LE FLEUVE

NEWSLETTER
ST. LAWRENCE VISION 2000

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IN TUNE

Agriculture

Developing farm producers' expertise in environmentally friendly agricultural practices.

Corporate communications

Gold Leaf Award

George Arsenault recognized for his commitment to wildlife conservation and development in Quebec.

Human Health

Results of a CHUQ survey on waterfowl and fish consumption by migratory bird hunters in the St. Lawrence region.

Community Involvement

ZIP Chronicle

The Chaleur Bay ZIP Committee — A wetland characterization project carried out by the Chaleur Bay ZIP Committee will have many positive spinoffs, including a directory with multiple uses.

Agricultural Producers Take Pride in New Strategy

If you happened to take a trip through one of Quebec's agricultural regions this summer, you may have noticed signs designed by the Quebec Department of Agriculture, Fisheries and Food (MAPAQ) and its Pest Control Strategy partners. The signs serve two purposes: they give agricultural producers an opportunity to demonstrate their commitment to healthier farming methods and they help encourage other producers to adopt the objectives of the Pest Control Strategy.

More and more Quebec agricultural producers are fighting crop pests (weeds, insects and diseases) by opting for more environmentally friendly practices and are thereby helping to achieve the objectives of the Pest Control Strategy launched in 1992 by MAPAQ. The aim of the Pest Control Strategy is to reduce the volume of pesticides used in agriculture in Quebec and increase the areas under cultivation where integrated pest management is used. This environmental approach is based on experimentation and observation, as well as on the application of environmentally friendly pest control practices.

In 1998 the St. Lawrence Vision 2000 partners launched the Agroenvironmental Pest Control Strategy Support Program. Since then, some eighty projects have received financial support, helping agricultural producers switch to new farming methods. The aim is to reduce non-point source agricultural pollution in the tributaries of the St. Lawrence and thereby help improve the quality of the river environment.

Not Shy about Their Achievements

Convinced that it is essential to take steps to reduce the health and environmental risks of pesticide use, agricultural producers are trying new production techniques. This reorientation is also a response to increased consumer demand for

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Canada

Saint-Laurent Vision 2000

Québec

Photo : Luc Vallières, MAPAQ

healthy products grown in an unpolluted environment. Proud of their contribution toward the achievement of MAPAQ's objectives, agricultural producers told the government that they wanted to raise public awareness of their involvement in the program to reduce pesticide use.

In response, MAPAQ designed a dozen signs for the major crops, including grains (oats, wheat, barley), corn, soybeans and potatoes. The sign *Champ moins de pesticides* (low-pesticide field), for instance, testifies to a producer's commitment to reduce the volume of pesticides used on his or her land; the producer may have opted to combine limited pesticide use with mechanical weeding of fields. Farmers who have completely stopped using any pesticide at all may display the sign *Champ sans pesticides* (pesticide-free field). Another sign, using the slogan *Pesticides agricoles : moins et mieux, j'y crois* (Agricultural pesticides — practicing the 'less is more' principle), is also displayed in some agricultural areas of the province.

Agroenvironmental consulting clubs distribute the signs to agricultural producers, who must already have taken concrete steps to improve their farming practices. The signs are displayed at the edge of fields, at farm entrances and on farm buildings.

In the summer of 2001, signs were also displayed on sixty or so farms whose owners had agreed to make their fields demonstration sites for simple, effective pest management techniques. By observing other farmers' work methods and comparing the results, agricultural producers are continuing to explore an agroenvironmental approach that allows them to reduce pesticide use while still controlling crop pests.

Contagious Pride

In the fall of 2001, agroenvironmental consulting club members who had distributed MAPAQ signs were surveyed. One of the comments most often heard by members was that producers were proud to let people know that they were concerned about protecting the environment and the health of consumers. They said the signs improved their corporate image in their communities. Moreover, producers who sell produce, such as potatoes or corn on the cob, on their farms are pleased to inform their customers about the production choices they have made.

The agroenvironmental consultants say that the signs also arouse the curiosity of producers. Those who have not yet switched to integrated pest management learn that there are effective ways for producers to cut down on pesticide use and thereby reduce their related expenses. As more producers opt for this method of production, it increases the number striving to achieve the objectives of the Pest Control Strategy and making use of the services of specialized consultants.

"Agroenvironmental consultants told us that pesticide retailers tended to alter what they said when they learned that producers had adopted an environmental approach," says Raymond-Marie Duchesne, co-ordinator of MAPAQ's Pest Control Strategy.

In designing the signs, MAPAQ and its Pest Control Strategy partners wanted to spotlight the know-how of agricultural producers who decide to implement new techniques in order to maintain the profitability of their operations without harming the

environment or endangering their own health or that of consumers. Their commitment definitely deserves a high profile.

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Gold Leaf Award

George Arsenault recognized for his commitment to wildlife conservation and development in Quebec

On October 25, the Canadian Council on Ecological Areas (www.ccea.org), a conservation organization, awarded two prizes to Quebecers. In the individual category, George Arsenault of the *Société de la faune et des parcs du Québec* (Quebec Wildlife and Parks Corporation) won the Gold Leaf Award for his lifelong dedication to the conservation and development of wildlife in Quebec. The organization *Attention FragÎles*, of the Magdalen Islands, also won a Gold Leaf Award in the organization category for its contributions to conserving the islands' natural heritage.

Arsenault, a native of PEI, began his career in Quebec at Environment Canada's Canadian Wildlife Service, where he worked, among other things, on establishing national wildlife areas. He then served as director for Ducks Unlimited, and as Assistant Deputy Minister, Natural Heritage and Wildlife, responsible for wildlife and parks, for the Quebec Department of the Environment and Wildlife. From 1996 to 2000, he was co-chair for Quebec of the St. Lawrence Vision 2000 Action Plan, the objectives of which involve protecting and conserving natural habitats. From 1999 to 2001, he was Vice-President, Wildlife Development and Management, *Société de la faune et des parcs du Québec*, where he now serves as deputy chairman and CEO. Arsenault is also the government co-ordinator for the group involved in planning the Quebec strategy for protected areas (Stratégie québécoise pour les aires protégées).

The organization *Attention FragÎles*, which was also honoured, is actively involved in promoting the conservation and development of the natural heritage of the Magdalen Islands. Formed in 1988, this organization carries out annual surveys of endangered bird species as well as an educational program on the coastal environment and endangered species. *Attention FragÎles* is also active in dune restoration and controlling vehicle traffic in natural areas. In 1998, members of the organization created the *Société de conservation des Îles-de-la-Madeleine* (Magdalen Islands Conservation Society), a trust dedicated to conserving natural spaces on the islands. In addition, *Attention FragÎles* has played a significant role in creating the Magdalen Islands ZIP Committee.

From left to right: Don McCallum of the Basin Head Lagoon Ecosystem Conservation Committee (PEI), Adrian Phillips of the World Conservation Union, Hélène Chevrier of Attention FragÎles, George Arsenault of the Société de la faune et des parcs du Québec (Quebec Wildlife and Parks Corporation), Ed Wicken of the Canadian Council on Ecological Areas and Vince Zelazny of the New Brunswick Department of Natural Resources and Energy.
Photo: Jean Gagnon, *Société de la faune et des parcs du Québec*.■

Survey of waterfowl and fish consumption by St. Lawrence waterfowl hunters and health risk analysis

Photo : Léo-Guy de Repentigny, Environment Canada

Under the Human Health component of St. Lawrence Vision 2000, the public health research unit of the Centre hospitalier universitaire de Québec (CHUQ), a Quebec City hospital, carried out a study on several aspects of waterfowl and fish consumption by migratory game bird hunters. The information obtained allowed health risks to these users of the St. Lawrence to be analysed.

According to the Canadian Wildlife Service (CWS) of Environment Canada, over 30,000 migratory game bird hunting permits were sold in Quebec for the 1999-2000 season. Of the 353,000 geese and ducks harvested during the season, roughly 65% were taken by hunters along the banks of the St. Lawrence.

Waterfowl can be contaminated by a number of chemical products. Health Canada's Food Directorate considers levels of chemical contaminants in aquatic birds to be too low, however, to pose a health risk to waterfowl consumers in Canada.

In 1998, a team from the CHUQ public health research unit showed that Health Canada's risk assessment (based on contamination data obtained by the CWS) did indeed hold true for the consumption of waterfowl harvested from the St. Lawrence (see article entitled "Health Risks Related to Consumption of Waterfowl from the St. Lawrence" in *Le Fleuve* Newsletter, volume 10, issue 8). However, the calculated exposure doses for some chemical contaminants, particularly mercury and selenium, suggested that very frequent consumers of fish and waterfowl from the St. Lawrence could be exposed to chemical contaminants above the recommended limits set by public health agencies. (Calculated exposure doses were based on possible consumption scenarios for waterfowl and fish). Since no study had been done in Quebec to evaluate the extent of waterfowl consumption by hunters, it was difficult to determine what proportion of the hunting population consumed geese and ducks above and beyond the doses deemed safe to human health.

This lack of information has now been remedied. As Jean-François Duchesne, the researcher at the CHUQ research unit in charge of the two projects, explains, "we undertook, in collaboration with the CWS, a consumption survey to describe waterfowl hunting and consumption habits by migratory game bird hunters, as well as their harvesting and consumption of sport fish from the St. Lawrence. Using the data we obtained, we were able to carry out a health risk analysis based on up-to-date and comprehensive information."

Data previously unavailable in Quebec

Survey participants were selected from among hunters who had obtained a migratory game bird hunting permit for the 1999-2000 season. A total of 1,000 questionnaires were sent to waterfowl hunters in the winter of 2000 and close to 53% responded. The study area consisted of the entire St. Lawrence, from Cornwall in the west to the Gulf of St. Lawrence in the east.

The first part of the questionnaire dealt with waterfowl hunting and consumption habits. Participants were asked about such things as how often they consumed migratory game

birds (geese, dabbling ducks, pochards, goldeneye, sea ducks and mergansers), the parts of the bird and quantities consumed and precautions taken when preparing the meat (removal of fat and shot).

The second part of the questionnaire dealt with waterfowl hunters' consumption of fish. Hunters were asked if they had engaged in sport fishing on the St. Lawrence during the 12 months preceding the survey (including both open-water and ice fishing) and if they had eaten sport fish caught in the St. Lawrence during the same period. Respondents were asked to specify the number of meals consumed of each species. Survey participants' perceptions of the dangers posed by fish and waterfowl consumption were also evaluated.

The survey results showed that over 93% of respondents had eaten at least one meal of waterfowl during the survey period. The average number of meals in a year was 7.5, consisting mainly of geese and dabbling ducks. Although the great majority of hunters 62%) had eaten fewer than ten meals of waterfowl, some hunters had eaten between 80 and 114 meals of waterfowl.

The survey also showed that close to 50% of hunters were also consumers of sport fish caught in the St. Lawrence, having eaten at least one meal of sport fish from the St. Lawrence in the 12 previous months. The most frequently consumed species were walleye and yellow perch (52% of all meals), and the average number of meals eaten in a year was 8.7 (all species). Some waterfowl hunters were also frequent consumers of fish, eating over 50 meals of fish during the survey period.

A minimal health risk

Researchers currently believe that chemical contamination in the waterfowl consumed is generally too low to constitute a significant risk to hunters' health, at the levels measured in the survey. However, hunters who consume both waterfowl and large quantities of freshwater fish from the St. Lawrence could expose themselves to levels of chemical contaminants in waterfowl or fish higher than those seemed safe for health.

Duchesne concludes that "given the results of our risk analyses, we believe that advisories on the consumption of waterfowl hunted in the St. Lawrence region are not needed. However, to limit exposure to contaminants, particularly mercury, we recommend that hunters who also consume fish abide by the sport-fish consumption advisories currently in effect."

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Source:

DUCHESNE, J.-F., D. GAUVIN, B. LÉVESQUE, S. GINGRAS and É. DEWAILLY. 2001. *Enquête sur la consommation d'oiseaux migrateurs et de poissons de pêche sportive auprès de la population de chasseurs de sauvagine du Saint-Laurent et analyse des risques à la santé*, CHUL, Centre de recherche du CHUQ, Unité de recherche en santé publique, 148 pp.■

Chronicle
ZIP Committees in the Heat of the Action

The Chaleur Bay ZIP Committee

Barachois at Malbaie
Aerial photography, *Ministère des Ressources naturelles*, Photocartothèque québécoise.

Biophysical characterization of the coastal wetlands along the southern Gaspé peninsula

The success of any ecosystem protection, restoration or enhancement project depends in large part on whether there is sufficient knowledge of the characteristics of the natural site. This ensures that participating partners are convinced of the importance of the project and allows the judicious planning of activities. Consequently, during the summers of 2000 and 2001, the Chaleur Bay ZIP Committee (ZIP is short for Zone d'intervention prioritaire *or Area of Prime Concern) carried out a project to characterize the wetlands along the southern coast of the Gaspé Peninsula. This will result in a reference tool that can be used by both the ZIP committee and its regional partners.*

The coastal wetlands along the south shore of the Gaspé Peninsula, which include barachois (baymouth bars), saltmarshes and salt meadows, are exceptionally rich and productive ecosystems. They provide crucial habitat for a wealth of animal and plant species, many of which are rare, including the hooded arrowhead (*Sagittaria montevidensis* subsp. *spongiosa*), Nelson's Sharp-tailed Sparrow, striped bass and Maritime ringlet butterfly. Although the location and characteristics of the larger wetlands tend to be fairly well known, this is less true for the smaller wetlands, even though they are of equal ecological value.

Wetlands and the species inhabiting them cannot be protected without a knowledge of their distribution and distinctive characteristics. Consequently, the Chaleur Bay ZIP Committee has been working since the summer of 2000 to characterize the coastal wetlands between the municipality of Matapédia and Cap Gaspé, in Forillon National Park. This project fits in with one of the priorities that emerged from consultations with local communities, as expressed in the Environmental Remedial Action Plan for the region (Plan de d'action et de réhabilitation écologique du secteur Baie des Chaleurs /Gaspé-sud).

Study based on photointerpretation and surveys in the field

The Chaleur Bay ZIP Committee began by interpreting topographic maps and aerial photos of the southern coast of the Gaspé to locate wetlands in the study area. The extent of knowledge on these wetlands was also determined.

Next, the committee undertook to characterize habitats by their biophysical characteristics. Several surveys were carried out at each site to describe its distinctive characteristics in terms of geomorphology, flora and fauna. Since a knowledge of plant communities in a habitat allows a number of other characteristics such as wildlife potential to be inferred, particular attention was paid to vegetation inventories.

The various types of human disturbances threatening the integrity of the wetlands were also described, as well as the characteristics of the areas bordering the sites. Lastly, a cadastral search was carried out to determine the ownership of each site.

In all, 43 wetlands were surveyed. The ZIP committee is currently synthesizing the data obtained to draft descriptions of each site, which will be an integral part of the reference document to be published in the spring of 2002.

A management and educational tool

The directory of coastal wetlands on the southern Gaspé coast will have many different uses. The Chaleur Bay ZIP Committee will use it to carry out comparative analyses and define conservation priorities for wetlands in cases where action is required. As Michel Chouinard, ZIP committee co-ordinator, explains, “the survey enabled us to identify wetlands under significant pressure from human activities that require protection efforts in the short term or restoration work. It also allowed us to target exceptional habitats, as well as sites supporting rare or endangered species. Protection measures must also be implemented for these habitats so that their biodiversity value is preserved.” For example, concerted efforts must be made to implement special protection measures for the 15 barachois surveyed, due to their crucial role in maintaining the dynamics of coastal habitats.

Administrators of municipalities and regional county municipalities will also benefit from this new reference tool. By using the legal and regulatory tools at their disposal, these ZIP committee partners can help to ensure the long-term protection of wetlands.

To provide concrete support for land-use planning, the various options for conserving natural habitats are also described in the directory.

The project may also have other positive spinoffs. Benoît Tremblay, the wildlife technician in charge of the study, used his expertise in botany to draw up a list of coastal plant species and developed methodology for characterizing coastal wetlands which can be used for future work on a regional scale. Lastly, according to Chouinard, the Chaleur Bay ZIP Committee increased its capacity for action by acquiring a number of documents, maps and photographs, particularly aerial photos, that in turn can be made available to its regional partners.

“As is true everywhere else in Quebec, we have to deal with deep-rooted prejudices about the value of wetlands. This project is an additional effort to convince elected officials and citizens alike of the importance of protecting these habitats,” Chouinard concludes. The ZIP committee co-ordinator firmly believes that the soon to be published reference work will encourage the committees’ partners to be even more vigilant in preserving the wetlands on the south coast of the Gaspé Peninsula.

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News in BRIEF

COMMUNITY INTERACTION PROGRAM

The partners in the *Community Interaction funding program* would like to inform nongovernmental and nonprofit organizations that the deadline for submitting projects for funding is February 1, 2002. The program provides technical and financial support for projects undertaken by riverside communities to protect and conserve the St. Lawrence. For more information, contact a project officer at one of the following numbers: (418) 648-3537 or (418) 521-3910, ext. 4342 or toll-free numbers: 1-800-463-4311 (Environment Canada) or 1-800-561-1616 (Ministère de l'Environnement du Québec).

In addition, you can visit the St. Lawrence Vision 2000 website at the following address: http://www.slv2000.qc.ec.gc.ca

LAKE ST. PIERRE ZIP COMMITTEE HOLDS WORKSHOP

On February 23, 2002, the Lake St. Pierre ZIP Committee will hold a regional workshop on sport fishing and the concept of a community wildlife area. The purpose is to make local stakeholders more aware of the current issues involving sport fishing on Lake St. Pierre and inform them about the concept of co-operative management. The ZIP committee will also elicit participants' opinions on various fisheries management topics.

The workshop will be held at the Sorel-Tracy CEGEP, located at 3000 Boulevard de Tracy, Sorel-Tracy, from 8:00 am to 5:00 pm.

SEASON'S GREETINGS TO ALL OUR READERS

With the Christmas and New Year's holidays soon upon us, the partners of the St. Lawrence Vision 2000 Action Plan would like to take this opportunity to send season's greetings to all *Le Fleuve* readers. We hope that this newsletter will continue to enlighten you on issues involving the Action Plan and keep you well informed of the results of its implementation.

The editors would like to remind you that the next issue will appear in February 2002.■

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