quercus rubra*)

Population	138 928
Total area	0.57 million ha
Land area	0.57 million ha
Forest land	0.29 million ha
Provincial parks	1 500 ha

FOREST RESOURCE

Ownership		
Provincial		7%
Federal		1%
Private		92%
Forest type		
Softwood		35%
Mixedwood		35%
Hardwood		30%
Annual allowable cut (1999) ^a	0.5 million m ³	
Harvest (volume) (1999) ^b	0.5 million m ³	
Harvest (area) (1999)	5 780 ha	
Status of harvested Crown land (1997) ^c		
Stocked (72%)	24 600 ha	
Understocked (28%)	9 400 ha	
Area defoliated by insects (1999) ^d	0	
Area burned (2000)	29 ha	

FOREST INDUSTRY

Value of exports (2000)	\$17.9 million
Softwood lumber	87%
Other paper and paperboard	9%
Major export markets (2000)	
United States	99%
Other countries	1%
Balance of trade (2000)	\$17.6 million
Value of shipments (1997)	\$44.0 million
Number of establishments (1997)	
Logging	32
Wood (1998)	10
Paper and allied (1998)	4
Direct jobs (2000)	546
Wages and salaries (1997)	\$8.0 million
New investments (2000)	not available



NOVA SCOTIA



RED SPRUCE (*Picea rubens*)

Population	940 996
Total area	5.6 million ha
Land area	5.3 million ha
Forest land	3.9 million ha
Provincial parks	30 507 ha

FOREST RESOURCE

Ownership	
Provincial	28%
Federal	3%
Private	69%

Forest type	
Softwood	45%
Mixedwood	22%
Hardwood	33%

Annual allowable cut (1998) ^a	6.7 million m ³
Harvest (volume) (1998) ^b	5.9 million m ³
Harvest (area) (1999)	49 680 ha

Status of harvested Crown land (1998) ^c	
Stocked (97%)	185 000 ha
Understocked (3%)	6 700 ha

Area defoliated by insects (1999) ^d	49 866 ha
Area burned (2000)	488 ha

FOREST INDUSTRY

Value of exports (2000)	\$1.1 billion
Newsprint	26%
Wood pulp	23%
Softwood lumber	22%
Other paper and paperboard	23%

Major export markets (2000)	
United States	70%
European Union	13%
Central and South America	11%
Other countries	6%

Balance of trade (2000)	\$1.1 billion
Value of shipments (1997)	\$1.2 billion

Number of establishments (1997)	512
Logging	418
Wood (1998)	74
Paper and allied (1998)	11

Direct jobs (2000)	10 794
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Wages and salaries (1997)	\$244.0 million
New investments (2000)	not available



NEW BRUNSWICK



BALSAM FIR (*Abies balsamea*)

Population	756 598
Total area	7.3 million ha
Land area	7.2 million ha
Forest land	6.1 million ha
Provincial parks	24 900 ha

FOREST RESOURCE

Ownership	
Provincial	48%
Federal	1%
Private	51%

Forest type	
Softwood	47%
Mixedwood	29%
Hardwood	24%

Annual allowable cut (1998) ^a	11.0 million m ³
Harvest (volume) (1998) ^b	11.5 million m ³
Harvest (area) (1998)	111 568 ha

Status of harvested Crown land (1998) ^c	
Stocked (96%)	510 000 ha
Understocked (4%)	22 000 ha

Area defoliated by insects (1999) ^d	59 274 ha
Area burned (2000)	336 ha

FOREST INDUSTRY

Value of exports (2000)	\$2.9 billion
Other paper and paperboard	30%
Softwood lumber	23%
Wood pulp	23%
Newsprint	12%

Major export markets (2000)	
United States	83%
European Union	7%
Japan	4%
Central and South America	2%
Other countries	4%

Balance of trade (2000)	\$2.6 billion
Value of shipments (1997)	\$3.7 billion

Number of establishments (1997)	1 015
Logging	855
Wood (1998)	123
Paper and allied (1998)	24

Direct jobs (2000)	20 006
--------------------	--------

Wages and salaries (1997)	\$530.0 million
New investments (2000)	not available



QUEBEC



YELLOW BIRCH (*Betula alleghaniensis* Britton)

Population	7.4 million
Total area	154.1 million ha
Land area	135.7 million ha
Forest land	83.9 million ha
Provincial parks	7.1 million ha

FOREST RESOURCE

Ownership	
Provincial	89%
Private	11%
Forest type	
Softwood	58%
Mixedwood	23%
Hardwood	19%
Annual allowable cut (1999) ^a	58.0 million m ³
Harvest (volume) (1999) ^b	45.5 million m ³
Harvest (area) (1999)	382 538 ha
Status of harvested Crown land (1998) ^e	
Stocked (94%)	4.9 million ha
Understocked (6%)	323 000 ha
Area defoliated by insects (2000) ^d	478 875 ha
Area burned (2000)	39 205 ha

FOREST INDUSTRY

Value of exports (2000)	\$12.2 billion
Newsprint	25%
Other paper and paperboard	31%
Softwood lumber	15%
Wood pulp	9%
Major export markets (2000)	
United States	87%
European Union	7%
Other countries	6%
Balance of trade (2000)	\$10.4 billion
Value of shipments (1997)	\$18.7 billion
Number of establishments (1997)	
Logging	1 714
Wood (1998)	722
Paper and allied (1998)	198
Direct jobs (2000)	108 916
Wages and salaries (1997)	\$3.2 billion
New investments (1999)	\$1.3 billion



ONTARIO



EASTERN WHITE PINE (*Pinus strobus*)

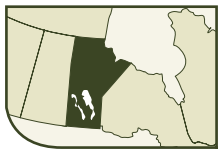
Population	11.7 million
Total area	106.9 million ha
Land area	89.1 million ha
Forest land	58.0 million ha
Provincial parks	7.0 million ha

FOREST RESOURCE

Ownership	
Provincial	88%
Federal	1%
Private	11%
Forest type	
Softwood	50%
Mixedwood	27%
Hardwood	23%
Annual allowable cut (1999) ^a	0.4 million ha
Harvest (volume) (1999) ^b	24.8 million m ³
Harvest (area) (1999)	201 522 ha
Status of harvested Crown land (1999) ^c	
Stocked (87%)	3.9 million ha
Understocked (13%)	577 000 ha
Area defoliated by insects (2000) ^d	7.3 million ha
Area burned (2000)	6 633 ha

FOREST INDUSTRY

Value of exports (2000)	\$9.7 billion
Other paper and paperboard	38%
Newsprint	17%
Wood pulp	14%
Softwood lumber	9%
Waferboard	6%
Major export markets (2000)	
United States	97%
Other countries	3%
Balance of trade (2000)	\$3.9 billion
Value of shipments (1997)	\$15.5 billion
Number of establishments (1997)	
Logging	1 756
Wood (1998)	525
Paper and allied (1998)	308
Direct jobs (2000)	88 473
Wages and salaries (1997)	\$2.8 billion
New investments (2000)	\$0.9 billion



MANITOBA



WHITE SPRUCE (*Picea glauca*)

Population	1.1 million
Total area	65.0 million ha
Land area	54.8 million ha
Forest land	26.3 million ha
Provincial parks	1.5 million ha

FOREST RESOURCE

Ownership	
Provincial	94%
Federal	1%
Private	5%

Forest type	
Softwood	59%
Mixedwood	20%
Hardwood	21%

Annual allowable cut (1998) ^a	9.7 million m ³
Harvest (volume) (1999) ^b	2.2 million m ³
Harvest (area) (1999)	15 509 ha

Status of harvested Crown land (1999) ^c		
Stocked	(94%)	277 000 ha
Understocked	(6%)	17 000 ha

Area defoliated by insects (1998) ^d	181 614 ha
Area burned (2000)	86 129 ha

FOREST INDUSTRY

Value of exports (2000)	\$659.2 million
Other paper and paperboard	25%
Newsprint	18%
Softwood lumber	21%
Waferboard	12%

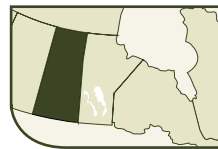
Major export markets (2000)	
United States	93%
European Union	1%
Other countries	6%

Balance of trade (2000)	\$289.1 million
Value of shipments (1997)	\$918.0 million

Number of establishments (1997)	248
Logging	164
Wood (1998)	51
Paper and allied (1998)	22

Direct jobs (2000)	8 973
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Wages and salaries (1997)	\$189.0 million
New investments (2000)	not available



SASKATCHEWAN



WHITE BIRCH (*Betula papyrifera*)

Population	1.0 million
Total area	65.2 million ha
Land area	57.1 million ha
Forest land	28.8 million ha
Provincial parks	1.2 million ha

FOREST RESOURCE

Ownership	
Provincial	97%
Federal	2%
Private	1%

Forest type	
Softwood	39%
Mixedwood	25%
Hardwood	36%

Annual allowable cut (1998) ^a	7.6 million m ³
Harvest (volume) (1998) ^b	3.3 million m ³
Harvest (area) (1998)	21 169 ha

Status of harvested Crown land (1997) ^c		
Stocked	(36%)	150 000 ha
Understocked	(64%)	269 000 ha

Area defoliated by insects (1999) ^d	506 749 ha
Area burned (2000)	140 922 ha

FOREST INDUSTRY

Value of exports (2000)	\$887.8 million
Wood pulp	43%
Other paper and paperboard	30%
Softwood lumber	21%
Waferboard	4%

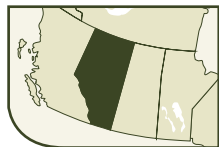
Major export markets (2000)	
United States	71%
European Union	11%
Japan	4%
Central and South America	2%
Other countries	12%

Balance of trade (2000)	\$791.9 million
Value of shipments (1997)	\$947.0 million

Number of establishments (1997)	251
Logging	191
Wood (1998)	42
Paper and allied (1998)	5

Direct jobs (2000)	5 581
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Wages and salaries (1997)	\$166.0 million
New investments (2000)	not available



ALBERTA



LOGDGEPOLE PINE (*Pinus contorta*)

Population	3.0 million
Total area	66.1 million ha
Land area	64.4 million ha
Forest land	38.2 million ha
Provincial parks	1.3 million ha

FOREST RESOURCE

Ownership		
Provincial		87%
Federal		9%
Private		4%
Forest type		
Softwood		44%
Mixedwood		23%
Hardwood		33%
Annual allowable cut (1999) ^a	24.8 million m ³	
Harvest (volume) (1999) ^b	19.4 million m ³	
Harvest (area) (1999)	42 210 ha	
Status of harvested Crown land (1999) ^c		
Stocked (67%)	662 000 ha	
Understocked (33%)	332 000 ha	
Area defoliated by insects (2000) ^d	481 428 ha	
Area burned (2000)	14 676 ha	

FOREST INDUSTRY

Value of exports (2000)	\$3.2 billion
Wood pulp	52%
Softwood lumber	21%
Waferboard	12%
Newsprint	4%
Major export markets (2000)	
United States	66%
Japan	12%
European Union	10%
Other countries	12%
Balance of trade (2000)	\$3.0 billion
Value of shipments (1997)	\$4.4 billion
Number of establishments (1997)	
Logging	548
Wood (1998)	323
Paper and allied (1998)	153
	29
Direct jobs (2000)	24 499
Wages and salaries (1997)	\$704.0 million
New investments (2000)	\$0.5 billion



BRITISH COLUMBIA



WESTERN RED CEDAR (*Thuja plicata*)

Population	4.1 million
Total area	94.8 million ha
Land area	93.0 million ha
Forest land	60.6 million ha
Provincial parks	11.3 million ha

FOREST RESOURCE

Ownership		
Provincial		95%
Federal		1%
Private		4%
Forest type		
Softwood		89%
Mixedwood		8%
Hardwood		3%
Annual allowable cut (1999) ^a	70.6 million m ³	
Harvest (volume) (2000) ^b	75.0 million m ³	
Harvest (area) (1999)	176 312 ha	
Status of harvested Crown land (1998) ^c		
Stocked (82%)	3.2 million ha	
Understocked (18%)	715 000 ha	
Area defoliated by insects (1999) ^d	not available	
Area burned (2000)	16 830 ha	

FOREST INDUSTRY

Value of exports (2000)	\$16.0 billion
Softwood lumber	43%
Wood pulp	28%
Other paper and paperboard	9%
Newsprint	5%
Major export markets (2000)	
United States	58%
Japan	18%
European Union	12%
Other countries	12%
Balance of trade (2000)	\$14.8 billion
Value of shipments (1997)	\$23.5 billion
Number of establishments (1997)	
Logging	4 140
Wood (1998)	3 379
Paper and allied (1998)	584
	60
Direct jobs (2000)	101 417
Wages and salaries (1997)	\$3.9 billion
New investments (2000)	\$0.7 billion



YUKON TERRITORY

The Yukon Territory does not have an arboreal emblem.

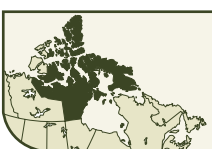
Population	30 663
Total area	48.3 million ha
Land area	47.9 million ha
Forest land	27.5 million ha

FOREST RESOURCE

Ownership	
Federal	100%
Forest type	
Softwood	79%
Mixedwood	19%
Hardwood	2%
Annual allowable cut (1999) ^a	352 200 m ³
Harvest (volume) (1999) ^b	253 326 m ³
Harvest (area) (1999)	1 034 ha
Status of harvested Crown land (1998) ^c	
Understocked (69%)	7 200 ha
Stocked (31%)	3 300 ha
Area defoliated by insects (1999) ^d	not available
Area burned (2000)	7 651 ha

FOREST INDUSTRY

Value of exports (2000)	\$11.9 million
Softwood lumber	94%
Major export markets (2000)	
United States	100%
Balance of trade (2000)	\$11.9 million



NUNAVUT

Nunavut does not have an arboreal emblem.

Population	27 692
Total area	199.4 million ha

FOREST INDUSTRY

Value of exports (1999)	\$92 784
Softwood lumber	100%
Major export markets (1999)	
United States	100%



NORTHWEST TERRITORIES

JACK PINE (Pinus banksiana)



Population	42 083
Total area	342.6 million ha
Land area	329.3 million ha
Forest land	61.4 million ha

FOREST RESOURCE

Ownership	
Federal	100%
Forest type	
Softwood	33%
Mixedwood	58%
Hardwood	9%
Annual allowable cut (1998) ^a	236 500 m ³
Harvest (volume) (1999) ^b	71 271 m ³
Harvest (area) (1998)	547 ha
Status of harvested Crown land (1993) ^c	
Understocked (85%)	2 600 ha
Stocked (15%)	440 ha
Area defoliated by insects (1999) ^d	487 556 ha
Area burned (2000)	177 814 ha

FOREST INDUSTRY

Value of exports (2000)	\$4.4 million
Softwood lumber	96%
Major export markets (2000)	
United States	100%
Balance of trade (2000)	\$4.4 million

Notes

Data Sources

The main sources for the data are Statistics Canada, Environment Canada, the Forest Products Association of Canada, Natural Resources Canada–Canadian Forest Service, the National Forestry Database and the Canadian Interagency Forest Fire Centre. Most of the information for the National Forestry Database was collected by provincial and territorial natural resource ministries. At the time of publication, data were preliminary. As data are finalized, they will be made available on the Internet in the National Forestry Database (<http://nfdp.ccfm.org>).

Arboreal Emblem

An illustration of the tree species that has been designated or officially adopted as the arboreal emblem of Canada and of each province and territory is included in the profiles on the preceding pages. The Yukon Territory and Nunavut do not have arboreal emblems.

Forest Land

The data regarding Canada's forest land are based on Canada's Forest Inventory 1991 (revised 1994). The map on page 24 shows the forest land boundary.

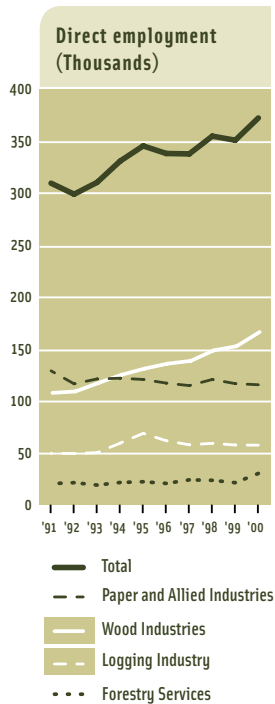
Forest Resource

Ownership data are provided for the total forest land.

- ^a Annual allowable cut: The level of harvest set by the provinces and territories for a year is called the "annual allowable cut" (AAC). AAC figures include data for both softwoods and hardwoods. The AAC figures for Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec and Manitoba include federal, provincial and private lands. Given the differences outlined below, a national AAC cannot be calculated by simply adding the provincial and territorial AACs.
- The national AAC figure that appears on page 24 was arrived at by estimating some data for private and federal lands, and converting the Ontario area figures into volume figures.
 - Ontario provides figures for AAC (which it refers to as the "maximum allowable depletion") in hectares only.

- Saskatchewan, Alberta and Ontario do not include figures for private lands in their AACs.
 - British Columbia does not include all private lands in its AAC.
- ^b Harvesting: The national and provincial figures for harvesting volume include data for industrial roundwood only. The harvest level for fuelwood or firewood for a single province may range as high as 2.2 million m³, and is not included in these harvest figures.
- Although the AAC for British Columbia does not include all private lands, these lands are included in the harvest figure. The yearly harvest rate for British Columbia may fluctuate, and in some cases, it may exceed the AAC. Over a five-year period, however, the harvest figure would be equal to or lower than the AAC.
- ^c Status of harvested Crown land: These data reflect the cumulative area harvested since 1975. Data for private lands are not included. The term "stocked" refers to land where the forest cover meets certain timber-production standards established by forest management agencies in each province and territory. The term "understocked" refers to harvested land that requires silviculture treatments, such as site preparation, planting, seeding or weeding, to meet established standards. This category also includes land that has not yet been surveyed. A significant proportion of recently harvested areas will always be reported as understocked because of the time lag between harvesting and observable results of subsequent treatments. The small percentage of the area harvested each year that is devoted to access roads is not included in these data.
- ^d Insect defoliation: The data relating to insects were provided by provincial and territorial agencies, and they include moderate-to-severe defoliation only. Defoliation does not always imply mortality; for example, stands with moderate defoliation often recover and may not lose much growth. Also, defoliation is mapped on an insect species basis, and a given area may be afflicted by more than one insect at a time. This may result in double or triple counting in areas affected by more than one insect, exaggerating the extent of the total area defoliated.
- ^e All "Area burned" figures are from the Canadian Interagency Forest Fire Centre. Area burned includes areas within National Parks.

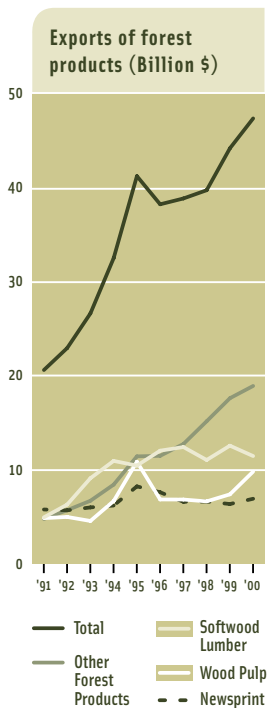
Forest Statistics*



Direct Employment (2000)

Employment in the forest sector grew by more than 20 000 person-years between 1999 and 2000. This expansion was driven by the wood products sector, which generated nearly 14 000 new jobs. Forestry services, which consist of activities relating to forest management and protection, also experienced substantial growth. Employment in the paper and logging sectors remained generally stable. Over the past decade, employment in the wood products sector increased by 59 000 person-years.

2000	Person-years	Annual change	
		1 year	10 years
Total	373 300	6.1%	1.9%
Wood industries	167 700	8.9%	4.4%
Paper and allied industries	116 400	-1.0%	-1.1%
Logging industry	58 200	-0.4%	1.4%
Forestry services	31 000	40.4%	3.9%



Exports of Forest Products (2000)

With the help of a dollar that was considerably weaker than its United States counterpart, exports of Canadian forest products were worth a record \$47.4 billion in 2000. Wood pulp prices were excellent throughout the year, with the result that the value of pulp exports was \$2.5 billion higher than that of the previous year. Softwood lumber prices, in contrast, declined steadily during 2000, and consequently the value of exports declined by \$1.1 billion. The value of exports of other forest products increased in 2000 for the tenth consecutive year.

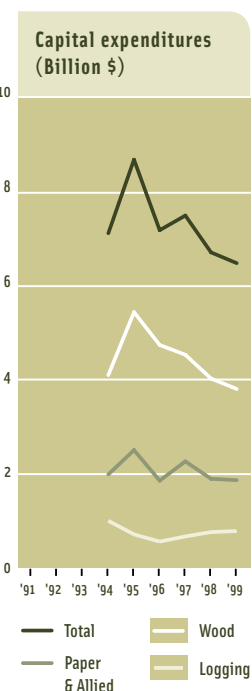
2000	Billion \$	Annual change	
		1 year	10 years
Total	47.4	7.2%	8.7%
Other forest products	19.0	7.4%	14.6%
Softwood lumber	11.5	-8.7%	8.7%
Wood pulp	9.9	32.4%	7.2%
Newsprint	7.0	8.7%	1.8%

*See "Data sources" note on page 31.

Capital Expenditures (1999)

There are two main categories of capital expenditures: expenditures for new plants and equipment, and expenditures for repairs to existing facilities. Expenditures for new plants and equipment result in increased production capacity, whereas expenditures for repairs serve to keep existing plants and equipment operational. Total capital expenditures in the forest sector in 1999 were \$6.5 billion (\$3.3 billion of which was for new investments), which was below the annual average of \$7.3 billion observed over the past six years.

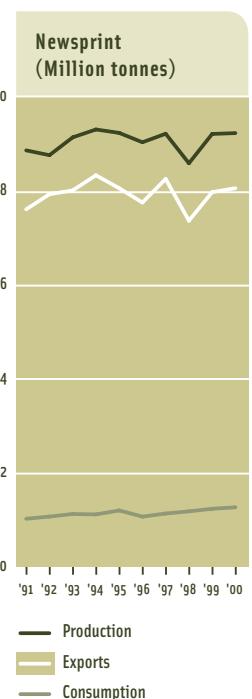
	Billion \$	Annual Change	
		1 year	5 years
Total	6.5	-6.6%	1.8%
Wood industries	3.8	-5.5%	-1.5%
Paper and allied industries	1.9	-1.5%	-1.3%
Logging industry	0.8	2.7%	-4.8%

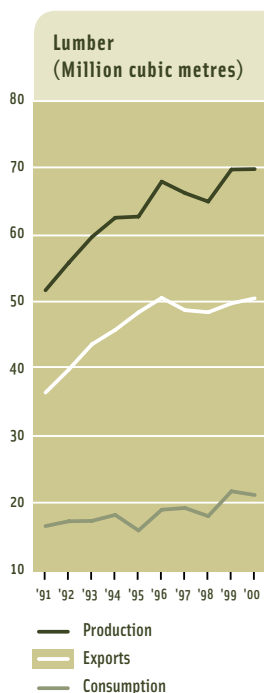


Newsprint (2000)

For the newsprint sector, 2000 was almost a carbon copy of the previous year's activity in terms of quantities of newsprint produced, exported and consumed. However, prices were slightly higher, and consequently newsprint mills were not as financially pressured as in the past few years. In North America, total newsprint consumption has not changed much during the past decade. Canada produces about 24 percent of the world's newsprint and exports about 80 percent of this production to more than 70 different countries.

	Million tonnes	Annual Change	
		1 year	10 years
Production	9.2	5.1%	-1.9%
Exports	8.0	2.1%	3.1%
Consumption	1.2	7.6%	0.3%

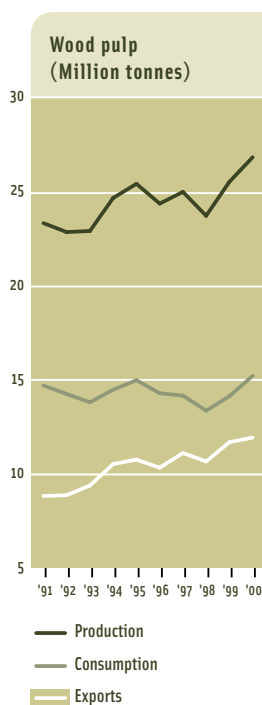




Lumber (2000)

Canadian softwood lumber production in 2000 equalled the record set in 1999. Domestic consumption was off slightly, but there was a slight increase in exports. Canada is the world's second-largest producer of softwood lumber, with a fifth of world production. Canada is also the leading exporter, with 51 percent of the world market. While quantities produced and sold were virtually unchanged in 2000 as compared to 1999, prices and earnings were down. For example, the price of spruce/pine/fir two-by-fours, random lengths, delivered to the Great Lakes, was \$425 per thousand board feet at the beginning of 2000, whereas by December it had fallen to \$294, a decline of 31 percent. (The Canada United States Softwood Lumber Agreement expired in March 2001).

2000	Million cubic metres	Annual change	
		1 year	10 years
Production	69.6	0.1%	3.0%
Exports	50.4	1.5%	3.3%
Consumption	21.2	-2.6%	2.5%



Wood Pulp (2000)

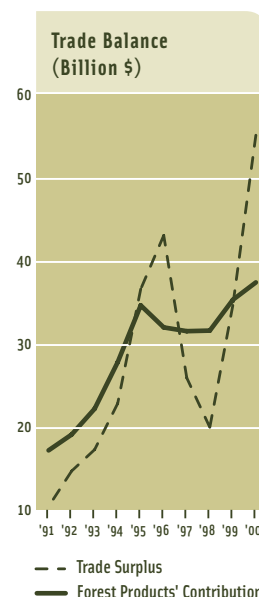
Canadian wood pulp production, consumption and exports rose to new heights in 2000. Canada is the world's second largest producer of wood pulp, after the United States, but it is the world's leading exporter, with 25 percent of the international market. Canadian wood pulp is exported to over 50 countries: the United States accounted for 33 percent of Canada's total exports, Asia received 30 percent and Europe took 25 percent. In recent years, Canadian paper makers have been using less wood pulp and more recycled paper, but for the past two years, paper makers have increased their production to such an extent that they have consumed more of both of these main sources of fibre.

2000	Million tonnes	Annual change	
		1 year	10 years
Production	26.8	5.1%	1.4%
Consumption	15.2	7.6%	0.3%
Exports	11.9	2.1%	3.1%

Trade Balance (2000)

In 2000, forest products contributed \$37.5 billion to Canada's positive trade balance, \$2 billion more than in the previous year: forest products exports were worth \$47.4 billion, while forest products worth \$10 billion were imported. In the area of forest products, Canada has a trade surplus with virtually all of its trading partners, that is, Canada exports more forest products than it imports. The largest trade surplus was with the United States, with exports to that country exceeding our imports by \$27.8 billion. Japan was second with the surplus amounting to \$3.4 billion. Canada's trade surplus with Europe was \$3.2 billion, and for trade with Asia, the surplus was \$2.4 billion.

2000	Billion \$	Annual change	
		1 year	10 years
Trade surplus	55.2	58.9%	18.0%
Forest products' contribution	37.5	5.9%	8.0%



Recycling of Waste Paper and Paperboard (2000)

Over the last decade, the use of waste paper as a source of fibre by Canadian paper mills has increased to such an extent that these mills now import 45 percent of their waste paper consumption from the United States. This clearly indicates that Canada's paper industry would welcome larger amounts of waste paper from Canadian recycling programs. Paper and paperboard consumption in Canada in 2000 is estimated at 7.9 million tonnes. Of that amount, 3.4 million tonnes are recovered for the production of paper, 0.6 million tonnes of which are exported. The quantity of waste paper used for purposes other than paper production is not precisely known. If calculated only on the basis of the volume of waste paper recycled in paper mills, the recovery rate in Canada in 2000 is estimated at 43.3 percent. Canadian paper mills recycle five million tonnes of waste paper, 2.7 million tonnes of which are generated in Canada and 2.3 million tonnes of which are imported.

2000	Million tonnes	Annual change	
		1 year	10 years
Consumption of paper and paperboard	7.9	3.3%	4.3%
Recovery of waste paper	3.4	8.0%	9.6%
Use of waste paper	5.0	1.6%	13.9%
Net import of waste paper	1.6	-9.9%	35.8%

