



Spring 2019

# THE COLD HARVESTER

NEWFOUNDLAND AQUACULTURE

- ✱ **Aquaculture Training**
- ✱ **Science Atlantic**
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# Cold 2019 Harvest

## Newfoundland Aquaculture Industry Association

**26<sup>th</sup> ANNUAL CONFERENCE & TRADE SHOW**

**Delta Hotel, St. John's, NL, Canada • September 24 - 26**

On behalf of the Newfoundland and Labrador aquaculture industry, we invite you to join us for our 26th Annual Cold Harvest Conference and Trade Show; full of exciting and informative discussions related to aquaculture and its potential in our province. With world class keynote speakers and guests, sessions and panel discussions related to aquaculture innovation, technology, human resources and consumer trends. The 2018 event was a record breaker in Canada with a sold-out trade show and more than 450 guests in attendance. We hope to exceed this at Cold Harvest 2019! This event should not be missed.

**To register, exhibit, sponsor the event  
or for more information, please contact:**

**Roberta Collier, Conference Coordinator  
709-538-3454 • [roberta@naia.ca](mailto:roberta@naia.ca)**



**[www.coldharvest.ca](http://www.coldharvest.ca)  
[www.naia.ca](http://www.naia.ca)**



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#### Cold Harvester Credits

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Roberta Collier - Copy Editor and Design Assistant



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The Newfoundland Aquaculture Industry Association represents aquaculturists and the service sector in the province. Its fundamental purpose is to assist the aquaculture industry to achieve its full wealth creation potential. It is the voice for the industry by ensuring that Federal / Provincial legislation, policy, and services match the needs of the industry. It delivers programs and services to its members to attain excellence in safety, quality, environmental sustainability, and profitability. For more information on NAIA membership benefits, please contact us!



# Message from Sheldon George, President



**Sheldon George, President and Chair of the Board, Newfoundland Aquaculture Industry Association**

**C**old Harvest, what a better name to refer to the Newfoundland and Labrador aquaculture industry. Winter 2018/2019 was a cold and windy one. To all the farming staff who tend to our farms daily, no matter what the weather is like, my hat goes off to you folks. It is the men and women who leave the wharves every morning in wind chills of minus 20 and 30 degrees Celsius, like we had this past February, that makes our industry what it is today. I have the upmost respect for our farmers who battle the elements of our Newfoundland climate daily and return home safely, to grow our high-quality products. Thank you for your dedication to our industry.

As we move out of winter and into spring, it is time to get all our farms ready for spring stocking. This is the time of year farmers look to a fresh start with a new crop. Spring on the farms is a time of optimism and energy, and I sense it even more this year with all the talk about growth in our industry and the visits from new suppliers that are coming to Newfoundland to set up new locations for their businesses. Good luck to everyone who is receiving a new crop this year, and to the new suppliers to the area, welcome to Newfoundland, we are glad to see you.

I would like to take this opportunity to thank Keith Rideout and Bill Carter of the Marine Institute for piloting their Coast of Bays Regional Aquaculture Centre and for

their dedication to the industry. During the recent advisory meeting, we were informed that the Centre's office located in St. Alban's will be closing at the end of March. Both industry and surrounding communities benefited from the Centre's presence and Keith and Bill's ability to help with various projects and needs. However, an office is only a building, and I hope the Marine Institute can keep in touch with the industry with regular visits to the farming areas. I don't view the closing of the St. Alban's office as a negative, as it can hopefully give the Marine Institute more flexibility to have a presence in other areas as well where the industry exists through frequent visits. Thank you, Keith and Bill.

It was great to see the Newfoundland and Labrador Mussel Chain Assessment completed in February. As indicated in the assessment, the NL mussel industry has been dealing in the fresh market mostly, and this area has seen little price growth over the past couple of decades. Brian Rogers provided an outside look at the industry as was able to come up with some great suggestions on how the mussel sector can improve on their success as they work towards industry growth as well. I look forward to working with the mussel folks as they grow and move towards different products, as I am a big fan of mussels, especially when they come in convenient packages that fit our fast-paced lives.

Finally, I would like to draw readers attention to our Cold Harvest 2019 Conference being held at the Delta in St. John's, NL September 24 to 26. Each year our conference continues to grow, with an increase in attendees, exhibitors and speakers. I am looking forward to hearing updates on farming topics from presenters globally. This year's program will provide an excellent opportunity for farmers to network with global peers while enjoying great Newfoundland hospitality. Hopefully I will see you all there in September..✿

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Daniel J. Mahoney photo



# Message from Mark Lane, Executive Director



Mark Lane, C.D., Executive Director, Newfoundland Aquaculture Industry Association

This first three months of 2019 certainly has been a productive start to the year.

In January, the Board of Directors and staff engaged Jean Cook of Flow Consulting to facilitate the development of an updated 3-year strategic plan for NAIA.

This updated strategic plan focuses on critical priority areas and strategic directions to ensure that the association remains relevant and responsive to its members in a fast-evolving industry.

For the next three years, we will focus our energies on our public education and awareness, government advocacy and sector capacity building. More specifically, we have embraced the following major strategic directions:

- Strengthen public awareness, opinion and support for aquaculture
- Advocate for the infrastructure and supports required to advance the province's aquaculture industry
- Promote and support sector development

For each of these strategic directions, we have formulated objectives, actions and timelines. NAIA's Board will monitor progress in these strategic directions as a core component of its governance work. Most importantly, we expect our members and stakeholders to hold us accountable for our planned objectives that we want to achieve and thus, progress reporting will become a regular feature of our communications with both our board members and our membership.

In efforts to dive into the priorities of our strategic plan, we have engaged M5 agency to develop and implement a comprehensive communication strategy to increase general awareness of the industry, its economic benefits and the employment opportunities that we offer. Our first commercial and media flight will be launched this Spring.

We have developed a comprehensive Community Outreach Plan to strategically meet with and inform the key community stakeholders such as First Nations, educators, municipal leaders, and Chambers of Commerce for example in areas of our operations.

To enable us to effectively engage stakeholders and other target audiences such as youth we will develop a suite of

educational resources including a comprehensive online learning portal and virtual reality platform.

We look forward to adding a Communications Coordinator to our team in the near future to assist in the execution of the NAIA communications strategy.

Of course, equally important as, public awareness and public trust, we intend to continue working with our provincial and federal governments to enhance the legislative and regulatory environments to enable sustainable growth of our industry. At the recent Canadian Council Fisheries and Aquaculture Ministers meeting in St. John's it was agreed upon that the federal government would proceed to draft an Aquaculture Act. NAIA is committed to working with DFO and others in the development process.

Currently we are preparing to release two RFPs for an independent consulting firm to conduct needs assessments related to marine infrastructure and telecommunications to support our growing industry. We anticipate that this multiyear capital works plan will be completed this Spring.

What I have outlined are only very few of the many initiatives which NAIA has been engaged in since the New Year. The staff work diligently day in day out to fulfill our members changing needs. We are pleased to do so. ✨



Members of the Atlantic Canada Aquaculture Industry met with the Honourable Jonathan Wilkinson, Minister of Fisheries, Oceans and the Canadian Coast Guard in Ottawa in March regarding federal issues of importance. L to R: Mark Lane, NAIA, Sue Farquharson, Atlantic Canada Fish Farmers Association, Jamie Gaskill, MOWI Canada East, Tim Kennedy, Canadian Aquaculture Industry Alliance, Minister Wilkinson, Fisheries, Oceans and the Canadian Coast Guard, Peter Warris, PEI Aquaculture Alliance, Joel Richardson, Cooke Aquaculture, and Tom Smith, Aquaculture Association of Nova Scotia.

# CNA and MI Team up to Deliver Aquaculture Training in the Coast of Bays

By: Keith Rideout, Marine Institute of Memorial University, Boris Palameta, Social Research and Demonstration Corporation, Wendy Lee, Social Research and Demonstration Corporation, and Judy Dobson, College of the North Atlantic



Students listening attentively to the CNA Instructor on February 25, 2019.

A partnership between the College of the North Atlantic (CNA) and the Fisheries and Marine Institute of Memorial University (MI) is attempting to produce employees for the burgeoning salmonid aquaculture industry in the Coast of Bays region. The Development and Pilot Testing of an Innovative Demand-led Training Model to Support Entry and Retention in the Aquaculture Sector Research Project, led by the Social Research and Demonstration Corporation (SRDC), is one of fourteen research projects funded to date by the NL Workforce Innovation Centre (NLWIC). SRDC is a non-profit research

organization based in Ottawa whose mission is to help policy-makers and practitioners develop and field test new programs, and to raise the standards of evidence that are used to evaluate these programs. Funding is provided by the Department of Advanced Education, Skills and Labour under the Canada-Newfoundland and Labrador Labour Market Development Agreement and NLWIC is administered by CNA.

The research involves developing a training model that enhances career adaptability and essential skills of workers in a way that is specifically aligned with the occupational requirements of the aquaculture sector. This model aims to prepare workers for successful training completion, transition to employment, and longer-term retention in aquaculture.

The research objectives are to:

- Conduct an extensive needs assessment to identify job performance gaps associated with entry-level occupations in salmon aquaculture. This will inform the design of an innovative training curriculum aligned with both job seeker and business needs.
- Develop and pilot the new training model targeting a broad range of unemployed and underemployed Newfoundlanders, including older/displaced workers, those on income support, individuals living in rural or remote regions, Indigenous Peoples, and youth.

The research questions are:

- Are there challenges to implementing the training model, and what adaptations need to be put in place for future iterations?
- Does the model lead to positive training and employment outcomes, and job retention within the aquaculture sector?

Prior to the start of training, SRDC conducted a needs analysis to determine business trends, employer needs, and perceived skills gaps among existing employees. SRDC interviewed key sector stakeholders and administered surveys to managers from significant salmonid producers in



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Newfoundland. SRDC also reviewed information on occupational requirements from documents recently published by the Newfoundland Aquaculture Industry Association (NAIA) and the Canadian Agriculture Human Resource Council (CAHRC). CNA and MI used these findings to inform the development of their training curriculum.

The training consists of two primary components; CNA's 5 week Essentials Skills and MI's Technical Certificate – Aquaculture (TCA). The TCA includes 7 weeks of in-class training and a 5 week Work Experience course in which the students will be placed with a salmon producer in the region.

Recruitment has been ongoing since summer 2018 and by the start of the program on February 18, 2019, the enrollment cap of 16 students had been reached. This number was chosen as a manageable number for the salmon farming companies (Cooke Aquaculture, Mowi Canada East) that have agreed to take the students for their five week Work Experience. The timing of the training will make the students available when the industry is gearing up for smolt entry in the spring, a very busy time of year for the industry.

St. Alban's was chosen as the training location because the vast majority of applicants were from the St. Alban's – Milltown-Head of Bay d'Espoir area. Other communities represented among the students include Harbour Breton, Hermitage and Ramea.

To evaluate how well the training works, SRDC will collect information from student surveys and essential skills assessments before and after training and monitor student progress during

training. SRDC will also conduct employer feedback surveys and follow-up with students 6 months after their work experience to measure long-term effects on employment and well-being. The hope is that the five weeks of on-the-job training will turn into continued employment for all involved. The results of this research will be available in 2020. ✨



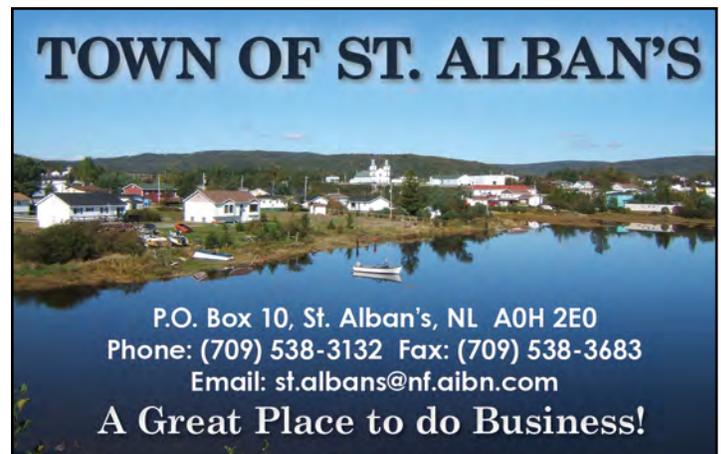
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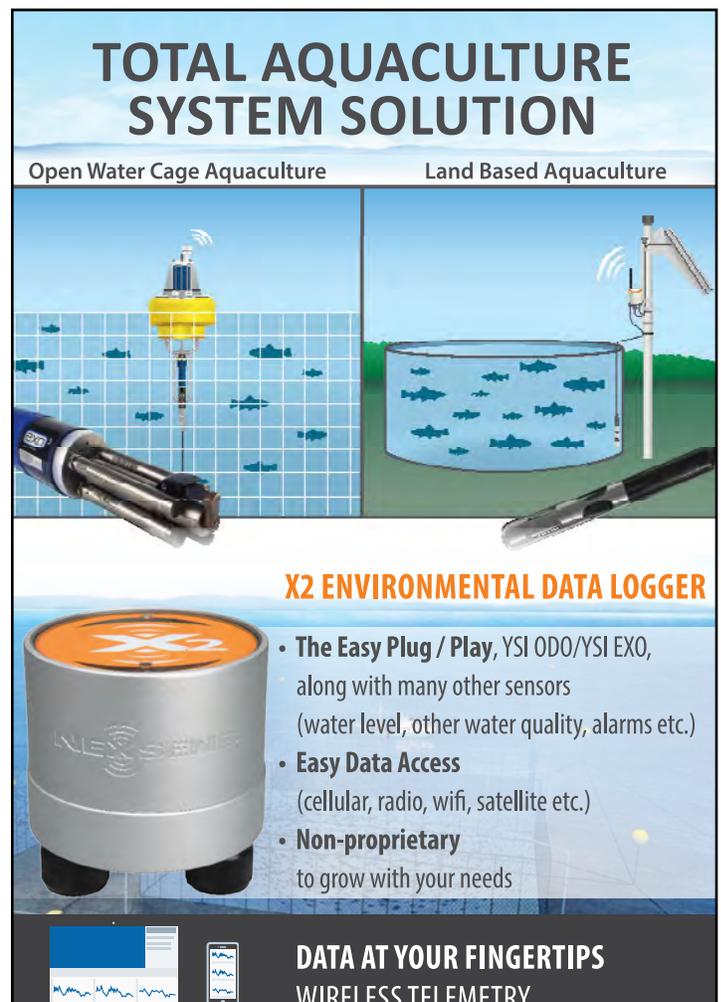
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# INTERNATIONAL EVENTS



## *Aquaculture - The Big Easy Choice!*

**A**quaculture 2019 took place in New Orleans, Louisiana on March 7 – 11.

This year's event, the Triennial, saw a record 3,500 attendees from more than 85 countries, a 65% increase from the 2016 event held in Las Vegas, California. The number of booths also increased to 205, which was up from 145 booths in 2016. The Triennial event combines the annual meetings of the World Aquaculture Society, National Shellfisheries Association, Fish Culture Section of the American Fisheries Society, and the National Aquaculture Association.

NAIA and its Board of Directors are looking forward to co-hosting Aquaculture Association of Canada and World



Danny Boyce, NAIA Board Member visiting the Aqua Metrix booth at the New Orleans Show.

Aquaculture Society at WAS2020 taking place in St. John's, Newfoundland and Labrador August 30 – September 2, 2020.✿



The Seafood Expo saw more than 22,600 visitors this year.



Juan Roberts and Chef Watson served NL organic mussel dishes to almost 3000 guests at their booth at Seafood Expo North America in March.



**S**eafood Expo North America and Seafood Processing North America, the largest seafood event in North America took place in Boston, Massachusetts on March 17 – 19. This year the event saw approximately 1,329 exhibitors and 22,600 attendees from 120 countries.

The Newfoundland and Labrador Pavilion included NAIA members/exhibitors Badger Bay Mussels and Barry Group of Companies among others.

Chef Watson served up his delicious blue mussel recipes all weekend long to almost 3000 guests. NAIA members True North Salmon/ Cooke Aquaculture and MOWI exhibited at the show, while many other NAIA Members attended the show.✿



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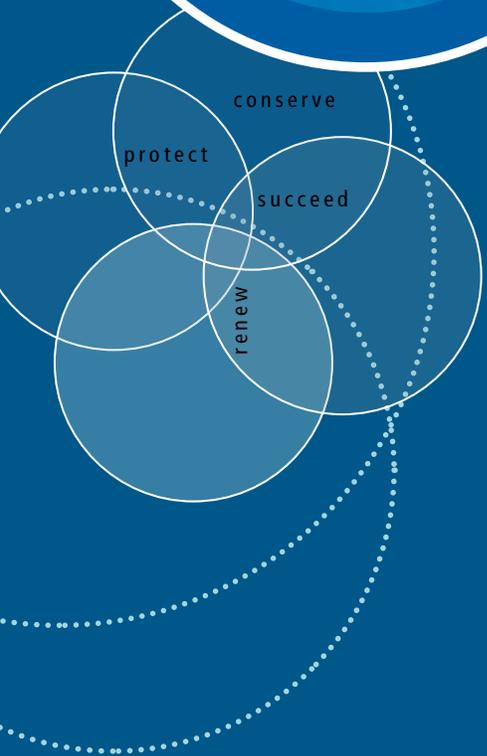


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## Brad Wiseman

Roberts Arm, NL

I've been a commercial fish harvester since I started fishing for squid, cod, lump fish & lobster in my own speedboat in 1978. Two years later, I joined my father fishing crab, mackerel, herring and capelin on his longliner, while also still fishing from my speedboat. In 2002, I built a 37-foot longliner which we used for the commercial fishery and my aquaculture

business. In 2004, I completed my Fishing Masters IV training. In 2006, we purchase an inshore core enterprise for my wife Bernice, and in 2009 I bought my own enterprise and Bernice and I fished together.

In 1992, I visited an experimental mussel seed site on the south coast of Newfoundland, and I found the system very interesting. Upon returning home I had some conversations with a long-time mussel farmer, Lloyd Fudge from Brighton, NL. He helped and encouraged me quite a bit, and in 1994 I applied for an experimental mussel license in Bear Cove near Roberts Arm. That first year I deployed 1500 spat collectors, and the following year I applied for a commercial grow-out license for the site.

In 2000, I applied for a nearby site in Moorey Cove, NL. Seed for these sites was collected at the Sunrise Fish Farms site in Woodford's Arm, thanks to a written agreement between B & B Farms and Job Halfyard, owner of Sunrise Fish Farms.

On an average these two sites can produce 450,000 to 500,000 pounds annually. Most of this product has been sold to Allen's Fisheries, with some being sold to Green Seafoods and Live Ocean in recent years. In 2002, B&B Farms became incorporated with my wife Bernice and I as shareholders.

In 2012, B&B Farms started transitioning to become organic certified and was among the group of Newfoundland and Labrador mussel farms to produce the first organic certified mussels in North America.

My role in the company covers everything related to production; seed collecting, socking, harvesting, site maintenance, boat and barge operation, and employee scheduling while my wife Bernice does all the office management.

Over the years of farming mussels, there have been many challenges from late night ice-breaking to dealing with wind storms, to trouble with Arctic Ice.

Overall, having the mussel farm has served our family well over the years. We are happy to say that with their hard work, our two sons put themselves through University with the wages they earned on the farm. To anyone interested in getting into the mussel farming industry in Newfoundland and Labrador, I would say that it takes a lot of time, hard work and dedication but can be very successful and very rewarding. ✨



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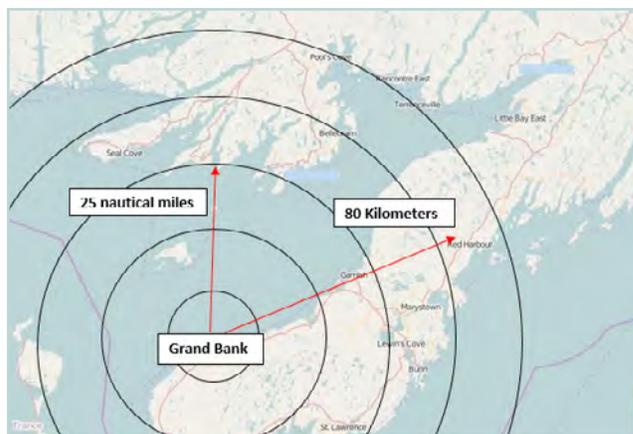
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# Congratulations to the NAIA Board of Directors

Congratulations to the Board of Directors of the Newfoundland Aquaculture Industry Association on being recognized by the Canadian Forces Liaison Council for your support of Executive Director Mark Lane's military career with 37 Combat Engineer Regiment Primary Reserve members. 🌟



NAIA Treasurer Danny Boyce accepts the prestigious award of recognition on behalf of the Board of Directors of NAIA from the Canadian Forces Liaison Committee and Lieutenant Governor Judy Foote.



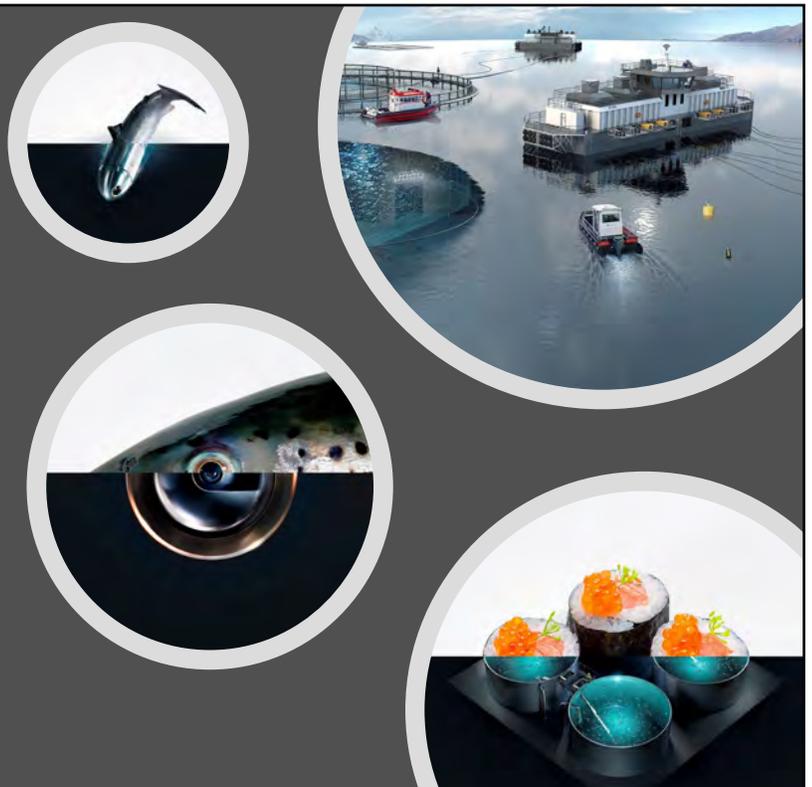
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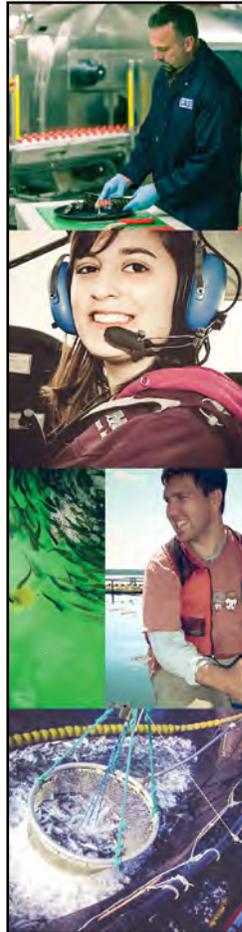
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# NEWFOUNDLAND AQUACULTURE INDUSTRY ASSOCIATION

## High School Graduating Students 7<sup>th</sup> Annual Scholarship

The Newfoundland Aquaculture Industry Association (NAIA) is pleased to announce its 7th Annual Scholarship for graduating students from high schools in Newfoundland and Labrador. Two scholarships, valued at \$500 and \$250, will be awarded to students pursuing post-secondary education in marine or aquatic related studies. (sustainable aquaculture, marine biology, marine environmental technology, ecology, nautical science, marine engineering, etc.)

### Eligibility:

- To be eligible, you must be graduating in 2019 and entering your first year of University or College.

### Evaluation Criteria:

- Based on academic achievement, references, level of community involvement and volunteerism.

### To Apply, Please Submit the Following:

- Completed Application Form
- Resume and Cover Letter outlining why you should be the successful recipient
- Three Reference Letters: Academic (1), Professional (1), and Personal (1)
- Most Recent Transcript

### Review Process:

Applications will be reviewed by the NAIA scholarship committee. Deadline for submissions: July 1, 2019. To apply or for more information please contact: Roberta Collier at: 709-538-3454 or via email at [roberta@naia.ca](mailto:roberta@naia.ca). Only those applicants who are successful in their application will be notified. ✨

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Read more at [www.skretting.com](http://www.skretting.com)





# Fisheries and Aquaculture Clean Technology Adoption Program (FACTAP)

## WHAT IS FACTAP?

The Fisheries and Aquaculture Clean Technology Adoption Program is a national contribution program investing \$20 million over 4 years (2017 to 2021) to assist Canada's fisheries and aquaculture industries to improve their environmental performance.

The program offers funding to assist eligible participants to incorporate existing clean technologies, processes and sustainable practices into their day-to-day operations.

Applications are accepted on an ongoing basis -- you can apply at any time.

## COVERED COSTS

FACTAP provides funding for up to 75% of eligible project costs. All project proposals submitted for consideration must also include:

- ❖ a cash financial commitment by the applicant; and
- ❖ at least 10% confirmed provincial or territorial government funding (cash or in-kind)

## WHO MAY APPLY

To be eligible, you must be currently active in, or support activities related to, the fish and seafood sectors, including; wild capture fisheries, aquaculture and/or processing of fisheries products.

You must also be one of the following: a commercial enterprise (e.g., company or individual), an Indigenous organization, or an industry or professional association.

## ELIGIBLE ACTIVITIES

Eligible activities include the adoption of market-ready clean technologies, processes or practices, such as protocols or harvesting techniques, aimed at improving the day-to-day environmental performance of wild capture harvesting, aquaculture facilities or fisheries processing plants.

The following activities are ineligible under the program: research and development activities; start-ups or expansion projects; capital purchases, such as buildings and rolling stock; facilities improvements not directly tied to the adoption of clean technologies; or projects that only use fish as part of their production process but aren't the primary product resulting from their operation.

Contributions are targeted to small and medium-sized enterprises with a focus on short term timelines (e.g. 1 – 2 yrs). Some larger projects will be considered depending on their potential benefits and the contribution levels of partners.

## FOR MORE INFORMATION

All information and documents needed to apply for funding are on DFO's website - [www.dfo-mpo.gc.ca/cleantech](http://www.dfo-mpo.gc.ca/cleantech). Regional FACTAP coordinators are also available for inquiries and to answer questions.

For NS, NB, PEI, NL please email: [DFO.ATL.FACTAP-PATPPA.ATL.MPO@dfo-mpo.gc.ca](mailto:DFO.ATL.FACTAP-PATPPA.ATL.MPO@dfo-mpo.gc.ca)



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Canada

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Canada

# Sunwell Technologies Inc.

180 Caster Avenue, Woodbridge, ON L4L 5Y7 Canada

Anis Somani, Director of Sales – North America

Email: [anis.somani@sunwell.com](mailto:anis.somani@sunwell.com) • Website: [www.sunwell.com](http://www.sunwell.com)

**F**ounded in Canada in 1978, Sunwell pioneered and commercialized slurry ice technology. Today, Sunwell is the world leader in the field of slurry ice systems.

DeepChill® slurry ice cools fish 3 times faster than other icing methods, and maintains product temperature just above the freezing point. The round crystals have no sharp edges that can harm the surface of the fish. Like a natural shield, they suspend and protect product from bruising, freezer burn, bacterial growth, and tissue degradation.

Sunwell has been working with the seafood industry for over 30 years – building and customizing DeepChill® solutions for fisheries, aquafarms, processing plants and fish markets around the world. The company has been focused on helping clients achieve tangible results.

Sunwell’s compact and modular systems can produce, store and deliver different ice fractions from very liquid slurry (20%) to a thick paste (60%) and even dry (liquid-free) 100% crystals. Completely sealed systems provide hygienic environments that improves HACCP compliance.

## DeepChill® Application Results throughout the Cold Chain



### Chill fish upon harvest

- Prolong shelf life at least
- Lower stress and maintain flesh quality
- Reduce icing and labour cost



### Transport & chill: From harvest to processing

- Keep fish in peak quality
- Maintain low temperature on the road
- Increase transport capacity



### Control temperature throughout processing

- Extend processing window
- Increase cooking and filleting yield
- Increase freezer capacity & efficiency



### Pack seafood in DeepChill

- Retains moisture & avoids shrinkage
- Cut over-packs (especially for mussels)
- Ship farther & reach new markets 🌟



A PEI Mussel farmer has cut 75% of over pack, gets 10-12 days shelf life compared to 7 days previously and has reduced manual labor.



Fully HACCP compliant processing center integrated DeepChill into their entire process and as a result has been “saving time and manpower”

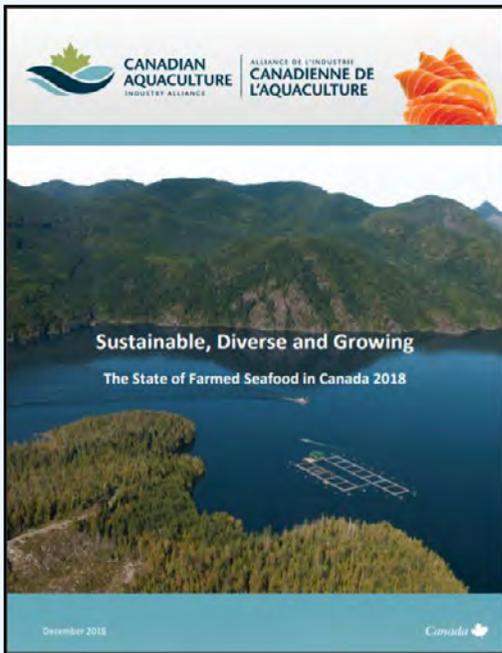


One of the largest fish processing centers in Japan sells DeepChill branded fish at a 10-15% premium, achieving \$5-7.5 million profits from the premium.

# NEWLY RELEASED DOCUMENTS NOW AVAILABLE:

**Canadian Aquaculture Industry Alliance**

Download available at: [www.aquaculture.ca](http://www.aquaculture.ca)



**Fisheries and Land Resources**

Download available at: [www.fishaq.gov.nl.ca/publications/pdf/SYIR\\_2018.pdf](http://www.fishaq.gov.nl.ca/publications/pdf/SYIR_2018.pdf)



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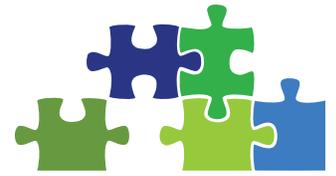
NEWFOUNDLAND STYRO also carries Styropack accessories - including polyliners, gel packs, corrugated outer boxes and thirsty pads.



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Tel:709 258-5890 Fax:709 258-6015





R to L: Judith Bjorndahl of Acadia University and Viviane Baldwin of Université de Moncton accepting their awards from Dr. Trevor Avery of Acadia University, at Science Atlantic in early March in Moncton NB.

**S**cience Atlantic is a charitable association for scientists, faculty, and students in Atlantic Canada. One of the organization’s many activities includes annual conferences in ten disciplinary and interdisciplinary fields: Aquaculture & Fisheries, Biology, Chemistry, Computer Science, Earth Science, Environment, Nutrition and Foods, Mathematics and Statistics, Physics, and Psychology.

The Aquaculture & Fisheries Committee (A&F) of Science Atlantic was initiated almost 30 years ago, back in 1991, with the goal of fostering and encouraging student-to-student and student-to scientist communications in aquaculture and fisheries related research. The primary means of achieving this goal is an annual

undergraduate and graduate student A&F Conference hosted each year by an Atlantic Canada university. Some of the other mechanisms to achieve this goal include student exchanges between research labs and providing support for student attendance and research presentations at the annual national Aquaculture Association of Canada conference, and the Canadian Conference For Fisheries Research.

The A&F Committee of Science Atlantic joins with the Biology Committee to hold an annual joint conference. The A&F portion of the conference sees 20 to 30 young scientists enrolled in undergraduate Honours, MSc and PhD programs in Universities across Atlantic Canada present oral presentations related to

their research projects in aquaculture or fisheries. This year, the conference was held at Crandall University, Moncton, New Brunswick, during 8–10 March 2019. In addition to student presentations, a keynote speaker is invited to present to the combined conference attendees. This year’s keynote speaker was Memorial University graduate, Dr. Stefanie Colombo, who is an Assistant Professor and Canada Research Chair in the Aquaculture Nutrition Department of Animal Science and Aquaculture at Dalhousie University. Dr. Colombo, who is no stranger to the NAIA Cold Harvester Annual Conference and Tradeshow, presented a talk titled “Aquaculture: Sea-ing it grow”.

The Newfoundland Aquaculture Industry Association (NAIA) has been a long-standing supporter of the A&F conference. This year’s NAIA award was presented to graduate student Judith Bjorndahl (right), Acadia University, for her second place oral presentation “Long-term monitoring protocol for American Eel (*Anguilla rostrata*) based on sampling effort simulations”. Judith tied for second place with Viviane Baldwin (left), Université de Moncton, who was awarded the Marine Institute award for her oral presentation “Identification of stress biomarkers in *Chionoecetes opilio* to assess snow crab quality from the fishing to the processing plant”.

Science Atlantic is an excellent opportunity for students to highlight their work, seek mentorship on giving presentations, meet new people, and network for their next academic, government, or industry endeavor. ✨



# WELCOME NEW MEMBERS!



**Valerie Moulton**  
vmoulton@lgl.ca  
www.lgl.com



**J. Alex Templeton**  
alex.templeton@mcinnescooper.com  
www.mcinnescooper.com



**Carl Sullivan**  
csullivan@allswater.com  
www.allswater.com

### INTERESTED IN BECOMING A NAIJA MEMBER?

NAIA welcomes membership from anyone who has an interest in the aquaculture industry in Newfoundland and Labrador.

Our membership base is composed of representation from the following sectors:

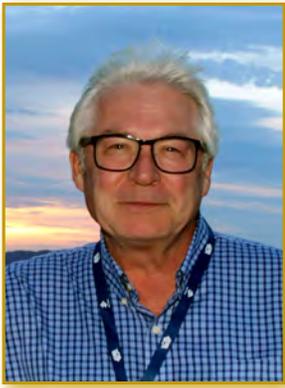
- Finfish Growers • Shellfish Growers
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# Couturier on Culture

## Once a Great Fisheries Nation, Have We Lost Our Way?

Cyr Couturier is an aquaculture and fisheries scientist and program chair at the Fisheries and Marine Institute of Memorial University. He has 35+ years of experience in applied research and development, training and education in aquaculture and fisheries. He has been, and is a Board and Executive member of several aquaculture & development associations, including CAIA (President, Chair of the Board), CAHRC (incoming chair), past RDÉE TNL, past RDÉE Canada, past AAC, past NAIA, etc. He has worked in aquaculture and fisheries development in over 18 countries. The views expressed herein are his own. Contact: [cyr@mi.mun.ca](mailto:cyr@mi.mun.ca) or follow on Twitter [@aquacanada](https://twitter.com/aquacanada)

By: Cyr Couturier

(Note – this is an opinion piece, musing on our public policy directions in fisheries and the outcomes from them)

I would tout myself as an observer of fisheries policies, as these help me understand why we do, or do not support fisheries, in all their forms (including capture, recreational, and farmed seafood). In this context, Canada was once a great fisheries nation, and led in many respects in international policies related to fisheries. Consider that in the 1960s we ranked in the top 10 fishery nations of the world up and until the 1980s, and then by all accounts we have fallen to 22nd globally in terms of production and value (UN FAO Fisheries Statistics).

Canada has played a lead role in fishery policy globally, being advocates and leaders of a variety of international policies and principles, including The Law of the Sea Convention (1958-1982), The Rio Declaration (and Principle 15 – The Precautionary Principle, 1992), the Convention for the Conservation of Salmon in the North Atlantic Ocean, and



Modern ocean farming of salmon. Juvenile fish are placed in the net pen under densities no higher than 2% of the “ocean environment”, and kept healthy and growing until sent to market 20-24 months later. Many farmers are from declining fisheries backgrounds and working full time in good paying jobs in these pristine rural, coastal communities.

ensuing NASCO agreements (1983 onwards), and among the first countries to establish Exclusive Economic Zones (EEZs) in 1977, all to protect our natural resources, mainly fisheries of all sorts. In addition to this, Canada was the main stimulator for the UN’s World Oceans Day declaration and has taken a lead role in promoting fisheries and oceans resources and impacts around the globe. However, we now rank 22<sup>nd</sup> in the world, with an almost continuous decline in fisheries value and volume since the 1960s, and our traditional fisheries, recreational fisheries, groundfish and even farmed seafood have not shown increases in nearly 20 years. So where did the ship veer off course, if indeed it has? Could it have something to do with implementing our fisheries policies or failures thereof?

I don’t portend to have the answers, but some observations at home may be insightful and stimulate discussion.

First, consider that the federal government recognized as far back as 1983 that aquaculture (also known as culture fisheries then) and its’ legislative framework for managing



Modern seafood farming (a.k.a. aquaculture or “culture fisheries”) of shellfish (mussels) in a subarctic environment. Wild seed are collected on ropes and grown out to harvest size in 2-3 years. Most farmers employ seasonal lobster harvesters to work on the farm in some areas.

such fisheries was not in keeping with our constitutional obligations nor the assertion of sovereignty by the EEZ, nor the Rio Convention, or any other convention signed and led by Canada. It continued to manage aquaculture with an outdated regulatory frame, known as the Fisheries Act, that dates back to the 19th century, and which till this very day continues, relatively unchanged, in a modern frame of fisheries management. Meanwhile our competitors and allies alike in fisheries - including some jurisdictions within Canada - have developed their regulatory frames around aquaculture and updated these Aquaculture Acts since the mid-1980s. I would cite Norway, Iceland, Scotland (UK), Chile, USA, Japan, and even China and the EU block in this category. I would also point out that all of these countries have increased their fisheries seafood outputs from aquaculture and fisheries enormously since the 1980s, providing sustainable, economic development in rural coastal communities around the globe. We are losing ground in terms of fisheries output from both capture fisheries and aquaculture with all of these countries including our competitors. Is this a failure in policy or a failure in implementing policies, or both? The readers can decide for themselves.

Second, the capture fishery side of the equation took the independent science advice and developed a mandate from the Fisheries Research Board of Canada somewhere around the 1970s or early 1980s and incorporated it into the regulatory body, we now know as Fisheries and Oceans Canada, and Coast Guard or DFO for short. While this has occurred likely for policy and financial reasons, the downward trend in our capture fisheries can be correlated in some sense to this shift and integration of the independent science and development of fisheries, including aquaculture, and the reduction in the development and science functions within the regulatory department since the 1980s, on a prorated basis. Are these facts failures in policy or an implementation of policy or both?

I don't think there is total failure in fisheries policy or implementation today. Far from it. The good folks in DFO do their best to implement policies, but arguably with limited resources. Today, fisheries science and development capabilities have started to return to within the regulatory body which is DFO, and there have been some changes to the 150 year old Fisheries Act to some extent. However, we are nowhere near what other forward thinking allies and competitors have done to develop, regulate and maintain the independent science aspects for their publics' needs and wants. Moreover, there have been recent announcements signaling that we are honoring our international fisheries treaties and conventions with more efforts, and that our legislative, regulatory framework at the federal level is being reconsidered, especially for aquaculture.

I hope my observations have stimulated some discussion amongst the fisheries and aquaculture community and garnered some interest in the public in understanding a little bit of where we are in terms of policies and directions on fisheries and where we can or should go to become yet again another "great fisheries nation". I am always open to constructive criticisms and vigorous debate on these views. And of course I would ask you, the readers, if you think we may still be off-course, or whether there is a beginning to make corrections to our fisheries policy and implementation, so that we can take our rightful place as a great fisheries nation once again? ✨



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# Cooking with Chef Steve Watson

## *Atlantic Salmon in Phyllo with Sun Dried Tomatoes & Pesto with Grilled Vegetables*

### Ingredients:

2 skinless Atlantic salmon fillets (4-6 ounces each)  
2 oz. Melted natrel sea salt butter  
1 oz. Olive oil  
4 cups Fresh baby spinach leaves, coarsely chopped  
2 tbsp. Sundried tomato pesto (store bought)  
Balsamic vinegar reduction (store bought)  
Salt and coarsely ground black pepper  
4 sheets (9 x 14 inches) thawed phyllo dough  
Nonstick cooking spray

### Directions:

Preheat oven to 425°F. Heat oil in sauté pan until hot, add spinach and season with salt and black pepper. Cook and stir until spinach is wilted, approx. one minute. Remove spinach to paper towel-lined plate. Squeeze out all excess moisture and set aside. Lay one sheet of phyllo on large work surface and brush with melted natrel sea salt butter. Place second sheet of phyllo over first, pressing sheets together to seal. Continue laying down and brushing phyllo sheets to create a layer of phyllo. Repeat with remaining phyllo and additional and melted butter to create another phyllo stack.

Season Atlantic salmon fillets with salt and black pepper. Spread each fillet with sundried tomato pesto and



top with half of the spinach. For each phyllo bundle, place salmon, spinach side down, on phyllo stack 2 inches from bottom edge of short side. Fold long sides of phyllo in toward center. Gently roll up phyllo from bottom to top. Place both bundles on baking sheet, seam side down. Using a bread knife, make three diagonal slits across top of each bundle. Brush phyllo with remaining Butter. Bake for 11-13 minutes or until centers of salmon register 130°F and phyllo is golden brown. Remove from oven, let stand for five minutes before serving. Place on top of grilled vegetables and drizzle with balsamic vinegar.

### GRILLED VEGETABLES

#### Ingredients:

¼ cup Olive oil  
2 tbsp. Honey  
4 tsp. Balsamic vinegar

1 tsp. Dried oregano  
½ tsp. Garlic powder  
⅛ tsp. Pepper  
Dash of salt  
1 lb. Fresh asparagus, trimmed  
3 sm. Carrots cut in half lengthwise  
1 lg. Sweet red pepper, cut into 1-inch strips  
1 med. Zucchini, cut into ½-inch slices  
1 med. Red onion, cut into wedges

### Directions:

In a small bowl, whisk the first seven ingredients. Place 3 tsp. of the mixture in a large resealable plastic bag. Add the vegetables to the bag, seal bag and turn to coat. Marinate 1-1½ hours at room temperature. Grill the vegetables, covered, over medium heat 8-12 minutes or until crisp-tender, turning occasionally. Place vegetables on a large serving plate and drizzle with remaining marinade. ✨

**C**hef Steve Watson served as an apprentice in London, and worked in Scotland, Belgium, France and Germany before moving to Canada in 1977 to study North American cooking. He taught culinary arts at the Cambrian College in Sudbury, ON before joining the Canadian Pacific Hotels chain in 1988. He recently retired as Territory Sales Manager and Executive Chef with Agropur, and has taken on a new passion of working as a tour guide with McCarthy's Party in St. John's, NL. He's also a devoted family man and a prominent member of the local community. Steve epitomizes the definition of a volunteer, including his work with NAIA and his quarterly submissions to the Cold Harvester, and spends countless hours giving back to the people of a province he now calls home. ✨

# AQUACULTURE CANADA and WAS NORTH AMERICA 2020

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Newfoundland and Labrador is one of very few places in Canada with plenty of aquaculture space available. It also offers an excellent investment environment. Various international investors have already recognized this and are currently partnering with local companies to grow the industry . . . and their return on investment.

The Newfoundland Aquaculture Industry Association (NAIA) offers a constructive and personalized approach to help you develop positive relationships with experienced, reputable local partners. Please contact NAIA to learn how we can help.

For more information contact: Mark Lane, Executive Director  
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mark@naia.ca Tel. 709.754.2854 Fax. 709.754.2981

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