

FISHERIES AND AQUACULTURE

NEWS

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Though it got off to a slow start, summer is finally here. When spring comes to an end, the fishing season begins in our maritime regions. This year, I know the presence of right whales rather complicated regular operations for some of you, particularly those fishing for snow crab in zone 12 around the Gaspé Peninsula and the Magdalen Islands. Please know that I am following the developments in the situation closely and that I understand the difficulties faced due to several quadrilateral areas being closed to fishing in the southern part of the Gulf of Saint-Lawrence. We must find a balance between protecting these marine mammals and fishing for crustaceans in the affected areas. I will be sending this message to the federal government and am committed to standing up for Quebec's fishing industry.

In a highly competitive business environment, companies in the sector are called on to overcome significant challenges. Your industry plays an important role in the maritime regions' economy, providing more than 8,000 jobs as well as estimated economic benefits exceeding 560 million dollars, and I will spare no effort in supporting the development of your activities.

In the month of July, the first reports of the season come in. As such, snow crab and lobster fishing has ended for most Quebec fishing zones. I hope your companies see positive results for all your efforts. And to those whose activities will continue in the fishing, processing and aquaculture industries, I wish you continued success. And, of course, I also bid everyone a wonderful summer.



Minister of Agriculture,
Fisheries, and Food

ANDRÉ LAMONTAGNE

THE CENTRE D'EXPERTISE EN GESTION DES RISQUES D'INCIDENTS MARITIMES (CENTRE OF EXPERTISE FOR MARITIME HAZARDS RISK MANAGEMENT)

By Luc Côté and Sébastien Cyr,

Direction des analyses et des politiques des pêches
et de l'aquaculture (Fisheries and Aquaculture Analysis
and Policies Department)

in collaboration with Stéphanie Poulin,

director of Centre ministériel de sécurité civile
(Departmental Centre of Civil Security) (MAPAQ)

The increased bulk carrier traffic and their diverse loads on the Saint Lawrence River, as well as on the commercially navigable part of the Saguenay River, is a concern for fish harvesters and marine farmers. In fact, they depend on the protection of fishery resources since they make their living from these resources. In addition, they supply marine product processing plants, which sell globally-marketed products that are sought after for their renowned high quality, which must be preserved. This business, overall, creates about 8,000 jobs (2016) in Quebec and considerably contributes to socio-economic health, primarily in maritime Quebec.

In 2017, the Quebec government opened the Centre d'expertise en gestion des risques d'incidents maritimes (CEGRIM – Centre of Expertise for Maritime Hazards Risk Management) to protect fishery resources and manage risks for maritime spills of hazardous substances in the Saint Lawrence. This centre specializes in preventing and preparing for emergency responses and implementing them for the Saint Lawrence River in the event of toxic product spills. Its scope mainly covers:

- improving the knowledge and management of the risks related to maritime transport of hazardous goods to take into account the anticipated increase in maritime traffic;
- developing best practises based on research and knowledge about river and marine ecosystems, in collaboration with relevant stakeholders;
- participating in developing and securing marine emergency plans for all industry stakeholders;
- promoting training and exercises on emergency response management for maritime incidents;
- supporting municipalities and governments during emergency maritime situations that impact the population, environment, goods and critical infrastructure;
- promoting a dialogue with all stakeholders affected by maritime incident risk management.

CEGRIM reports to the Ministère de la Sécurité publique (Ministry of Public Security) and combines, in the Magdalen Islands, the expertise of six other Quebec ministries, including the Ministry of Agriculture, Fisheries and Food (MAPAQ). With this relationship, CEGRIM benefits from the knowledge of people who have made the sea their career and their comprehensive knowledge of the sensitivity of coastal ecosystems and the marine environment. In addition, it contributes to creating and maintaining high-quality jobs in the Magdalen Islands.

Since one of its mandates is to ensure the continued existence of the commercial fisheries and aquaculture

industry, MAPAQ brings its expertise on the use and management of fishery resources to CEGRIM. Its representative at CEGRIM, Mr. Sébastien Cyr, is establishing working relationships with fish harvesters, marine farmers and processors in the commercial aquaculture and marine product processing industry. MAPAQ provides them with assistance for maritime incidents that may impact their operations. In addition, it contributes to risk management for spills of toxic substances in a fishery environment by offering support to the affected customers. With their support, it participates in producing vulnerability and criticality analyses of customers exposed to such risks. It also oversees the assessment of major disaster consequences in CEGRIM's area of involvement and acts as an adviser to stakeholders in the commercial fisheries and aquaculture sector. It also helps prioritize the actions that the Ministry and its partners must take if such situations arise. Finally, it helps evaluate the impact of responses and subsequent feedback, collaborating with affected clientele.

FOR MORE INFORMATION:

Centre d'expertise en gestion des risques
d'incidents maritimes

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SUSTAINABLE DEVELOPMENT OF STARFISH BY INNOVACTIV

By Julie Boyer,
Direction régionale de la Gaspésie

Clearly, starfish are among the most intriguing marine organisms. They possess unique regenerative properties allowing them to regrow limbs after injury or attack by a predator. The firm innoVactiv inc. was interested in this exceptional asset. Its scientific team conducted several research projects and a clinical study leading to the commercialization of an anti-aging cosmetic ingredient patented as JuventideMD.

This ingredient is made of starfish coelomic fluid, a liquid contained in the internal cavity of certain marine animals where organs can grow. The marine biotechnology company has developed a procedure for sustainably collecting this liquid while keeping the starfish alive.

However, sea farmers see starfish differently—formidable mollusc predators, starfish are a species to be controlled. In keeping with the principle of a circular economy that respects the resource, innoVactiv tapped into a supply source based on existing mussel farming. The starfish are captured during routine upkeep of mussel farming facilities. Then they are kept for a short time in conditions that mimic their natural environment. A fraction of the coelomic fluid is taken and the starfish are quickly returned to their natural habitat and their normal life. To make up for the wide geographic distribution of the capture sites, innoVactiv developed and built a mobile collection plant,

in collaboration with the Institut maritime du Québec à Rimouski.

Observations made at the time indicated rapid recovery of the starfish. However, since follow-up is complicated in the natural environment, the condition of the starfish returned to the sea after collection had not been scientifically documented.

This is where innoVactiv stepped in to carry out a research project with financial support from MAPAQ. The aim of the project was to ensure that development was fully sustainable and unharmed to the animals and to explore the feasibility of a supply scenario that includes a period in a holding basin.

The Rimouski company joined forces with Merinov to conduct trials for six months to assess starfish viability and growth after fluid collection using two methods. The results showed that the non-invasive fluid-collection method had no effect on starfish viability, feeding or growth. innoVactiv hired the French company E-Phy-Science, a leader in preclinical validation of cosmetic actives, to verify the presence of the active compounds sought and of tissue regeneration.

These findings confirm the sustainability of innoVactiv production and make it possible to consider complementary supply streams to support the increased production it foresees given market interest in its cosmetic ingredient.



For more information, contact Raphaël Anguenot, Vice President, Supply Chain, by email at ranguenot@innovactiv.com or by phone at (418) 721-2308, extension 211.

A WELL-DESERVED AWARD FOR JOBEL

By Danielle Bouchard,
Gaspé Peninsula Regional Directorate

The Regroupement des pêcheurs professionnels du sud de la Gaspésie (RPPSG – Southern Gaspé Professional Fish Harvester Group) won the Mercure prize in the Web Technology Development category for small- and medium-sized enterprises at the gala for Les Mercuriades on April 29, 2019, in Montreal. JOBEL, the electronic logbook project, stood out with its original technology, solid strategy, the innovation it brings to the market and the pioneering development of this cutting-edge product by the fishing

industry. This prize awarded the excellent work accomplished by the RPPSG team. It's rare to see projects from the maritime sector, especially the fishing sector, receive awards at Les Mercuriades competition.

For certain fisheries, using the electronic logbook is still optional. However, following a transition period for the industry, Fisheries and Oceans Canada intends to make it mandatory by 2021 for all Atlantic fisheries.

The RPPSG electronic logbook is the first data collection software developed for Atlantic Canada and approved by Fisheries and Oceans Canada. It is currently being used by many Quebec fish harvesters.

JOBEL was designed by professional fish harvesters to adequately meet fishing company needs. Developing this type of catch reporting and monitoring technology is one of the new practises adopted by the sector, which is helping make fisheries more sustainable.

The number of subscribers in snow crab, lobster, herring and bait fisheries grew from 400 in 2018 to 670 in 2019, adding New Brunswick shrimp and lobster harvesters. The JOBEL team hopes to have over 3,000 subscribers by 2021.

There are several challenges that JOBEL and RPPSG will have to tackle, including expanding use of the software, mainly in Atlantic Canada. The marketing strategy includes participating in several professional fairs and meetings with potential users. The software has already been presented at the North Atlantic Fish and Workboat Show in Newfoundland and Canadian Fisheries Exposition in Yarmouth, Nova Scotia.

The Quebec Ministry of Agricultural, Fisheries and Food (MAPAQ) and several government and regional partners have supported the development of JOBEL.

PORTRAIT OF FISH AND MARINE PRODUCT SMOKERIES AND SMOKEHOUSES IN QUEBEC

By Thierry Marcoux,
Direction régionale de la Gaspésie

In 2018, the Centre de recherche sur les biotechnologies marines (CRBM) completed a portrait of Quebec's fish and marine product smoking industry. Simon Cartier, process development research officer, spearheaded the project to create a profile of the industry, present smoking techniques and take a special look at by-product management and enhancement. Of note is the fact that 41 of the 42 smo-

kehouses identified took part in the study—an outstanding rate of participation.

Fish and seafood smoking are carried out in 14 of Quebec's 17 administrative regions. The raw material comes from Quebec, but also from Canada's maritime provinces and from other countries, notably Chile and Norway. In the past, the species fished in Quebec's lakes and streams and in the sea accounted for most smoked products. Since then, the industry has concentrated on salmon (90% of Quebec smokehouses) and trout (68% of smokehouses). Despite the importance of these two species, 25 species were identified during the study, which shows that a variety of smoked products are nonetheless made in Quebec.

The use of two techniques—cold smoking (the temperature does not exceed 30°C, which keeps the flesh raw and smooth) and hot smoking (the temperature is above 60°C so that the proteins in the flesh coagulate)—is widespread throughout the industry. 37% of Quebec smokehouses only do cold-smoking, 22% only do hot smoking, and 41% use both methods.

As for smoking by-products, nearly 700 tons are generated per year. Skin constitutes 60% of smokery by-products, while heads and guts account for 22%. The biochemical composition of these by-products was also characterized during the study. Many smokehouses choose to discard the by-products. However, other solutions, such as composting, agricultural application or biomethanization, exist. The study enabled CRBM to highlight several other means of development, e.g. animal feed or pet treat production and smoked fish flavourings. However, high salt and polyaromatic hydrocarbon levels may limit their use as raw material. More in-depth biochemical characterization is needed to define other by-product development strategies.

The Quebec Ministry of Agricultural, Fisheries and Food (MAPAQ) provided financial support for this portrait which helps foster sustainable development practices in the marine product processing and enhancement industry in Quebec. To see the complete version of the portrait, contact CRBM project manager Simon Cartier directly at simon_cartier@crbm-mbrc.com.

PRODUCTS FROM QUEBEC: ESSENTIAL TO PROMOTING AQUATIC PRODUCTS IN THE QUEBEC MARKET

By Michel Bélanger

Direction des analyses et des politiques des pêches et de l'aquaculture (Fisheries and Aquaculture Analysis and Policies Department)

During the fishing season, the exceptional quality of local aquatic products and the appetite of Quebecers make headlines in the province’s various media outlets. The promotional campaigns of industry representatives are now well established and receive media coverage every season. The visibility of these campaigns helps inform Quebec’s consumers and sparks interest in local aquatic products. This year, the importance of aquatic products from Quebec is attracting attention and several organizations are actively promoting fish and seafood from Quebec.

RPPSG PUBLIC RELATIONS CAMPAIGN

The public relations campaign for Regroupement des pêcheurs professionnels du sud de la Gaspésie (RPPSG – Southern Gaspé Professional Fish Harvester Group) is now in its seventh year. The objective is to educate about the quality of Gaspé lobster, the traceability system that was established, the work of the fish harvesters, and the many measures adopted to ensure sustainable fishing. Interest in the campaign continues to grow. This year, the high-quality media coverage demonstrates the success of the group’s efforts. Over the years, RPPSG has helped consumers in Quebec learn the importance of looking for and buying lobsters whose origin is clearly indicated.

QUEBEC FISH PROCESSORS ASSOCIATION PROMOTIONAL CAMPAIGN

The launch of the promotional campaign for Quebec Fish Processors Association (QFPA) took place on May 28, 2019, at the Le 47e Parallèle restaurant with a “Taste Maritime Quebec” theme. Aimed at industry representatives and the media, the event was a resounding success with record attendance this year. The Quebec Minister of Agriculture, Fisheries and Food (MAPAQ) attended this gathering and conversed with the participants who came to support local marine products.

Once again this year, the Quebec Fish Processors Association is running a wide-reaching promotional campaign that directly targets consumers in Quebec. One aspect of the campaign is frequent TV ads to reach a wide audience. In addition to promotions in supermarkets, the QFPA was able to procure a spot in SAQ (Quebec Alcohol Society) stores in order to promote snow crab, lobster and Northern shrimp. In addition, over the summer, the association will participate in various projects that showcase Quebec marine products, mainly the Bordeaux Wine Festival in Quebec City.

QUEBEC FISH AND SEAFOOD WEEK

The fourth Quebec Fish and Seafood Week took place May 27 to June 8, 2019, in Quebec City and Montreal. This year, once again, the week’s events were presented in a partnership with the Institut de tourisme et d’hôtellerie du Québec (Quebec Tourism and Hotel Institute). For the occasion, the chefs from four participating restaurants concocted a tasting menu using fish and seafood from Quebec. This unique week promotes aquatic products from Quebec to the restaurant industry, chefs and the general public.

REGIONAL INITIATIVES

Promotional efforts are also taking place directly in Quebec’s different regions. Promoting local aquatic products is an integral part of the activities of producer and business associations, such as Gaspésie Gourmande, Le bon goût frais des îles de la Madeleine and Table bioalimentaire Côte-Nord. As part of a pilot project, Gaspésie Gourmande worked with several fishmongers to label fish and seafood from the Gaspé Peninsula. As a result of a collaboration with fishers, aquafarmers and processing plants, consumers can recognize aquatic products that were caught, raised, landed, processed and sold in the Gaspé Peninsula thanks to a special logo: “Gaspésie Gourmande Mer.”

Lastly, it’s important for consumers to seek out local aquatic products to benefit from their high quality. The best way to get fish and seafood raised or caught in Quebec is to ask your fishmonger where products come from, look for traceability labels and the Aliments du Québec (Food from Quebec) certification, and keep up with the seasonal fishing calendar for fresh products. In addition, summer is the perfect time to visit producers directly in the region and shop at the many stores that carry aquatic products from Quebec.

Promoting Quebec aquatic products in the Quebec market is part of the 2018-2025 Action Plan from the Ministère pour développer l’industrie des pêches et de l’aquaculture commerciales (Ministry for the Development of Commercial Fisheries and Aquaculture).

PROMOTION OF GASPÉ MARINE PRODUCTS IN THE GASPÉ PENINSULA

By Gabrielle Lafond Chenail,

Gaspé Peninsula Regional Directorate

For the first time, Gaspésie Gourmande is partnering with several Gaspé fishmongers in a project to label fish and seafood that is 100% local. As a result of a collaboration with fishers and processing plants, consumers will be able to recognize, at participating fishmongers, the main species that are landed or raised and sold in the Gaspé Peninsula thanks to a special logo. Gaspé marine products will be easy to spot with the “Gaspésie Gourmande Mer” label. This initiative, which is currently in the pilot project phase, will be launched on a broader scale over the next few years.

From May to September, Gaspé marine products can be purchased all over the peninsula at fishmongers who are participating in this promotional initiative. The species being promoted this season are snow crab, Northern shrimp, lobster, Atlantic halibut, turbot and Arctic char. The fishmongers each have a designated species, and consumers will be invited to try it on the

spot. The 2019 issue of the Gaspésie Gourmande guide magazine will also include a map of sales outlets and a calendar of landings to tell readers where to find fishmongers and fresh products.

This pilot project aims to promote Gaspé marine products and make them more readily available to local customers and visitors, as well as to educate them about seasonal products. It is also pursuing the goal to ensure the traceability of authentic Gaspé marine products and respond to the major consumption trends of traceability and buying local. Highlighting Gaspé marine products at fishmongers that are working with processing plants therefore promotes their traceability and ensures a good supply. This initiative received financial support from the Ministry of Agriculture, Fisheries and Food (MAPAQ).

If you are passing through the Gaspé Peninsula, we invite you to discover regional marine products at participating fishmongers. By monitoring landings, you will have access to fresh fish and seafood that you can enjoy without restraint!



Look for this logo to identify marine products that are caught, raised, landed, processed and sold by Gaspésians in the Gaspé Peninsula!

OVERVIEW OF INTERVENTIONS IN THE COMMERCIAL FISHERIES AND AQUACULTURE SECTOR IN 2018-2019: MEANINGFUL FIGURES!

By Michelle Parent,
Gaspé Peninsula Regional Directorate

DISTRIBUTION OF FINANCIAL INTERVENTIONS ACCORDING TO THE FOUR AXES OF DEVELOPMENT:

- Fishing fleet
- Research-development
- Collective initiatives
- Processing, aquaculture and biomass valorization

Fishing fleet

- 15 interventions totalling \$650,000 in financial aid for relief
- 78 interventions in the form of loan guarantees totalling \$30.6 million

Research-development

- Implementation of 28 new R&D projects focused on innovation
- Total investment of \$32.9 million
- Total financial aid of \$6.9 million

Collective initiatives

- 11 projects implemented
- Total investment of \$848,000
- Total financial aid of \$407,000

Processing, aquaculture and biomass valorization

- 47 projects completed
- Total investment of \$15.7 million
- Total financial aid of \$4.9 million

Effect on employment

- 36 jobs created and 1,779 jobs improved

REPORT ON THE 2016-2019 SECTORAL PLAN FOR DEVELOPING THE SEAL INDUSTRY IN QUEBEC

By Michel Bélanger,
Direction des analyses et des politiques des pêches et de l'aquaculture,
and Karine Villemaire,
Direction régionale des Îles-de-la-Madeleine

In June 2016, a first three-year action plan (see the table) for developing Quebec’s seal industry was adopted further to a meeting of some 40 seal sector representatives. It was agreed that a follow-up committee would be needed to facilitate the implementation of the action plan.

As a result, a committee was formed. It still consists of representatives of the Association des chasseurs de phoques intra-Québec, the Office de gestion du phoque de l’Atlantique, Quebec seal product processing companies, Fisheries and Oceans Canada, and the Quebec Ministry of Agricultural, Fisheries and Food (MAPAQ). Since the plan was approved, the group has met two or three times a year to establish priorities and coordinate activities in connection with these priorities.

So far, all of the above organizations have carried out several actions written into the plan. Increased manufacture of added-value products, coordination enabling the changes requested



by the hunters, marketing of new products, and numerous awareness, promotion and outreach activities are among the main achievements. The meetings have also been a platform for discussion for sector players by giving them the opportunity to express their opinions and better understand the various challenges and prospects for the seal industry.

TABLE – 2016-2019 SECTORAL ACTION PLAN FOR DEVELOPING THE SEAL INDUSTRY IN QUEBEC

SUMMARY OF THE ACTION PLAN	
FOCUS 1 – SUPPLY	
PRIORITY 1 – ACCESS TO THE RESOURCE	
Establish optimal conditions for facilitating access to harp seals	
Structure the grey seal hunt	
Establish optimal conditions for facilitating access to grey seals	
Give priority to short-term initiatives that favour supply enabling development project viability	
PRIORITY 2 – QUALIFIED LABOUR	
Encourage the professionalization of labour	
FOCUS 2 – SUSTAINABLE AND INTEGRATED MANAGEMENT OF THE RESOURCE	
PRIORITY 1 – KNOWLEDGE OF THE RESOURCE	
Increase knowledge about grey seals	
FOCUS 3 – PROCESSING AND DEVELOPMENT	
PRIORITY 1 – PROMOTION OF PRODUCTS DERIVED FROM THE SEAL HUNT	
Foster start-up and development of seal product processing businesses	
Improve consistency between federal and provincial regulations	
Support a slate of quality products safely derived from the seal hunt	
Ensure the professionalization of labour	
PRIORITY 2 – PUBLIC PERCEPTION	
Work to counter negative perceptions of the seal hunt	