LE FLEUVE

NEWSLETTER
ST. LAWRENCE VISION 2000
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IN TUNE

MAKING ENLIGHTENED DECISIONS

The people behind the St. Lawrence Vision 2000 Action Plan (SLV 2000) wanted to incorporate aspects reflecting a more global approach in terms of environmental management, while following in the footsteps of the first St. Lawrence Action Plan (SLAP).

Among these new fields of activity, the *Decision-making Assistance* component is known for its role of support among many project managers and partners working for SLV 2000. This issue is devoted to this topic; it describes its many facets. Whether it concerns the acquisition of scientific knowledge on-site and in the lab or the proliferation of information tools made available, researchers and managers alike share the same objective: integrating newfound knowledge to fashion practical tools designed for the decision-making process.

One of the articles in this issue comments on the soon-to-be-released *State of the Environment Report on the St. Lawrence River*, a two-part document, and a popularized brochure, with the latest data on the river's ecosystem. This comprehensive work will undoubtedly be the source of reference for years to come for all those who take the protection and conservation of the river to heart.

The Harmonization Committee

The Decision-making Assistance Component

THE SCOUT FOR SLV 2000

What are the real causes of the environmental problems that plague the St. Lawrence? How can we ascertain what actions should be taken to clean up such a vast and diversified ecosystem? How can we establish priorities for action? What is the impact of the measures taken to improve the situation? These questions, and many others, must be posed regularly by the managers of the various components of the St. Lawrence Vision 2000 Plan (SLV 2000). And it is often with the help of their colleagues of the *Decision-making Assistance* Component that they find the answers.

"The main thrust of our activities is shaped by the acquisition, analysis, integration and dissemination of knowledge pertaining to the river and its ecosystem," explains Denyse Gouin, Co-president of the component and in charge of the aquatic ecosystems directorate of the Québec Ministère de l'Environnement et de la Faune. From this perspective, the work encompasses a range of fields which reflects the greatness of the river. "Teams of scientists are working on topics as varied as marine mammals, in particular the St. Lawrence beluga, the contamination and health of fish, the quality of water or processes for the confinement of sediment," adds Lynn Cleary, also Co-president of the Component and Director of the St. Lawrence Centre (SLC) of Environment Canada.

In fact, the Component plays a support role with all those responsible for SLV 2000. Its tasks include data collection, the improvement of sampling and analysis techniques and the publication of documents intended for researchers or the general public. "Our main goal," affirms Lynn Cleary, "is to provide—not only the managers of SLV 2000, but also municipalities, citizens and many other interested parties—with all the information necessary for a decision-making process that is the most enlightened one possible." For instance, a citizens' group will be able to find out what condition a river is in, set down priorities of action and determine the best techniques available to carry out the clean-up or riverbank stabilization work.

Labs and partners

In order to attain this ambitious objective, the Component counts on reputable laboratories, at the MEF and the St. Lawrence Centre as well as at the Maurice-Lamontagne Institute (MLI) of Fisheries and Oceans

SUMMARY

UNDERSTANDING OUR ENVIRONMENT

Performing a diagnosis of the River to later propose conservation and restoration measures presupposes accurate and concrete knowledge of the state of the environment.

Canada. However, the Component is also backed by a widespread network of partners and collaborators, including universities. "We always work in cooperation with other departments or consultancy firms," points out Denyse Gouin. For example, for the work related to the *Agriculture* Component, those in charge at the MEF joined forces with specialists working at the Québec Ministère de l'Agriculture, des Pêcheries et de l'Alimentation, to publicize information on the best use of fertilizers and pesticides, among other things.

In addition to its essential role of support, the Component acts somewhat as a scout for SLV 2000, by combining short-term work and long-term applied research projects. "At the St. Lawrence Centre," explains Lynn Cleary, "we spend approximately two-thirds of our time working on short-term projects, over two or three- year periods, in order to meet specific requests from the other components." The rest of the time, scientists conduct research aimed at enhancing basic environmental knowledge that will eventually be used by managers of SLV 2000. "For instance," adds Lynn Clearly, "four years ago, we undertook work on the toxicity of sediments, but only in the last two years have we been able to step up our efforts to meet the needs of the *Restoration and Protection* Component whose role is was to supervise the clean-up work".

This type of work obviously requires a constant monitoring of the river situation as well as trends in environmental research. "We must also have a good grasp of the substance of the other components in order to accomplish our task which is seeking out pertinent information where it can be found to arrive at a coherent whole," concludes Denyse Gouin. As for the Maurice-Lamontagne Institute, it allows us to update our knowledge of the marine ecosystem of the St. Lawrence through its ongoing research programs.

When acquiring expertise in this field, scientists are obviously the primary stakeholders who ensure that the information gathered respects the necessary rigour and that the quantity of data is sufficient to give an adequate picture of the situation. The supervision of the physicochemical quality of the water in the St. Lawrence and its tributaries, begun in 1967 by the federal Department of Natural Resources, is now under the responsibility of the Québec Ministère de l'Environnement et de la Faune (MEF). The public is concerned about the water quality of the waterways and whether the aquatic milieu can be used and can sustain a balanced aquatic life.

"From the middle of the 1980s, the monitoring program of the physicochemical quality of water was planned taking into account the water purification program of the Québec government," notes Yves Grimard, in charge of the follow-up networks of the quality of the aquatic milieu at the MEF. It was important to find out what the environmental impact and level of effectiveness were on the facilities set up to treat the effluents and wastewater on the waterways affected by these improvements. The follow-up projects (physicochemical quality, biological monitoring and monitoring of industrial toxics) which are part of the *Decision-making Assistance* Component of SLV 2000 are not exactly new activities for the MEF; we have managed to integrate them into the objectives sought by partners so that the information gathered would be useful to the greatest number of people."

Supervising the quality of water and habitats

The follow-up on the physicochemical quality of the water in the St. Lawrence and of twenty-four of its tributaries is the largest-scale project ever taken on by the MEF. Reports have already been tabled on some of the most polluted and problematic rivers, such as the rivers Nicolet, Assomption, Yamaska, Chaudière, Saint-Maurice, Saint-François and Richelieu. In the coming months, we will see the publication of reports on at least the following rivers: Etchemin, Saint-Charles, Châteauguay and Ottawa. Studies on the biological integrity of certain waterways as well as the detection of toxic substances are also under way on some of the St. Lawrence's tributaries.

The biological integrity of the environment is evaluated through an examination of the fish and benthos communities, and the detection of toxic substances with tracers such as aquatic moss and dialysis cells, which allow for a concentration of the pollutants sought. The findings of these studies have already been published for the Assomption river and will soon be released for the Saint-François. Also under way is a data collection and interpretation project for the rivers Châteauguay, Chaudière, Yamaska and Richelieu. "The information gathered, thanks to the regular sampling that we carry out, should give us a good idea of the impact of the solutions suggested for certain rivers and inform us on the residual problems the aquatic milieu is still facing," adds Yves Grimard.

At the Maurice-Lamontagne Institute, the SLV 2000 research program on the condition of resources and marine habitats of the St. Lawrence was set up to give environmental decision-makers and managers the scientific information they need to better manage the marine environment and its resources and ensure its conservation.

The scientific studies carried out the by the Maurice-Lamontagne Institute within the scope of the St. Lawrence Vision 2000 Action Plan are basically aimed at acquiring new expertise on the marine environment and its

MPO-GCC-J.-F. Carpentier

The Maurice-Lamontagne Institute takes advantage of the summer to carry out several observation expeditions on marine mammals, notably fin whales, in the Haute-Côte-Nord region.

resources, at better comprehending the interrelations and at assessing the impact of human activity on the marine ecosystem of the St. Lawrence. The ultimate goal of the research program is to establish a diagnosis on the condition of the marine environment of the St. Lawrence River and monitor its evolution.

Some of the research will be on the St. Lawrence beluga. As part of the species conservation plan, protective measures and follow-up programs will be proposed to save the beluga population. Additional MLI studies will determine the status of other marine mammal populations in the Estuary and Gulf of St. Lawrence and more carefully assess the impact of ecotourism.

The federal Department of Fisheries and Oceans' research program for SLV 2000 will include, among other things, deliverable goods, such as: tools to evaluate and follow up on the effects of contaminants on the marine habitats of the St. Lawrence; assessment of the impact of contaminants on the health of fish; development of toxicity tests for the marine environment; a forecast system to monitor movement in the St. Lawrence (particles, sediment, watercraft, hydrocarbons, etc.) of use in search and rescue operations and environmental emergencies; an atlas of currents in the St. Lawrence estuary; a model to predict ultraviolet radiation rates below the water's surface and assess their impact on marine organisms; and, publication of reference material on the marine species in the estuary and Gulf of St. Lawrence.

Monitoring Mercury

The public is aware that the presence of mercury in a river is synonymous with pollution, indeed significant pollution, since it is found at all levels of the food chain. However, although it has been a crucial problem for almost thirty years, the exact amount of mercury in the River is still unknown. Measurements taken in the 1970s and 80s were far from accurate—problems of contamination in laboratory samples obscured the results. Although measurements of mercury in fish and sediment were more reliable, it was obvious that a method of mercury analysis of the water itself was needed. The analysis had to gauge minute quantities of less than 10 µg/L but meet the MEF quality standard of 6 µg/L.

The St. Lawrence Centre found the method it was looking for at the laboratories of the IFREMER in Brittany, France. A local adaptation of the technology was performed here in 1994. Since the spring of 1995, samplings are taken regularly at four stations along the River: Cornwall (considered the River's gateway), Carillon (the Ottawa River is the main tributary of the St. Lawrence), —the outlet for Montreal's wastewater, near the Boucherville islands (to study the urban influence) and Quebec City.

"Things are going well," comments Yves de Lafontaine, Manager of the Aquatic Environment Contamination program of Environment Canada. "We are beginning to get the data we need to be able to monitor the amount of mercury in the St. Lawrence River. By gathering reliable information over a long enough period, we will be able to understand the dynamics of the mercury, its sources and its evolution in the St. Lawrence ecosystem."

Elsewhere, at the Atmospheric Environment Service, major efforts have been made since the beginning of the 1990s to prove, using quantitative analysis, the theory that a good portion of the toxics found in the St. Lawrence (mercury included) comes from the air. "The challenge is not an easy one," Gérard Vigeant points out, a meteorologist at Environment Canada, "especially when it involves the link between water and air. In the case of mercury, we now have enough data to report that there are not only mercury deposits in the water but also, in some conditions, there is a volatilization of mercury from the water toward the air."

To more fully understand the process, sampling activities by the Aquatic Environment Contamination program have been done in conjunction with the Atmospheric Environment Service. Three main stations monitor the presence of toxic substances in the air over the St. Lawrence. The stations are situated at Saint-Anicet, near Montreal; Sainte-Françoise, between Quebec City and Trois-Rivières; and Longue-Pointe-Mingan on the North Shore. Two other temporary stations will complete the sampling program. "By expanding our knowledge of toxic water-air links, we can better assess the consequences on an ecosystem," says Gérard Vigeant. "We can then develop and use the meteorological and chemical modelling in our effort to reduce toxic emissions affecting the St. Lawrence ecosystem."

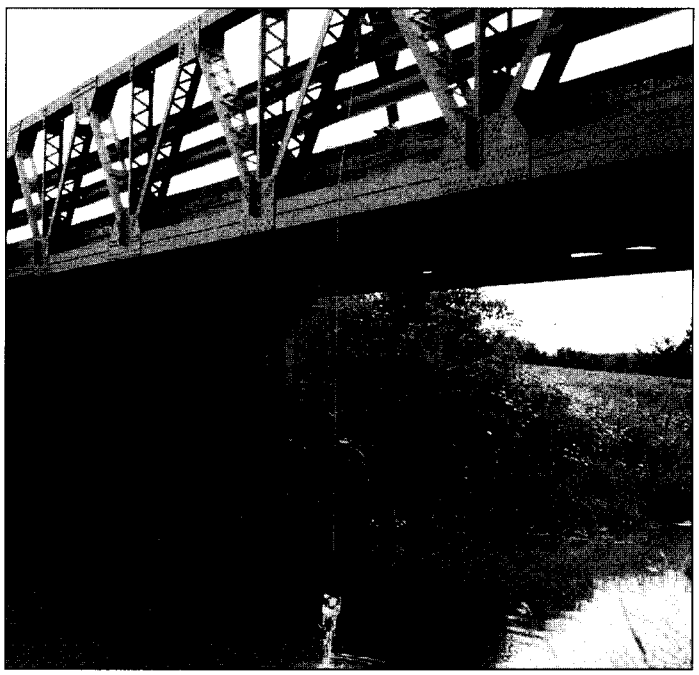
THE KEY ROLE OF LABORATORIES

The development of management tools for decision-makers is a crucial aspect of the role laboratories play when gathering and processing information.

"Our research mandate in ecotoxicology has led us to concentrate our efforts on the *Decision-making* Assistance Component of the St. Lawrence Vision 2000 (SLV 2000) program," observes Raymond Vezeau, Manager of the Ecotoxicology and Environmental Chemistry division of the St. Lawrence Centre. "One of our leading areas of development is in the field of bio-tests, simple bioanalytical procedures used to monitor the presence of the toxic effects in liquid and soil or sediment samples."

The need to develop bio-tests stems from limitations with chemical analysis procedures. They fail to indicate the potential toxicity of effluents or waterways. Although they can determine when the critical threshold of a concentration in a substance has been reached, they do not assess the impact the substance will have when it comes in contact with other living organisms. That is where bio-tests come in. Because they examine the global physicochemical phenomena influencing bioavailability, bio-tests can gauge the extent and intensity of the toxic response and its persistence in the sample under analysis. Today this is increasingly done using micro-organisms, bacteria for instance, that replace organisms from higher up in the trophic chain, such as fish, which would be much more costly and not necessarily more useful in many cases. Because there are so many areas where answers are needed, researchers have had to develop a whole range of tests. These tests are the concrete tools managers need for making decisions that could have major consequences on the environment. Information on substance biodegradation in the samples, their toxicity, their persistence and their reaction to dilution is also the kind of data needed to help implement recovery and conservation measures.

At the laboratory division of the ministère de l'Environnement et de la Faune du Québec (MEF), many of the ongoing projects have been planned with the same aims as those of SLV 2000. "The certification program of private and municipal laboratories was already implemented in 1983," says Aristide Bouchard, Director of MEF laboratories, "so we just had to adapt it to the specific needs of SLV 2000. Since our concerns include present and future needs in environmental analysis, a commitment to certified laboratories and the globalization of markets, we have adopted the ISO/CEI international certification standards, Guide 25. This confers an even greater credibility onto the work of SLV 2000. By June 1996, all 80 laboratories in the certified laboratory network will meet international standards."



Ministère de l'Environnement et de la Faune du Québec

Standardizing sampling procedures is one of the priorities of the Ministère de l'Environnement et de la Faune du Québec (MEF).

Reliable, Low-cost Tests in Ecotoxicology

In the area of bio-tests, the philosophy of the MEF and that of the St. Lawrence Centre are one and the same. Their research programs reflect a desire to develop reliable and low-cost tests. Since such tests require the use of samples, their validity is of utmost importance. The MEF has produced eight handbooks on the subject. They aim at standardizing sampling procedures and improving the quality of samples collected. "Samples must as closely as possible reflect the general situation prevailing at the time of collection," Aristide Bouchard points out. "The reliability and quality of the data depend on it." Environment Canada has also produced quality control guides concerning sampling and contaminant analysis for use on sediments, soils and wastewater. They are complementary to those of the MEF.

Sound decision-making is based on credible and comprehensive information, but decision-makers must be able to use the information effectively. "We are striving to develop tools to manage the many facets of the data collected and forecast the problems that some environmental activities can cause," adds Raymond Vézeau. "Proactive tools, so to speak. In addition, we want to promote the tools internationally and have them adopted by our counterparts in other countries. Scientific articles by our researchers are also a part of how

we promote our activities in Canada and abroad."

Furthermore, assessing toxicological or ecotoxicological risks or even technological accidents is made possible due to the data management mechanisms increasingly used in the decision-making process. "At the MEF," says Aristide Bouchard, "a lot of our energy is spent fine-tuning these tools to meet the variety of environmental challenges facing us."

FRANCE-QUÉBEC COOPERATION

Development of tools and tests to evaluate the toxicity of contaminated sediment

A tool and bio-testing development project allowing for the evaluation of the toxicity of contaminants has been under way since 1992. The French team, composed of the Inter-Agency Committee on Water and Ecotoxicology and represented by the Rhin-Meuse and Aadour-Garonne agencies, is in charge of developing the phytotoxicity and phytogenotoxocity applicable to sediment deposited on the ground. The Québec team, composed of experts from the MEF and the firm Analex Inc., is responsible for developing aquatic toxicity and whole sediment tests, as well as degradation and mobility tests. The development of the ecotoxicological evaluation procedure is being jointly carried out by the two teams. The project, which gives rise to bidirectional exchanges of expertise, is of great interest to all partners involved.

INFORMATIONAL TOOLS FOR EVERYONE

Since the launching of the St. Lawrence Action Plan (SLAP) in 1988, the St. Lawrence Centre has published numerous informational tools intended for a variety of reading audiences. These tools were produced in response to a number of questions about the St. Lawrence ecosystem. Below is a list of publications according to the audiences for whom they were intended.

General Public

Documents made for the general public have one common denominator: they aim at making concepts and content clear so as to keep people informed about the state of the environment and the risks at hand for the St. Lawrence River. Although intended for the general public, the information is equally helpful to decision-makers, environmental groups and schoolchildren.

- ***Environmental Atlas of the St. Lawrence***

Eleven plates of the *Environmental Atlas of the St. Lawrence* have been published to date. These large-sized, full-colour plates illustrate many aspects of the ecosystem and a variety of activities which take place on the River. Titles are: The Features and Dynamics of the St. Lawrence Shoreline; Broad Hydrographic Divisions of the St. Lawrence; Conserving and Restoring Heritage Sites; Freshwater and Brackish Ecosystems; Habitats on the Edge of Land and Water; Commercial Fishing in the St. Lawrence; Marine Ecosystems of the Estuary and Gulf of St. Lawrence; Commercial Shipping on the St. Lawrence; Population and Land Use along the Banks; Settlement (17th-18th Centuries); and Urbanization and Industrialization (19th-20th Centuries). A twelfth plate, Islands and River Landscapes, is currently being printed.

- ***Fact Sheets on the State of the St. Lawrence***

Four fact sheets in the form of eight-paged bulletins were published in 1990 and 1991. They deal with problems linked to the St. Lawrence: Fifty Priority Plants of the St. Lawrence Action Plan; Saguenay's Marine Park; Maritime Transport; and Toxics in the St. Lawrence. In the same series, fact sheets were produced in conjunction with partners such as the maritime magazine *Escale* on the uses of the River, and the magazine *Québec Science* on the River's hydrodynamics.

- ***Info-flash Series***

The info-flash series are modest publications under the title "The River at a Glance". The 74 pages present the St. Lawrence on a worldwide, national and regional level. They contain a great deal of information but are easy to understand and digest.

Managers, Industry and Lobbyists

Tools intended for these groups contain more detailed and complex information. They allow people to delve further into the study of specific aspects of the River.

- ***The Access-to-Information System (ATIS)***

Designed to manage the information available at the St. Lawrence Centre Documentation Centre as well as the unpublished data (digitalized information) compiled by its researchers, the ATIS makes it possible to recover almost anything that has ever been produced on the St. Lawrence ecosystem. Implemented this fall, the ATIS allows users to obtain information according to seven criteria: author; subject; code; collection; ISBN number; title; or zone in the St. Lawrence. It should be available on Internet through Environment Canada at *The Green Lane* by the beginning of 1996.

- ***Thematic Reports***

Two thematic reports have been produced: *The St. Lawrence River: Diversified Environments*, and *Quality of Water for Direct Human Consumption.*

- ***Scientific Articles and Conferences***

Scientific articles and conferences prepared by researchers will soon all be available through ATIS.

- ***National Report***

Consisting of two volumes and a popularized brochure, the national report is addressed to a variety of audiences. It is expected that some excerpts will be available on the Internet through Environment Canada in care of *The Green Lane* by 1996. It will also be available on CD-ROM.

State of the Environment Report on the St. Lawrence River

One of the major elements of state of the environment reporting is the preparation of a national report on the St. Lawrence River. The report is made by taking comprehensive information from the most recently available data and analyzing it to make an objective diagnosis of the condition of the River. The approach resembles that used for preparing a financial report, but in an area of complexity beyond imagination. It is that of an ecosystem whose variables are of an almost unlimited number, only partially understood, and above all, whose parts are so intimately related that one must often extrapolate to draw conclusions worth using.

The structure of the report meets the needs of a variety of audiences and is a reliable indicator of the state of the environment. The report contains two separate volumes that will be published by the St. Lawrence Centre, and co-edited with Éditions MultiMondes in December 1995.

Entitled *THE ST. LAWRENCE ECOSYSTEM*, the first volume outlines the physicochemical, biological and socioeconomic features of the St. Lawrence River. It also presents a method for managing useful scientific information to be able to conduct a diagnosis. It is intended for an informed public of scientists, environmentalists, government bodies and businesspeople who require a reference book on the St. Lawrence. The second volume, *THE STATE OF THE ST. LAWRENCE*, presents the actual diagnosis that was reached from the data currently available about the River. The volume was designed to make scientific information more accessible to decision-makers so they can make informed choices concerning the St. Lawrence.

The report on the St. Lawrence was prepared with the aim of providing information that can be effectively used by the public. Their questions and needs are a constant preoccupation. Indeed, a further document accessible to the general public has also been prepared. It presents the overall conclusions of the report and is entitled *OUR RIVER*.

Volume 1

The St. Lawrence Ecosystem

The physicochemical, biological and socioeconomic properties of the River as indicated by the latest data. The 14 characteristics retained to establish the state of the River, the array of their influences on the River, and the indicators of the environmental situation used for diagnosis.

21.5 x 28 cm, 750 pages, 145 maps and figures, a 3-colour edition

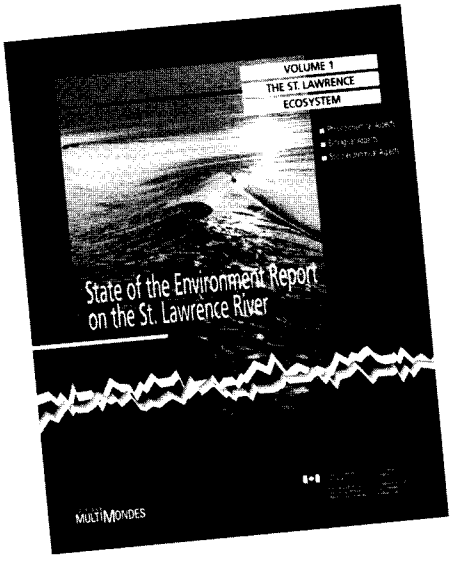
A reference book for scientists, students, environmental groups, government and business.

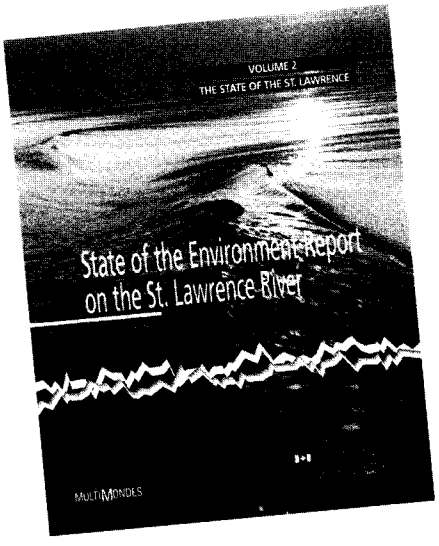
Volume 2

The State of the St. Lawrence

The River's Bill of Health

The bill of health of the St. Lawrence River according to 14 different features combined with environmental indicators.





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Our River
Popularized colour brochure on the St. Lawrence River

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An analytical document which contains all the pertinent information on the topic for decision-makers and the interested public.

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To be published in December 1995

Aussi disponible en français

OPEN TO ALL

St. Lawrence Centre Documentation Centre

Created in 1990, the Documentation Centre of the St. Lawrence Centre (SLC) provides the public with thousands of publications on the St. Lawrence River, for example, technical reports, in-house publications, conference transcripts, and literature from other agencies dedicated to the study of the St. Lawrence. Thanks to its Access to Information Service (ATIS), users may also consult limited-access, digitalized data prepared by the researchers at the SLC.

Located at 105 McGill Street (2nd Floor) in Montreal, the centre is open from Monday to Friday, 9:30 a.m. to noon and from 1:00 to 4:30 p.m. To make its services known to the public, an official opening will be held this Fall. For information, please call Ms. Carmen Schwery at (514) 283-2762.

Health Component

Financial assistance for projects on the links between the River and human health

Intended exclusively to for non-profit, non-governmental organizations, the new financial assistance program for the realization of projects on the St. Lawrence and human health pursues two objectives: on the one hand, promoting participation among citizens in the Health Component of the St. Lawrence Vision 2000 and, on the other, fostering partnerships among groups from the same region in the pursuit of common, health-related goals.

Projects eligible for the program's funding can be one of several types: providing information to the public on the relation between the River and health, or the health risks linked to the use of resources taken from the St. Lawrence. The program finances up to 50% of the project's expenses, up to a maximum of $15,000.

For further information, please contact Ms. Lynne Belle-Isle, Health Canada, Main Building, Suite 1145, Tunney's Pasture, #0301A1, Ottawa, Ontario, K1A 0K9. Tel: (613) 952-8156.

Fortieth Anniversary of the Great Lakes Commission

The Great Lakes Commission celebrated its fortieth anniversary in Quebec City, at its annual convention which took place last September 6-8. Eight American states (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin) are members of this Commission. The Canadian and American governments, along with the Ontario and Québec governments and certain NGOs sit on the Commission as observers.

The Commission took advantage of the occasion to present its strategic plan, adopted earlier this year, which defined the vision, objectives, and actions of the next five years aimed at conserving and restoring the ecosystem of the Great Lakes. A special symposium on the management of the freshwater resources followed the annual meeting.

Science in Action, Saint Lawrence Centre, Environment Canada, 1995, 28 pages.

This document is available at St. Lawrence Center: (514) 283-7000.

Qualité des eaux de la rivière Saint-Maurice, 1979 à 1992, study conducted by Denis Laflamme, forestry engineer, Direction des écosystèmes aquatiques, MEF, 1995 (French-language version only).

Teneurs en dioxine, furannes, mercure, BPC et autres contaminants dans les poissons capturés dans le Saint-Maurice en 1989 et 1993, study conducted by biologist Louise Lapierre, Direction des écosystèmes aquatiques, MEF, 1995 (French-language version only).

These two documents are available, along with many others, from the Trois-Rivières regional directorate of the Québec Ministère de l'Environnement et de la Faune (MEF), by calling (819) 373-4444, or from the Communications and Marketing Directorate of the Department, at the toll-free number: 1-800-561-1616.

First Progress Report Under the 1994 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem

You may obtain a copy of this report by calling the Communications branch of Environment Canada in Downsview, Ontario, at (416) 323-4321. The report is also available on the Internet, on the Great Lakes Ecology Network (GLEN) of the *The Green Lane* http://www.doe.ca ou http://www.cciw.ca/glimr/intro.html.

Status of the St. Lawrence Marine Resources and Habitats, Department of Fisheries and Oceans Canada, 1995, 6 pages.

This is a fact sheet which briefly describes the SLV 2000 Research Program of the federal Department of Fisheries and Oceans. Researched by the scientists at the Maurice-Lamontagne Institute of Mont-Joli, this publication is available in both official languages and may be obtained by contacting the Communications Branch of the MLI at (418) 775-0526.

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AGENDA

- **November 7, 1995**

  Tabling of the Environmental Report on the Quebec City and Chaudière-Appalaches Zone of Primary Intervention (ZIP).

- **November 7 to 9, 1995**

  18th international symposium on wastewater treatment and the 7th workshop on drinking water, at the Méridien hotel in Montreal.

- **November 24 and 25, 1995**

  Public consultation organized by the ZIP committee of the Quebec City and Chaudière-Appalaches region following the tabling of their report.

- **August 12 to 17, 1996**

  An international conference on the theme "Coastal Regions: Integrated Management and Sustainable Development", in Rimouski. For information, contact Mr. Mohammed El-Sabh, at (418) 724-1701.

LE FLEUVE

NEWSLETTER
St. Lawrence Vision 2000

Le Fleuve is published by all the St. Lawrence Vision 2000 partners. It is distributed free of charge to individuals, companies and organizations concerned by the protection, conservation and restoration of the St. Lawrence River. To subscribe, you may contact Nancy Lainé at Environment Canada, 1141, route de l'Église, 6th floor, P.O. Box 10,100, Sainte-Foy, Québec G1V 4H5. Tel: (418) 648-3444.

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Communications Component

St. Lawrence Vision 2000

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Environment Canada

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