



SUSTAINABLE FOREST MANAGEMENT IN CANADA

Forests cover almost half the landscape of Canada, an area the size of Europe, and they have shaped the country's history and economy.

Canada is the world's leading exporter of forest products. In 1994, forestry supported more than 340 communities, employing one in 15 Canadians (847,000 direct and indirect jobs). The total value of forest product exports in 1995 was US\$30 billion.

In the last decade, Canadians have recognized that forests play important environmental and social roles as well. Home to 131 species of trees, 3,000 other plant species and 200,000 species of animals and micro-organisms, the country's forests provide wildlife habitat, preserve the diversity of species, slow climate change and cover the watersheds of about 20 per cent of the world's fresh water. They provide recreational opportunities for millions and are a cultural and religious resource for Canada's Aboriginal peoples.

In 1989 the Canadian Council of Forest Ministers (CCFM) adopted the concept of sustainable forest management, shifting the focus of forest policies from maximizing timber production to ecosystems management, supporting an array of values—environmental, aesthetic, cultural, social and economic. The CCFM is consulting with local communities, Aboriginal groups, labour, industry, academia, conservation organizations and other special interest groups in developing management policies.

Many of the provinces are implementing new silvicultural practices such as leaving more trees standing after harvesting, widening buffer zones around lakes and other environmentally sensitive areas, and keeping dead trees and woody debris in place. Some provinces are raising the fees companies pay for the right to harvest timber, requiring

them to do more to restore harvested sites and auditing their performance.

A major element in the new approach is conservation of biodiversity. Canada was the first industrialized nation to ratify the convention on biological diversity arising from the 1992 Earth Summit.

Canadian governments are also changing their land use policies to meet the goal of protecting from development 12 per cent of the country's total land area, as recommended by the United Nations Brundtland Commission. The protected area will encompass a national network of forest ecological reserves.

The National Forest Strategy

In 1992 the federal, provincial and territorial governments, joined by Aboriginal groups, industry and conservation organizations, signed the Canada Forest Accord and developed a five-year National Forest Strategy to implement it.

The Strategy contains 96 specific commitments focusing on conservation of natural areas and sustainable forest management. They include creating an ecological inventory of forest land, developing guidelines to protect species and habitat diversity and revising timber harvesting practices and silviculture.

In 1995, the CCFM approved a national framework for sustainable forest management. Through nationwide consultation, involving some of Canada's leading scientists as well as representatives from industry and environmental, Aboriginal and social groups, the CCFM has endorsed a set of 84 indicators to track performance in six areas: conservation of biological diversity, forest ecosystem health, soil and water quality, forest ecosystem contributions to global ecological cycles, benefits to society, and accepting society's responsibility for sustainable development.

Federal Activities

The role of the federal government in forestry pertains mainly to research, international trade, environmental protection, pesticide regulation and Indian affairs. It includes managing forests on federal lands and in Yukon Territory.

Within the U.N. Commission on Sustainable Development, the government of Canada is pursuing the development of an international convention on forest conservation expanding the Forest Principles that resulted from the 1990 Earth Summit. As part of this process, Canada and nine other countries, including the United States, agreed in 1995 on a set of international indicators for temperate and boreal forests. Canada is also actively involved in the development of an international system for certifying that forestry products have been produced on a sustainable basis.

In Canada, the federal government has created a network of 10 model forests, from Newfoundland to British Columbia, that serve as laboratories for the development and testing of innovative approaches to sustainable forest management. Ranging in size from 247,000 to 3,705,000 acres, they are managed in cooperation with local communities and interest groups. Research is being carried out on such topics as the impact of natural and human activities on forests, the uses animals make of the forest and the habitats they prefer, and silvicultural techniques for managing old-growth forests. Canada is currently helping to develop an international network of model forests that will include sites in Mexico, Malaysia, Russia and the United States.

The Provinces

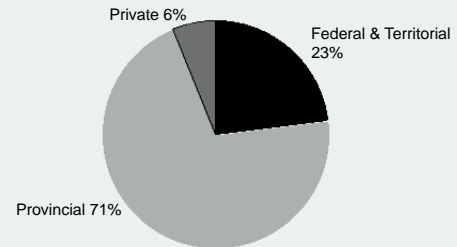
The provinces have responsibility for managing most of Canada's commercial forests. They regulate the supply of timber by setting the available harvest area or the Annual Allowable Cut

Forest Facts

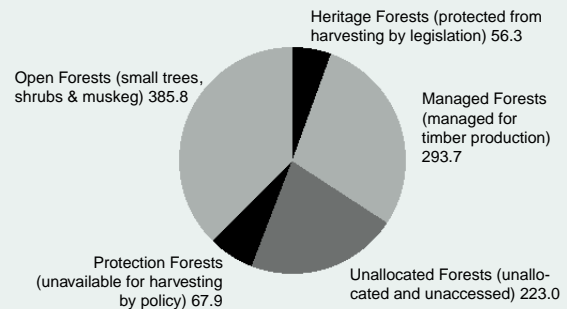
- Canada has more than a billion acres of forest land. It accounts for 10 per cent of the world's forests, 5 per cent of the world's softwoods and 19 per cent of the world's forest product exports.
- Forty-four per cent of Canada's forests are considered to be mature, referred to by some as old growth.
- Quebec has the largest supply of forest land, British Columbia the second largest and Ontario the third. B.C. is, however, the largest producer of products, accounting for 44 per cent of exports.
- Twelve per cent of Canada's forest land is protected from harvesting, either by policy or legislation.
- Only one-half of one per cent of Canada's total commercial forest is harvested per year.
- The volume of wood in Canada's commercial forests increased by 4 per cent between 1978 and 1992. The forests that had been regenerated increased to 81 per cent of the harvested area in 1992 from 62 per cent in 1980.

Source: Canadian Forest Service

Forest Land Ownership By percentage of total



Forest Land Allocation In millions of acres



(AAC). The AAC is based on characteristics of the forest, such as its age and growth, after allowing for soil quality, losses from fire, insects and disease, and environmental concerns. Forest companies pay stumpage fees to the provincial government and accept management responsibilities such as regenerating the areas they cut. In most provinces, companies must submit a long-term (20- to 25-year) management plan that specifies the methods to be used for harvesting, protecting wildlife and other resources and regenerating cut areas.

The provinces are reviewing their harvest levels and some are reducing their AACs or available harvest areas to reflect demands on forests for recreation, wilderness and biodiversity. In some cases, the revised provincial guidelines call for smaller clearcuts and the use of alternative harvesting methods that maintain the integrity of the forest ecosystem.

The following focuses on the three provinces that produce the largest volume of forest products: B.C., Quebec and Ontario. They have all made significant changes in their forest management practices.

ONTARIO

During the 1980s, Ontario began revising its timber management policies to ensure the long-term health of its forests.

In 1994, after more than four years of public hearings, an Environmental Assessment Board approved the province's forest management plan while making 115 legally binding requirements for improvements. These included managing the size of clearcuts to a prescribed distribution, developing a policy to protect old-growth red and white pine, and establishing objectives for harvest and regeneration.

The Crown Forest Sustainability Act, which came into force in April 1995, set strict standards and accountability requirements for forest management, renewal and conservation. It established the ecosystem approach as the basis for forest management and created a Forest Renewal Trust Fund financed by stumpage fees.

Ontario continues to create new parks and protected areas. One of the largest protected boreal forest areas in the world was created in 1995 with the expansion of Wabakimi Provincial Park

in northwestern Ontario. The protected wilderness in Wabakimi now totals 2.2 million acres, an area about the size of Yellowstone National Park.

Ontario has also developed a conservation strategy for old-growth red and white pine forests, under which the most significant forests will be protected and harvested areas will be regenerated naturally to red and white pine. The province has already protected 79,000 acres of old-growth red and white pine from development, almost one-half of the province's total area of the species.

QUEBEC

In 1987 Quebec implemented a new forest policy that led to a complete revision of the provincial Forest Act. The new law is based on the following principles:

- Quebec's forest is a collective heritage whose survival must be ensured.
- The multi-use character of the forest environment must be preserved and the various activities taking place in the forest must be compatible.
- Sustained yield of Quebec's forest must be guaranteed, allowing the



harvesting of a constant volume of wood, in perpetuity, without diminishing the productive capacity of forest lands.

- Any area that is disturbed must be returned to forest production.
- All forest management activities, including harvesting, must be coordinated from the planning stage through completion.
- The Quebec government and the forest industry share responsibility for forest management: The government sets objectives and ensures compliance, while industry develops and carries out management plans and inspects work in the field.

Forest companies must also comply with Quebec's management standards for forests in the public domain, including the return to production of all disturbed sites and the protection of watersheds, landscape, wildlife habitats, sensitive areas, and historic and archeological sites.

In 1994 the province announced a new forest protection strategy that includes commitments to:

- consult the public on general and five-year management plans;
- reduce the vulnerability of stands to insects and disease;
- adopt forest management practices that protect the soil and encourage natural regeneration;
- reduce the size of cut blocks;
- eliminate the use of chemical pesticides by the year 2001; and
- publish a progress report on the Forest Protection Strategy by 1999.

Quebec has implemented a large-scale forest research program aimed at developing silvicultural practices that enhance natural regeneration, limit the growth of competing species, ensure ecosystem survival and diversity, and improve the growth and quality of valuable species. The province is preparing ecological maps of all its forest tracts that will define areas by productivity and determine the sites that are best suited for intensive silviculture.

Under the Quebec Forest Act, stumpage fees paid by companies for the right to harvest on provincial land are based on the market value of comparable standing timber on private land. Since 1995-96, stumpage rates have been adjusted quarterly.

BRITISH COLUMBIA

British Columbia has set in place a comprehensive program of forest and land use reforms that recognizes the interrelationship between strong environmental stewardship and long-term economic and social well-being. The program incorporates the protection of significant forest areas, a new Forest Practices Code and forest renewal.

In 1992 the B.C. government set up an independent commission to develop a comprehensive provincial strategy for land use planning, with emphasis on environmental, economic and social stability, public participation, consensus building and respect for Aboriginal rights. Land use planning is currently in progress or completed for half the province.

In 1991, the B.C. government pledged to double the total land protected in the province to 12 per cent of the land base. It has since created more than 200 new protected areas, increasing the total to over 9 per cent of the province or almost 33,000 square miles. The new protected areas include the 3,600-square-mile Tatshenshini wilderness in the northwestern corner of the province, Canada's first sanctuary for grizzly bears in the Khutzeymateen Valley, and the largest intact area of coastal temperate rainforest in the world in the 1,220 square-mile Kitlope Valley. These areas are closed to all resource use activities, including logging.

In 1994, the provincial government legislated a Forest Practices Code to regulate all aspects of forest and range management in the province and to recognize a wide array of forest values including fisheries, wildlife, soils, watersheds, cultural heritage sites and timber. The Code requires that silvicultural practices be ecologically appropriate to

the site. It reduces the size of cut blocks and restricts clearcutting on unstable slopes, in visually sensitive areas, and in old-growth areas vital to wildlife habitat protection. It restricts road construction, strengthens soil conservation measures and protects streams and rivers. It provides for closer monitoring of the forest industry and an increase in maximum fines from \$2,000 to \$1 million a day.

B.C.'s Forest Renewal Plan was established in 1994 to invest \$400 million a year directly into the forest sector through a partnership of government, industry, communities, Aboriginal First Nations, and environmental and other special interest groups. It focuses on improving silviculture to produce healthier and more productive second-growth forests and on cleaning up environmental damage by rehabilitating rivers and streams, removing unused logging roads and restocking fisheries and other depleted resources. The plan contains measures to increase value-added manufacturing, provide training for forest workers and encourage participation by First Nations in the forest sector.

The Forest Renewal Plan is financed by an average 80 per cent increase in the stumpage fees paid by industry. Under the Comparative Value Pricing System in effect since 1987, stumpage rates are adjusted quarterly in two steps: a target or average rate is determined based on lumber prices in the previous quarter, and individual rates are set for each cutting authority based on the comparative value of its timber. The individual rates, taken together, average the target rate.

Lumber prices began rising dramatically at the end of 1992, and in May 1994, the B.C. government increased the level of stumpage to reflect the increased value of the timber resource and to fund the Forest Renewal Plan. Royalty fees were also raised. From 1988 to mid-1995, the target rate rose from about \$8.00 to \$25.00 per cubic metre. Most of the additional revenues are devoted to forest renewal.

In addition to paying stumpage fees, forest tenure holders in British Columbia have significant management



obligations. They are responsible for, and bear the costs of, preparation and public review of management and development plans, construction, maintenance and deactivation of roads, and reforestation. In recent years, the planning responsibilities of tenure holders have expanded to include landscape modeling, archeological studies, wildlife and fish habitat studies, soil analyses and development of recreational facilities. Management responsibilities and costs will increase further with full implementation of the Forest Practices Code.

Clayoquot Sound

Among the most contentious issues concerning forest management in British Columbia has been logging in Clayoquot Sound, a 1,000-square-mile area on the west coast of Vancouver Island that contains important stands of old-growth coastal temperate rainforest.

In 1993, after a community-based planning process for the Sound ended in only limited consensus, the provincial government announced a land use decision. As a result, 34 per cent of Clayoquot Sound, almost 350 square

miles, is now protected. The protected area stretches from the interior mountains to the coast and includes the largest untouched watershed on Vancouver Island and significant coastal temperate rainforest. In all of British Columbia, 2,700 square miles of rainforest--an area larger than the state of Maine--are protected and other areas are being studied for possible future protection.

The government's land use decision reduced the amount of land generally available to logging and other resource use from 81 to 40 per cent of the Sound. It placed another 21 per cent under special management, which allows some logging but emphasizes protection of wildlife habitat, recreation sites and scenic qualities.

For the areas of Clayoquot Sound where logging is allowed, the B.C. government established an independent scientific panel to develop forest management regulations suited to the Sound's unique ecological conditions. In July 1995 the government accepted all the panel's recommendations, which were based on traditional Aboriginal practices

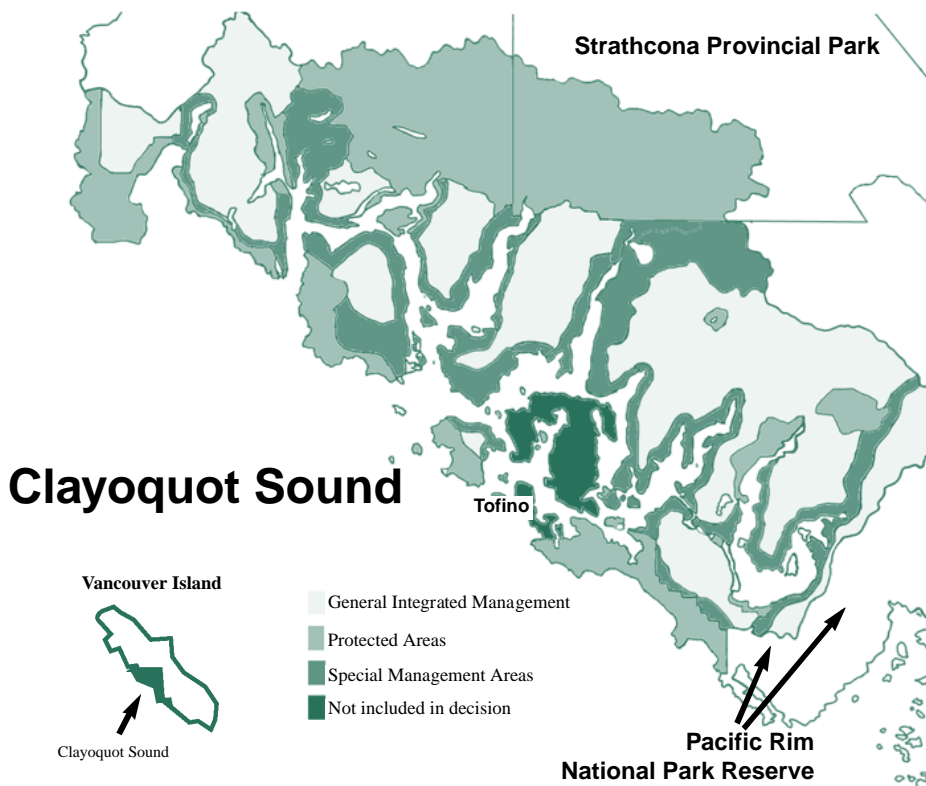
as well as the best available scientific knowledge.

Implementation of the recommendations sets in place planning and harvesting systems in Clayoquot Sound designed to maintain the physical structures, processes and biological components of the ecosystem. The new practices mean an end to conventional clearcutting in Clayoquot Sound, with the retention of a variety of sizes and ages of trees and other features across forest sites. Management practices are based on the specific characteristics of a site rather than on a predetermined annual allowable cut. They are being phased in under the supervision of Scientific Panel representatives and the Central Region Board (see below) and will be monitored to ensure that they contribute to the long-term health of ecosystems in the Sound.

Forest companies operating in Clayoquot Sound have agreed to implement the new requirements and maintain employment levels in the area. Through the Forest Renewal program, the provincial government is working with industry and unions to protect local jobs, provide training and increase employment in silviculture and watershed restoration.

In 1994, British Columbia and the First Nations in Clayoquot Sound signed an Interim Measures Agreement which established a joint management board to oversee land and resource use planning. The Central Region Board provides First Nations with a direct role in the management of resources in their traditional territories and local communities, and a voice in decisions that affect their long-term stability.

The governments of Canada and British Columbia and the First Nations in Clayoquot Sound are negotiating a comprehensive treaty which will deal with a range of issues, including resource management.



♻️ Printed on recycled paper.