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The end of the year is fast approaching and the holiday season has already begun. Now is a good time to take a look back. It is fair to say that the past 12 months have been quite busy for the industry. On April 24, we announced the establishment of the Quebec Fisheries Fund. Members of the industry showed continued interest in this fund week after week. After announcing an initial project this summer on Îles-de-la-Madeleine, dozens of projects were submitted for analysis or are currently in development with support from staff in the Quebec and Canadian governments. We must continue to build on this momentum. I encourage businesses and associations in the sector to make the most of all possible benefits from this fund of \$42.8 million over five years.

This year has also been impacted by the dossier on right whale protection measures. I maintain our position and urge the federal government to take steps to institute measures that ensure harmonious cohabitation between Atlantic right whales and fishermen. Fishing activities are the only source of revenue for hundreds of workers and are a very significant economic driver for Quebec. I have shared my views with my federal counterpart many times and I intend to continue discussions with Mrs. Bernadette Jordan, the new minister of Fisheries, Oceans, and the Canadian Coast Guard, to ensure that the most effective measures possible are implemented.

During this year, I had the opportunity to tour Gaspésie and Îles-de-la-Madeleine and to meet with various industry stakeholders. Your challenges and plans for the future were the main focus of discussions. I have seen first-hand the industry's energy and the importance of fishing, aquaculture and marine product processing activities for Quebec's coastal regions.

I also observed that cooperation among stakeholders in the fisheries and aquaculture sector can sometimes prove difficult. It is important that we all work together to ensure the long-term viability, growth and development of this industry whose activities are closely linked and often interdependent. A strong, tight-knit industry is essential for tackling the challenges posed by global competition, market access, fishing resource decreases and climate changes, just to name a few.

Finally, on the eve of a well-earned break, I wish you a lovely holiday season, as well as health, happiness and prosperity in the new year to come. May 2020 mark the start of improved cooperation and even greater synergy among stakeholders in the industry.

Happy Holidays!



Minister of Agriculture, Fisheries, and Food

ANDRÉ LAMONTAGNE

## FISH HEALTH SERVICES OFFER TO THE MINISTÈRE DE L'AGRICULTURE, DES PÊCHERIES ET DE L'ALIMENTATION

By Nathalie Moisan

Direction régionale de l'estuaire et des eaux intérieures

Improving the health of Quebec's fish stock is an ongoing concern at the ministère de l'Agriculture, des Pêcheries et de l'Alimentation (MAPAQ). Disease-related growth delays and mortality can seriously affect a company's profitability. For several years, fish farmers have been offered support to improve the health of their fish. It comes in different forms.

### DIAGNOSTIC SERVICE

First, a veterinarian specialized in fish health offers fish farmers a diagnostic service through a partnership between the Université de Montréal's Faculty of Veterinary Medicine and the MAPAQ. This service includes help in implementing good farming practices and detecting and treating diseases. A free telephone consultation service, farm visits and laboratory tests confirm the veterinarian's diagnosis so the correct treatment can be administered. Fees are requested from fish farmers for visits and tests. However, they are partially subsidized by the MAPAQ.

For diagnostic support, Dr. Judith Farley can be reached at the Université de Montréal's Fish Disease Diagnostic Department of the Faculty of Veterinary Medicine at 450-773-8521, ext. 8317.

### QUEBEC HEALTH CERTIFICATION PROGRAM FOR SALMONID FISH FARMERS

This program allows Quebec fish farmers to test eggs and fish for three diseases that cause significant losses in fish farming: furunculosis, bacterial kidney disease and infectious pancreatic necrosis. A veterinarian will evaluate these diseases and samples will be submitted for laboratory analysis. The combined results of the veterinarian's visit and the laboratory analysis will assign a «positive» or «negative» status to each of the three diseases after four visits over a two-year period. This program allows fish farmers to conduct commercial transactions with well-known health status companies. Its objective is to limit the spread of these diseases and improve the health of Quebec's fish stocks.

For more information, go to:

[www.mapaq.gouv.qc.ca/programmeattestationsanitaire](http://www.mapaq.gouv.qc.ca/programmeattestationsanitaire)

### TECHNICAL SUPPORT

Upon request, the MAPAQ also offers companies free technical support that covers different aspects than veterinarians. Depending on the company's needs, this support can be done either by telephone or through site visits. Support includes checking the farming water quality, advising fish farmers on good management practices and explaining disinfection procedures.

For more information, contact the MAPAQ Direction régionale de l'Estuaire et des eaux intérieures at 819-371-3971.

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## QUEBEC SEAWEED: A MARINE RESOURCE THAT MAY BENEFIT SEVERAL DIFFERENT MARKETS

By **Thierry Marcoux**

Direction régionale de la Gaspésie

On September 24, a conference on the Quebec seaweed market was held at the Centre for Sustainable Development in Montreal. The meeting was organized by Technopole maritime du Québec (TMQ) as part of events related to BioMar-Innovation. The activity united around forty participants from the maritime and mainland regions of Quebec. Their goal was to provide an overview of the applications and potential of Quebec seaweed for the entire value chain.

**Managed by TMQ, BioMar-Innovation is an initiative that supports development and innovation through a network of businesses and a technology watch dedicated to the marine biotechnology, recovery and marine product processing sectors.**

The day began with a presentation of the Seaweed Strategy, developed by Merinov and GIMXPORT, which documented trends in the consumption of seaweed food and cosmetics markets in Quebec. A focus group made up of a stakeholder from the ministère de l'Agriculture, des Pêcheries et de l'Alimentation and entrepreneurs working with seaweed in various markets then looked into the issues of raw material supply, market difficulties and potential solutions. Findings indicate that it is still crucial to determine species-specific volumes to derive maximum value from this resource. In addition, educating the public on the benefits of seaweed remains important to promoting its inclusion in Quebec's consumption habits.

In addition, the marketing and food tourism company Papilles développement has specified a way of presenting seaweed as a niche food product, for example by focusing on how the product is developed or its health aspect.

The regulatory framework of the seaweed industry was also discussed, including a presentation by Fisheries and Oceans Canada on the regulations associated with seaweed harvesting and a presentation by the Marine Biotechnology Research Centre, which handled the support offered by the research centres.

A number of Quebec companies involved in the sector also presented a status report. The Mi'gmaq Maliseet Aboriginal Fisheries Management Association, which harvests seaweed in Gaspésie, announced the creation of the for-profit entity SALAWEG and the appointment of Mr. Frédéric Bossé-Côté as its general manager. InnoVactiv, a company that markets aquatic biomass-based cosmetics and nutraceuticals, has highlighted the urgent need for raw materials in Quebec and the fact that seaweed farming is a development path to be prioritized for this industry. Seabiosis, a seaweed processing company, then presented its work in developing various seaweed-based food products, such as kombu pesto and sugar kelp stipe pickles. Finally, Un Océan de saveurs, a company that harvests and processes wild seaweed, presented its origin and its latest developments, including international developments by selling its seaweed food products in the United States and Switzerland, and a project in Portugal to create seaweed sardines.

This successful day highlighted the various challenges that limit the growth of Quebec's seaweed industry, including supply due to wild harvest regulations, lack of knowledge on the resource and the need to control the cultivation of several species. Linking the entire value chain, from the harvester to the company using a specific seaweed molecule in a cosmetic product for example, has also been labelled a major challenge. In fact, very few Quebec seaweeds are sold on very high value-added markets such as nutraceutical or pharmaceutical products.

The government of Quebec is currently studying the Quebec seaweed value chain and its future prospects in order to resolve this issue. The ministère de l'Agriculture, des Pêcheries et de l'Alimentation is proud to have funded this event, which contributes to the development and profitability of Quebec's seaweed industry.

**For more information on the conference and presentations, visit the event website:**  
<https://tmq.ca/colloque-biomar-innovation-sur-les-algues-du-quebec-24-septembre-montreal/>



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## ARE YOU INTERESTED IN FISH FARMING? DISCOVER RAINBOW TROUT FARMING.

### RAINBOW TROUT

Rainbow trout, or *Oncorhynchus mykiss*, is a fish primarily farmed for food, although many are also farmed for stocking purposes. However, this is only permitted in certain areas of Quebec, particularly in the southwestern part of the province. In terms of volume, the rainbow trout is the highest produced species in Quebec.

To engage in commercial freshwater aquaculture activities in Quebec, a permit from the ministère de l'Agriculture, des Pêcheries et de l'Alimentation (MAPAQ) is mandatory. Prior authorizations from the municipality, the ministère de l'Environnement et de la Lutte contre les changements climatiques and the Ministère des Forêts, de la Faune et des Parcs are also required. For more information, consult the document Lois et règlements relatifs à l'aquaculture en eau douce (Laws and regulations on aquaculture in fresh water) at [www.mapaq.gouv.qc.ca/loisaquaculture](http://www.mapaq.gouv.qc.ca/loisaquaculture).

### WHY RAINBOW TROUT FARMING?

Rainbow trout is primarily produced for human consumption. Its farming is some of the most controlled. Its meat is delicate and delicious with hues ranging from pink to red. It also produces high yields and grows quickly. In Quebec, table market demand is mainly filled by a range of imported products. An ever-growing demand for fish farmed for consumption exists worldwide and the MAPAQ supports the development of this sector in Quebec\*.

Rainbow trout is a robust species that adapts well to commercial farming conditions. It can live in a variety of environmental conditions as long as a few minimum requirements are met. It can tolerate relatively high stocking densities due to showing little aggression toward its fellow fish. It is also useful to farmers who want to perform artificial reproduction because it reaches sexual maturity easily\*\*.

### RAINBOW TROUT NEEDS

- In general, the rainbow trout requires well-oxygenated water. During feeding or an increase in water temperature, its oxygen requirement may double. The farmer must consider observed variations to ensure the trout always has sufficient oxygen.
- Water temperature between 10 and 16°C, preferably 15 or 16°C, is ideal for proper growth and reproduction. It must not exceed 20°C.
- A clean environment and low maintenance equipment are essential for limiting disease.
- Although the rainbow trout is a predator in nature, it accepts dry (moulded) pellet feed early in its diet, making it easier to raise. You must carefully observe how it eats to give it the right quantity of food.

\*Sector-based diagnostic portrait of freshwater aquaculture in Quebec.  
[www.mapaq.gouv.qc.ca/diagnosticeaudouce](http://www.mapaq.gouv.qc.ca/diagnosticeaudouce)

\*\* B. JALABERTet A. FOSTIER, La truite arc-en-ciel : de la biologie à l'élevage, France, Éditions Quæ, 2010, 323 pages.

### WOULD YOU LIKE MORE INFORMATION ON RAINBOW TROUT FARMING?

Contact the MAPAQ Direction régionale de l'Estuaire et des eaux intérieures at 819-371-3971.

# AQUACULTURISTS HONOURED AT THE ORDRE NATIONAL DU MÉRITE AGRICOLE

On October 18th, the regional awards galas of the 130th Ordre national du mérite agricole (ONMA) took place. The five territories covered by this year's competition were Abitibi-Témiscamingue-Nord-du-Québec, Bas-Saint-Laurent, Gaspésie-Îles-de-la-Madeleine and Saguenay-Lac-Saint-Jean, and the North Shore. A total of 103 companies participated in this prestigious competition organized by the ministère de l'Agriculture, des Pêcheries et de l'Alimentation.

For the first time in the competition's history, two aquaculture companies distinguished themselves in their region. Their excellence and determination have earned them the regional honours in the Bronze category, as well as the title of Knight of the Ordre national du mérite agricole.

## ORDRE NATIONAL DU MÉRITE AGRICOLE

The Ordre national du mérite agricole is the highest distinction for men and women who devote themselves to their agricultural companies (aquaculture farms are recognized as agricultural companies). The ONMA is a true institution in Quebec agriculture. This competition promotes excellence and development in a dynamic, innovative and profitable agri-food company. It recognizes Quebec farmers' determination, initiative and love for the trade.

In 2020, aquaculture entrepreneurs in the Montérégie region will have the opportunity to participate.

For more information, please visit: [onma.gouv.qc.ca](http://onma.gouv.qc.ca)

## BRONZE CATEGORY 1st regional ranking



© Éric Labonté, MAPAQ

### LA MOULE DU LARGE

How would you like the privilege of seeing mussels, oysters and lobster in their natural habitat? This is what exactly what Christian Vigneau is offering. He has been a fisherman in the Magdalen Islands for 28 years and founded La Moule du large in 2007. After several attempts, this aquaculture pioneer managed to farm shellfish off the coast rather than in the lagoon. He is very proud of this method, which improves the taste and quality of his products. This year, he began offering his customers the opportunity to visit his offshore farming sites, adding agrotourism to his activities. His flourishing business provides work for around 20 people, including family members, to whom he will leave a legacy. He also contributes to the growth of the Islands by distributing his products throughout Quebec, and soon abroad.

## BRONZE CATEGORY 3rd regional ranking



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### AQUACULTURE GASPÉSIE

At Aquaculture Gaspésie, fish are treated like kings. Francis Dupuis, his wife, Roxane Parise, and their team make every effort to ensure superior farming of their Arctic char and brook trout. They built natural lakes, closed protected ponds, outdoor ponds and a pure oxygen generator that promotes fish growth. They are extremely cautious with crossbreeding to avoid inbreeding and ensure good genetics. To ensure success, they hire wildlife technicians and specialized staff. Their greatest pride is owning the second largest herd of Arctic char in the country. They do all this in an environmentally friendly manner; the company has a powerful water treatment and fish manure recovery system. Success with a side of tartar sauce!

## QUÉBEC FISHERIES FUND

# THE INDUSTRY'S FIRST PROMISING PROJECT

By François Bourque

Direction régionale des Îles-de-la-Madeleine

Sustainable fisheries rely on the longevity of the resource being used, the protection of its habitat and, of course, the profitability of fishing companies. With these elements in mind, combined with an innovative project proposal, the Îles-de-la-Madeleine scallop fishermen's association has received the first financial assistance grant from the Quebec Fisheries Fund in the amount of \$219,273.

The initiative proposed by the scallop fishermen of the Islands involves testing, under conditions specific to their

fishing sites, a new type of harvesting gear: the N-Viro Dredge. One of the main innovations of this Scottish-born dredge is the use of narrow, individually-sprung teeth as opposed to the large, solid teeth of the traditional dredge. The Association has mandated a Merinov team to assist them in this project and assess the dredge's performance.

The first component was carried out in autumn 2019 by a scallop vessel equipped with both the N-Viro Dredge and a traditional dredge (Digby). Early observations suggested that, with comparable commercial scallop harvest yields, the N-Viro Dredge was more selective and harvested much less rock. This could greatly facilitate sorting on board the vessel and have less impact on the seabed. Video images captured by the Merinov team show how the new gear operates during fishing.

The second component assessed how the new dredge performed in a commercial fishing setting as well as fuel consumption starting at the end of October. Two scallop vessels fishing side by side with different types of dredges perform comparative tests. The promoters hope to release the full results of the study by spring 2020.

The Quebec Fisheries Fund was set up in 2019 for a five-year period to stimulate innovation in the fisheries and aquaculture sector. The federal government funds 70% and the Government of Quebec funds up to 30%.

For more information on the Quebec Fisheries Fund or to submit an application for financial assistance, please visit: <https://www.mapaq.gouv.qc.ca/fondspechesquebec>

## SEAFOOD EXPO NORTH AMERICA 2020: REGISTER NOW

Are you a Quebec company in the fisheries and aquaculture sector that would like to increase your visibility in the US and international markets? Be a part of Seafood Expo North America (SENA).

### PARTICIPATING IN SENA ALLOWS YOU TO:

- Take advantage of the Quebec Pavilion's reputation;
- Seize profitable business opportunities;
- Improve your knowledge of new market trends;
- Be part of the largest seafood industry event in North America.

Register now: <http://www.groupexport.ca/>

## PROFESSIONALIZATION IN THE CATCHING SECTOR

By Omar Sarr

Direction des analyses et des politiques des pêches et de l'aquaculture

And Jenny Lapierre

Bureau d'accréditation des pêcheurs et des aides-pêcheurs du Québec

### THE IMPORTANCE OF PROFESSIONALIZATION

In Quebec's maritime regions, the commercial fisheries and aquaculture industry generates more than 8,000 direct jobs. The sales value of marine product processing plants located in these regions was estimated at \$563 million in 2018.

The catching sector, which supplies these plants, is the foundation of this industry. For Quebec, the professionalization of people working in this sector is very important. It helps strengthen the industry's performance by improving business productivity and competitiveness. It also helps improve the safety of people working on commercial fishing vessels.

Furthermore, certification by issuing professional booklets to anyone involved in fishing activities to recognize and emphasize their trades as well as their qualifications and professional skills. Anyone who has obtained certification can therefore be recognized, based on certain criteria, as part of the same trade and organize themselves accordingly to better assert and defend their collective professional interests.

In Canada, Quebec and Newfoundland and Labrador are the two provinces that have a professional certification system. Nova Scotia is currently setting one up.

### INSTITUTIONAL AND REGULATORY FRAMEWORK

At the request of catching sector workers, the Quebec government created the Bureau d'accréditation des pêcheurs et des aides-pêcheurs du Québec (BAPAP) through the Act respecting the Bureau d'accréditation des pêcheurs et des aides-pêcheurs du Québec (CQLR, chapter B-7.1), which came into force in 1999. The BAPAP's mission is to develop and implement a system of certification of the professional qualifications relating to commercial fishing in Quebec. One of its aims is to consolidate existing skills of fishermen and assistant fishermen. The Regulation respecting recognition of the professional qualification of

fishermen and assistant fishermen (CQLR, chapter B-7.1, r. 1) of the BAPAP specifies the professional requirements (professional training, apprenticeship at sea, experience) relating to issuing certificates attesting that the applicants qualify to carry on their trade of fishermen or assistant fishermen. These three professional categories are set out in this Regulation.

The BAPAP Board of Directors is made up of seven members, six of whom represent the catching community:

- Five members, two inshore fishermen, two midshore fishermen and an assistant fisherman, appointed by the most representative fishermen's associations;
- One member appointed by regional fishermen's associations that are not part of the associations referred to above.

The seventh member, who must be an employee of the Government of Quebec, is appointed by the minister of Agriculture, Fisheries, and Food.

### CERTIFICATION PROCESS AND STATUS REPORT

To obtain certification in one of the three professional categories mentioned above or to renew the certification, the applicant must meet the intended category criteria, apply to the BAPAP and pay a \$50 fee.

As of June 15, 2019 (certified total), 999 people were certified as fishermen, 305 as assistant fishermen and 439 as apprentice fishermen. Figure 1 shows a regional distribution of certified individuals.

### PERSPECTIVES

In 2016, the Department of Fisheries and Oceans Canada (DFO) amended its regional commercial fishing licensing policy to ensure that the only way for Quebec citizens to qualify for a commercial fishing license is to obtain a fisherman's or assistant fisherman's certificate issued by BAPAP. To implement DFO's new policy, BAPAP revised its regulations in order to standardize its professional certification criteria, based primarily on training, with DFO's criteria for obtaining a commercial fishing license, based on sea time. The current revision aims to integrate these two types of criteria.

## YUL EAT FESTIVAL 2019 – PÊCHÉS ICI, MANGÉS ICI STATION

By Michel Bélanger

Direction des analyses et des politiques des pêches et de l'aquaculture

The 6th edition of the YUL EAT Festival was held from September 9 to 15 in Montreal. This important event in Quebec gastronomy feeds the growing interest in food tourism and the foodies trend. This festival brings together food and restaurant industry representatives as well as the general public. The ministère de l'Agriculture, des Pêcheries et de l'Alimentation (MAPAQ) partnered with the Institut de tourisme et d'hôtellerie du Québec (ITHQ). Its *Pêchés ici, mangés ici* (fished here, eaten here) promotional campaign showcased the diversity and quality of Quebec's fish and seafood.

More specifically, Mr. Stelio Perombelon, chef emeritus and professor at the ITHQ, highlighted the aquatic products of Quebec during a gourmet circuit on September 13 and 14, 2019 at the Société des arts technologiques. This exceptional tasting experience developed by YUL EAT gave food-savvy festival-goers privileged access to meet members of the gastronomic community and taste the latest culinary trends and local products. The circuit included more than twenty stations where the chefs could speak directly with the participants. For the tasting, Chef Perombelon prepared gourmet bites featuring Quebec lobster, redfish and Arctic char. In front of a sold-out crowd at a conference, he was also invited to present the *Pêchés ici, mangés ici* campaign and promote the distinctive qualities of local aquatic products.

The ITHQ is a trend leader in Quebec gastronomy and launched the use of local products by chefs. Its collaboration with the MAPAQ allows it to benefit from various opportunities to promote Quebec fish and seafood during important events.

The involvement of the MAPAQ and ITHQ in the YUL EAT Festival yielded positive results. In total, nearly 1,500 foodies took part in the gourmet circuit and had the opportunity to sample and learn more about local aquatic products.

To learn more about the *Pêchés ici, mangés ici* campaign, visit: [www.mapaq.gouv.qc.ca/pechesicimangesici](http://www.mapaq.gouv.qc.ca/pechesicimangesici)



FIGURE 1: CERTIFIED INDIVIDUALS BY REGION AS OF JUNE 15, 2019

