

*Biodiversity,
Our Priority*

Forests

Newsletter from Québec

**NEW ASSOCIATE
DEPUTY MINISTER
FOR FORESTRY**



**Marc Ledoux,
new Associate Deputy Minister
for Forestry**

For several weeks now, the ministère des Ressources naturelles has had a new Associate Deputy Minister for Forestry. The former head of the forestry programs division, Marc Ledoux has succeeded Jacques Robitaille, who was recently appointed President and General Manager of the Québec Lumber Manufacturers Association (QLMA).

Throughout his career at the ministère des Ressources naturelles, Mr. Ledoux has been deeply involved in most of the principal issues on which the Québec government has focused, in particular, sustainable development, the Québec Forest Protection Strategy, the forest management standards regulation and the development of private forests.

Mr. Ledoux has become the head of the forest sector of the ministère des Ressources naturelles at a time when Québec forestry is undergoing great change. To meet the challenges of the year 2000, principally that of sustainable forest development, the government has embarked on the revision of the Québec forest system and of forest management structures.



OPTIMAL USE OF FIBRES

The sources of supply for pulp and paper plants have changed substantially in recent years, resulting in a better use of wood material. Whereas in the 1970s, roundwood accounted for 85% of the supplies of our paper mills, it now constitutes only 17%.

Chips, sawdust and shavings from the lumber industry are the main sources of supply for Québec paper mills, now accounting for 64%, while in the 1970s they accounted for only 15%. Six percent of paper mill consumption is ascribed to wood pulp and 13% to reclaimed fibres, which were formerly considered simple residues.

The modernization of mill pulp production areas and the expansion of the sawmill industry – the latter now uses more than 75% of all the timber harvested in Québec – explains most of the change that has occurred in the supplies of pulp and paper plants. Quebecers' resolve to make the use of forest products environmentally friendly also has an impact on paper mill supplies.



GREATER PARTICIPATION IN FOREST MANAGEMENT

Québec has just created a new forest management tool, the **Forest Forum**, a platform for broader consultation that is chaired by the Québec Minister of Natural Resources and brings together people and organizations involved in the future of forest resources and in sustainable forest development.

Through this democratic tool, representatives of these groups can voice their concerns about Québec forest management, thereby affecting the main thrusts of the Québec government in the forest sector.



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The members of the **Forest Forum** are from various circles, including government, the forest industry, the municipal world, Native affairs, economic and social development, forestry research, protection of forest and wildlife resources and private forest production. Their main function is to advise the Minister and make recommendations to him on the pivotal issues in forest management and sustainable forest development, such as revision of the Québec forest system, reorganization of the forest sector and integrated management of resources in the forest environment.

THE INTERNET AND FOREST TRAINING

A firm in eastern Québec, **NTIC-Forêt**, recently developed educational software that enables subscribers to the service to take forestry courses via the Internet. The courses are completely different from those traditionally given by a teacher in a classroom. Through this initiative, a first for the French-speaking world, owners of wooded areas, forestry workers and even students can take a computer-assisted forestry training program entitled *La foresterie, le développement durable et la certification environnementale (forestry, sustainable development and environmental certification)*.

Developed to meet practical needs and to solve frequently encountered problems, the program, which uses the latest computer technology, is aimed at providing people in Québec's rural areas with modern training. It has also been designed to give forest workers and owners of woodlands rapid access to the knowledge required to understand Québec forestry issues such as integrated resource management, environmental certification and the modernization of working techniques.

One of the main advantages of this new program is that each participant progresses at his own rate and along a path he himself has chosen. The participant can also seek help from an instructor, by means of e-mail or teleassistance.

INFORMATION

Visit the NTIC-Forêt's Internet site at:

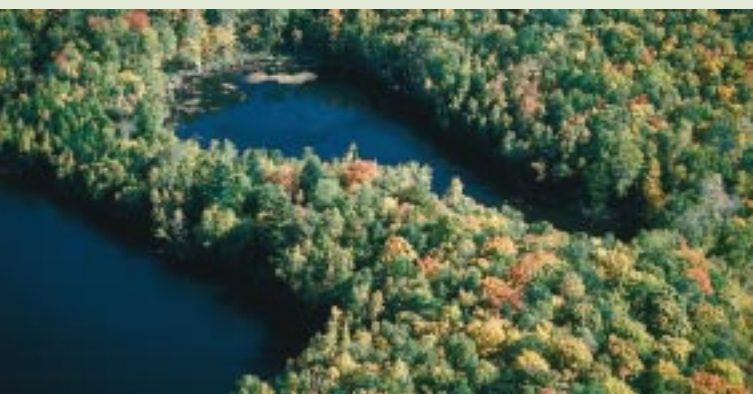
<http://www.nticforet.qc.ca>.



ANTALYA: QUÉBEC IN TUNE WITH RECOMMENDATIONS

Québec's forest management methods are in perfect harmony with the recommendations made at the last World Forestry Congress, in Antalya, Turkey.

For example, the recommendations urging forested countries to evaluate and manage their forest resources find tangible expression in Québec's forest management methods, given, among other things, the quality of our ecological inventories and our fire, insect and disease protection system. As regards the recommendations that biological diversity be preserved, Québec has demonstrated international leadership, for its government already has an appropriate development strategy.



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The same is true of the exceptional forest ecosystems protection and information program, as well as the recommendations aimed at preserving forest resources, in keeping with which Québec's forest operators must leave a portion of the forest intact.

Lastly, Québec forest management methods are in tune with the Antalya recommendations for the protection of fragile ecosystems and for sustainable forest development. Québec's approach to the integrated management of resources in the forest environment also reflects the recommendations that call for forested countries to do all in their power to encourage the participation of the Native peoples and of local communities in forest development.

Québec's approach to the integrated management of resources in the forest environment mainly takes the form of agreements that the government signs periodically with Native communities for the purpose of harmonizing forest operations with the traditional activities of the communities. The agreement with the Algonquins of Kitcisakik and the agreement with the Council of the Anishnabe Nation of Lac Simon are two examples. The GEAIS pilot project, in which parties involved in every aspect of the forest (forest operators, trappers, hunters, campers, Native communities and so on) come together to assist in preparing the development plans of forestry companies established in the region of Chicoutimi, is another Québec example of the integrated management of resources in the forest environment.

SYLVA II PROVIDES MORE ACCURATE SIMULATIONS

To meet all the challenges of managing its forests (sustainable development multi-resource management, protection of biodiversity, development of silviculture and so on), Québec is constantly improving its forest management computer models.

In the last 20 years, significant improvements have been made in simulation models for computing the sustained-yield forest potential, that is to say, the volume of wood that forest operators are authorized to harvest in perpetuity on a given territory without reducing its productivity.

For example, the **SYLVA II** software, the latest simulation tool for computing such potential, enables forest operators to describe in detail the development of the forest. They can then plan their forest operations and establish their priorities so that everything is in compliance with the Québec government's forest management goals.

In Québec, all the forest activities that operators wish to engage in are described in development plans that must have the government's stamp of approval. These plans include, in addition to the computation of forest potential, a detailed description of all the operations to be carried out; for instance, they outline forest production strategies, development strategies and measures to protect other forest resources, and identify problems. Thanks to **Sylva II**, these plans enable the Québec government to ensure that forest development abides by the principles of sound forest management.

Sylva II



SOIL FERTILITY RESEARCH

Since the mid-1980s, when many hectares of forest in the south of Québec were affected by blight, the ministère des Ressources naturelles began research into forest soil fertility. The specific objective of the research is to establish the extent to which atmospheric pollution, environmental stress and forest management have an impact on forest soil fertility, one of the foundations of sustainable development.

Aimed at verifying the balance of the biogeochemical cycles of forest ecosystem nutrients, the research focused mainly on three drainage basins, each representative of a Québec climate: the sugarbush of the deciduous forest, and the balsam fir stands and the spruce stands of the boreal forest.

Since 1988, the data collected in the Lac Clair drainage basin (between Trois-Rivières and Québec City) have indicated that forest soils are sustaining a net loss of fertility, despite a reduction in atmospheric sulfates (SO_4^{-2}), substances that cause acidity. This observation would explain in part the vulnerability of the forest in the Lac Clair drainage basin (a sugarbush area) to environmental stress.

Since soil fertility is closely tied to sustainable forest development, this on-going research in the three drainage basins will enable the ministère des Ressources naturelles to clarify, in the medium term, the actual impact of forest development and of pollutants on both the health of Québec's forests and their productivity.



Scientific facilities in the Lac Clair drainage basin



ADVANCED ECOLOGY SOFTWARE

What building materials are least harmful to the environment? Wood, steel, concrete, gypsum? Forintek Canada Corporation, a centre for research into wood products, has developed a highly effective means of answering this difficult question.

The centre, which is located in Québec, has designed software that enables architects, engineers, building experts and others to assess the impact on the environment of each of these materials. Marketed under the name ATHENA™, the software can, among other things, calculate the "environmental" cost of the production, transport, use and disposal of each of these materials. The software has already been put to use in a commercial building construction project.

A study of forest product and paper product substitution factors, conducted last May by a working subcommittee of the Food and Agriculture Organization of the United Nations, showed that forest products are considered more ecologically friendly than a number of competing substitutes, particularly plastic, aluminum, steel and concrete. According to the study, although the forest industry is perceived as a major consumer of forest resources, its products have many ecological advantages over competing products.

The study indicates that recycling and recovery are among the areas in which forest products receive high points in the minds of consumers. From this standpoint, forest products are perceived as being derived from renewable raw materials. And they are themselves recyclable, while the energy required to manufacture them can be partially recovered.

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