# SECURING CANADA'S FISH + SEAFOOD WORKFORCE

Real Challenges. Practical Solutions. Fresh Perspectives.

## FINAL REPORT



FPSC

FOOD PROCESSING SKILLS CANADA

COMPÉTENCES TRANSFORMATION ALIMENTAIRE CANADA

This project was funded by the Government of Canada's Sectoral Initiatives Program.



**ISBN 978-0-9959267-6-9**



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Canada
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# 1.0 ACKNOWLEDGEMENTS

Food Processing Skills Canada wishes to express sincere appreciation to the hundreds of firms and individuals who contributed directly and indirectly to this report and in particular to the members of the Advisory Committee who were instrumental in the planning, development, and validation of the study.

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Special acknowledgments are extended to the consulting team who undertook the research, surveys, site visits, translation, and report writing.

# 2.0 EXECUTIVE SUMMARY

Canada was built on fishing and trapping. Today, fish and seafood processing continues to play a vital role in the lives of many rural and remote Atlantic Canadian communities. The industry employs 15,670 workers and boasts $3.9 billion in annual exports. It also enjoys a worldwide reputation for quality.

However, employers in the fish and seafood processing sector have been suffering acute labour shortages for years. As this study concludes, the situation is projected to worsen under status quo conditions. In 2017, 1,800 job vacancies went unfilled due to the lack of available workers in regions where processing plants are located, and an additional 2,500 workers will be needed over the next five years to replace retirees (7,500 by 2030). Unfortunately, this recruitment need will be occurring within the context of very tight regional labour markets that are currently experiencing labour shortages during peak seasons and which are predicted to continue during this period.

Overall, the analysis indicated that of the 12 regions studied in-depth, were facing very tight labour markets where the current or projected demand for workers (total and lower skill level) from the regional industries was higher than the existing local labour market (see table below).

| Region | Total Labour Force | | | Lower Skill-Level Labour Force | | |
|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | 2018 | 2019 | 2020 |
| **Very tight (average and peak season)** | | | | | | |
| Old Perlican, NL | 3 | 3 | 3 | 3 | 3 | 3 |
| Clare, NS | 3 | 3 | 3 | 3 | 3 | 3 |
| Charlotte, NB | 3 | 3 | 3 | 3 | 3 | 3 |
| Lunenburg, NS | 3 | 3 | 3 | 3 | 3 | 3 |
| Richmond, NS | 3 | 3 | 3 | 3 | 3 | 3 |
| Burin Peninsula, NL | 2 | 2 | 3 | 3 | 3 | 3 |
| New Bandon-Caraquet, NB | 2 | 2 | 2 | 3 | 3 | 3 |
| Prince, PE | 2 | 2 | 2 | 3 | 3 | 2 |
| **Tight (peak season – lower skill levels)** | | | | | | |
| Kings, PE | 2 | 2 | 2 | 3 | 2 | 2 |
| Pictou, NS | 1 | 1 | 2 | 3 | 3 | 3 |
| Cornerbrook, NL | 1 | 1 | 2 | 2 | 2 | 2 |
| Kent-Westmorland, NB | 1 | 1 | 1 | 1 | 2 | 2 |

1 = Regional labour force meets seafood processing employment demand at annual average and peak employment levels
2 = Regional labour force meets seafood processing employment demand at annual average levels only
3 = Regional labour force does not meet seafood processing employment at annual average or peak levels

This report, which was prepared by Food Processing Skills Canada (FPSC) in partnership with industry, federal and provincial governments and funded by Employment and Social Development Canada, synthesizes the findings from several complementary study components, including: 12 regional community profiles, field visits, a large survey of employers and interviews with more than 140 plant workers, managers, immigrant agencies, Indigenous groups and community leaders. The study identifies chief regional concerns, provides access to data sources, validates assumptions and outlines promising practices and solutions for addressing HR challenges and contribute to a sustainable workforce.

Securing the future of the fish and seafood processing industry in Atlantic Canada is a large and complicated endeavour that requires a high degree of coordination among a wide array of stakeholders. The results of the study are sobering, but also offer reason for optimism.

## THE CURRENT SITUATION

To gain a deeper understanding of the various occupations within the fish and seafood processing sector, job descriptions and organizational charts were analyzed. Occupations consist of six main levels ranging from foundational through to senior executive leadership roles. Four out of the six occupational categories require no post-secondary training or education, which presents both opportunities and challenges for the sector. Some key observations include:

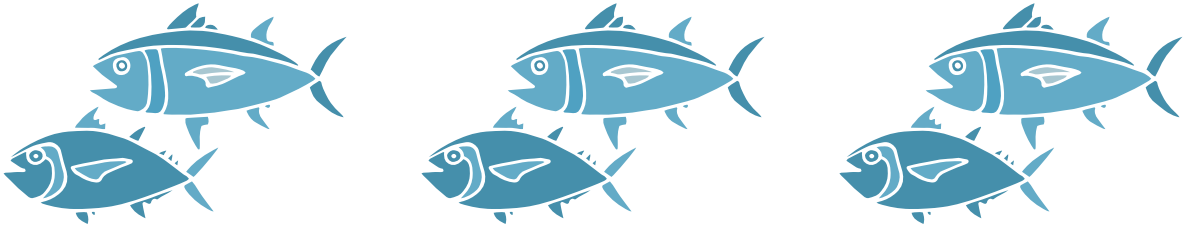
- the significant impact of unionization on the division of labour;
- the size of the facility has an impact on distinctions and differences between occupations;
- the physical requirements for many of the positions; and
- the differing skill requirements between fish and seafood processing.

As most jobs in the industry are at the foundational and intermediate levels, career progression is neither fast nor certain for new workers.

The reliance on international markets present both opportunities and challenges. Key determinants include the demand factors of the global and Canadian economic environment, exchange rates, international exports and demographics. These combine with supply factors such as fish quotas, aquaculture production and fish/seafood landings. The net result often produces a rapidly fluctuating demand for products, which can be difficult to respond to within a very tight labour market.

Canada lags behind in both R&D and technology implementation in the global seafood processing sector. To remain competitive in international markets for seafood products, advanced technological implementation developed specifically for Canadian firms is required. Barriers to greater technology adoption include a lack of interest in the industry from Canada's tech sector, industry uncertainty and seasonality. It is important to note that the species-specific nature of processing plants mean it makes it difficult, if not impossible, for employers to shift production based on sudden supply or demand for a product (e.g., moving from shellfish to fish processing).

Other challenges facing the sector include a decreasing supply of lower-skilled, production-level workers due to rising levels of education among youth. Working conditions, the physical nature of the job, seasonality, unpredictability of trade, negative perceptions and a lack of awareness of the industry are challenges to employment, especially among youth. Despite recent wage increases, the average starting wage for plant workers/labourers ranges from $13.69 to $14.97 per hour (considered slightly higher than other sectors with low-skilled entry positions), which is also seen as a deterrent for those starting out.



## AT A CROSSROADS

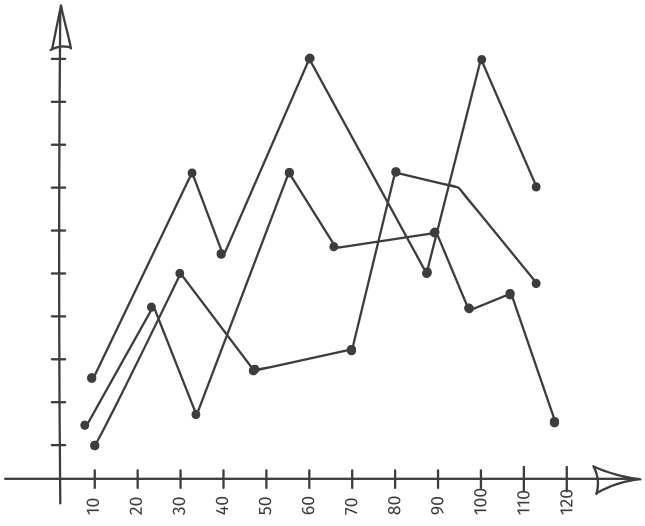
In Atlantic Canada, the seafood processing industry is at a crossroads in its development. There are currently more than 700 companies comprised primarily of small-to-medium-sized businesses with only one-quarter of companies having more than 120 employees. Many of the plants rely heavily on a seasonal, low-wage, low-skilled labour force to produce a single or limited number of lower value products. This makes it challenging to potentially transition to higher value products that rely on advanced automated methods, which in turn require significant upfront investment (technology, R&D investments), as well as potentially different skill levels among the workforce (and likely higher labour costs). This contrasts with the European processing plants that tend to be highly specialized according to species, but which produce an array of product forms.

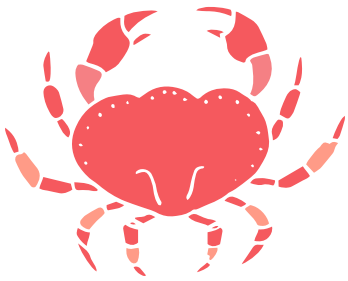
Other challenges include the precariousness of natural resources, ongoing impacts of climate change, resource management regimes, fluctuations in quota and supply of labour from both local and temporary sources; all of which negatively impact the ability of companies to invest in operations and raise capital for technological investment.

## RECRUITMENT FACTS AND FIGURES

One of the most daunting obstacles facing the industry is recruiting workers, especially since the majority of processing plants in Atlantic provinces are located in remote, rural settings, with small and aging populations. Some key characteristics of the current labour force and noteworthy recruitment/hiring challenges include:

- women play a significant role, making up 43% of the workers in 2017;
- an aging workforce with more than 37% currently aged 55 years or older;
- movement to urban centres by youth, young families;
- challenges of engaging unemployed workers as major labour source during peak times;
- relying on a workforce that accesses EI benefits on a regular and systematic basis;
- 2% of workforce is composed of immigrants, temporary foreign workers;
- costs associated with applying to the temporary foreign worker program; and
- underrepresentation of Indigenous Canadians in the sector's workforce.



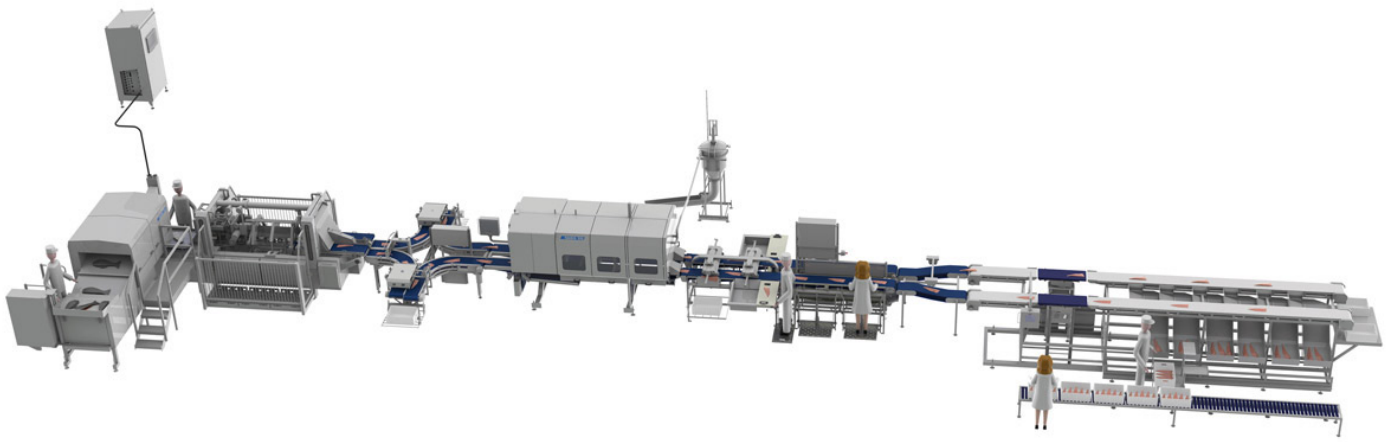
## LABOUR DEMAND VERSUS SUPPLY

In many regions, there are just too few people to meet the local employment requirements overall. It is estimated that the Atlantic fish and seafood industry will require 7,500 workers over the 2018 to 2030 period or roughly 600 workers on average per year to fill ongoing vacancies, replace retirements and work to address high turnover rates. This equates to approximately 50% of the current average workforce of 15,000 (2017). Unfortunately, as processors try to grow, increase productivity and remain competitive, recruitment will occur within very tight regional labour markets, which already experience labour shortages during peak seasons; shortages that are predicted to continue into the foreseeable future.

## WHAT CAN BE DONE TO IMPROVE THE SITUATION GOING FORWARD?

Options available for employers are limited. To meet hiring demands, they will need to compete against other seafood processors, as well as employers from other industries, which will be challenging given the anticipated increase in retirements among the workforce. In response, the research found that employers have attempted to bring in more workers (regional relocation, temporary foreign workers), tried to change processes to require less labour (automation, technology), or chosen to move the processing plants closer to more readily available labour sources. For any employers, hiring temporary foreign workers is neither easy nor cheap. For fish and seafood processors, this option is further complicated and made riskier by the fact that TFW applications must be placed well before catch quotas are set. The seasonal nature of processing also means that processors must reapply for TFW each year.

The research also suggests that governments, employers, educational institutions and communities work together to find solutions to the labour supply issue and in other areas, including offering R&D funding and assistance with marketing exports, immigration policies, EI policies, rural development initiatives, post-secondary education support, employment-related training and childcare support.



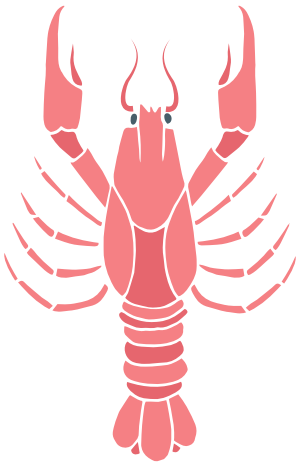
## SEIZING OPPORTUNITIES

As recruitment and retention continue to be challenging, the situation has resulted in considerably more job opportunities for lower-skilled members of the labour market. Seizing on this opportunity, employers are attempting various approaches to entice people and to retain a returning workforce, including improving awareness of the industry by holding open houses and plant tours, offering shorter shifts and managing workloads to give workers guaranteed days off, assisting with transportation and housing needs, recognizing experience and seniority, rewarding referrals from current employees and adapting schedules to meet EI requirements.

Other initiatives being undertaken by processing employers include:

- more involvement/partnerships with community agencies;
- "sharing" local labour supply with other area seasonal employers;
- developing closer ties with educational institutions – integrating work placements;
- growing partnerships between Indigenous peoples in processing, harvesting;
- recruiting youth through government/industry partnerships (Team Seafood) in summer;
- welcoming temporary foreign workers by providing housing/transportation and in assisting in becoming permanent residents; and
- using technology to reduce labour requirements, prolong retirement of an aging workforce.

While these measures have not produced universally positive results, progress is being made. Some large and small processors are investing in technology and infrastructure to improve productivity, expand value-added products and lengthen the processing season. Developing new products will ultimately contribute to new markets, more revenue and the sustainability of seafood processing companies.



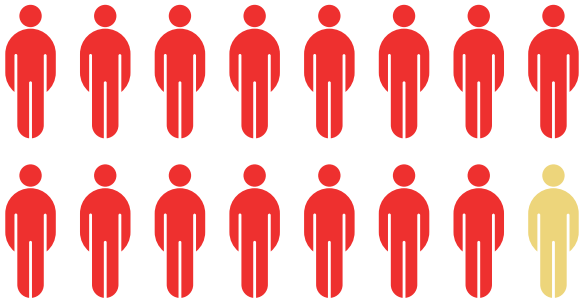
# RECOMMENDATIONS

The following recommendations are drawn from the LMI study results and implications. Several are aimed at quickly stabilizing the sector's labour market situation. The expectation is that these will provide sufficient time for the longer-term measures contained in the other recommendations to produce impacts and, ultimately, create labour market equilibrium in the fish and seafood processing industry.

## RECOMMENDATIONS THAT ARE EXPECTED TO PRODUCE IMPACTS OVER THE NEAR TERM

### RECOMMENDATION: ADDRESSING THE CRITCAL LABOUR SHORTAGE

The research has determined the sector is currently facing, and is expected to continue to face, a significant labour shortage. This situation has negative implications for the competitiveness of the sector and potentially, for its survival. There is a need to implement measures to help balance labour market supply and demand relatively quickly. The following recommendations are aimed at achieving this.



**Key Players**

- Immigration, Refugees and Citizenship Canada (IRCC)
- Employment and Social Development Canada (ESDC)
- Industry associations

**Initial Step**

- Discuss the federal government views on above recommendations.

**The federal government should consider:**

- Taking a cross sectoral approach to promoting short term peak fish and seafood processing work within Atlantic Canada, especially among seasonal workers who are out of season.
- Change the Atlantic Immigration Pilot Program to be inclusive of seasonal fish and seafood processors.
- Revive the Career Focus Wage Subsidy Program for fish and seafood processors as it was an extremely effective recruiting tool for recent post-secondary graduates, with 90% of hires staying on.
- Changing how it defines the industry's "foundational" jobs away from "low skilled". This would aid perceptions of the sector, and improve immigration options for employers.
- Creating a fish and seafood processing seasonal worker program akin to the agricultural worker program. This would help reduce the amount of catch lost due to labour shortages, particularly at peak periods.
- Lifting restrictions on the number of times a Temporary Foreign Workers (TFW) can return to work for sector employers.
- Removing the cap on the number of TFW a sector employer can hire per year.
- Lowering the cost of applying to the TFW program.
- Simplifying the LMIA process (e.g., by making local level LMI data available to employers).
- Adjusting the current immigration pathways so that TFWs would be more likely to find work in the sector an enticing option (e.g., allow sector employers to work with those in other industries to pool hours to create a full-time job, assistance with housing and transportation).

## RECOMMENDATION: REGIONAL SOLUTIONS

The current labour-market-demand-versus-supply situation is tight and projected to continue to be so until at least 2030. With no single obvious solution to the labour shortage, it is likely progress can only come through incremental improvements in a range of areas, including within plants (e.g., shorter shifts for older workers), as well as outside them (e.g., rural economic development). Government policies and programs can have a significant positive (or negative) impact on the industry's success and, concomitantly, on the success of the communities where the plants are located.

It is recommended that governments at all levels, conduct a coordinated review of all relevant programs and policies, including, for example, R&D funding, immigration policies, EI policies (e.g., with regard to absenteeism, disincentives to work), employment-related training and rural development.

Additionally, that communications between federal, provincial, and municipal governments as well as intra-departmental discussions within government improve, to ensure there is more collaboration and a clearer focus on outcomes.

| Key Players | Initial Step |
|---|---|
| • Immigration, Refugees and Citizenship Canada (IRCC)<br>• Department of Fisheries and Oceans (DFO)<br>• Employment and Social Development Canada (ESDC)<br>• Atlantic Canada Opportunities Agency (ACOA)<br>• Industry associations | • Explore potential mechanisms and structures for undertaking a coordinated review of programs and policies. |

## RECOMMENDATION: FLEXIBLE WORKPLACES

The fish and seafood processing sector's approach to human resources management is more traditional than that of other industries. The research suggests there is significant room for innovation.

Some of the HR practices that contribute to problems, such as turnover and absenteeism, come from the fact that processors have no control over, and little advance warning about, the size and timing of raw product delivery (e.g., resulting in very long shifts for employees). Some businesses have responded by constructing holding tanks to keep catches longer, thereby spreading processing work over a longer period (e.g., resulting in shorter shifts).

In the absence of a holding tank, there are several ways to better align workplaces with employee preferences. A more rational and consultative approach to scheduling could allow shifts to be tailored, so that employees who are open to working longer or extra shifts can do so, while those who are not are only requested to do so as a last resort. More generally, potential approaches for increasing workplace flexibility include implementing shorter shift options in a plant that has a predominantly older workforce, along with time off for medical appointments and enhanced health benefits (e.g., prescription drug coverage). For a workforce that includes several women, tailored enhancements could include child-care provisions and additional parental leave.

Sector employers should consider developing a recruitment and retention rewards programs. Examples include employee referral bonuses, retention bonuses, tenure milestone bonuses and recognition.

FPSC could assist by developing HR tools and training to help those with HR responsibilities implement some best practices.

| Key Players | Initial Step |
|---|---|
| • Industry associations<br>• Industry members (including HR professionals)<br>• Food Processing Skills Canada (FPSC) | • Conduct a needs assessment to identify which areas of HR are most in need of innovation/ change. |

# RECOMMENDATIONS THAT ARE EXPECTED TO PRODUCE IMPACTS OVER THE MEDIUM TERM

## RECOMMENDATION: SHARED HR SERVICES BUREAUS

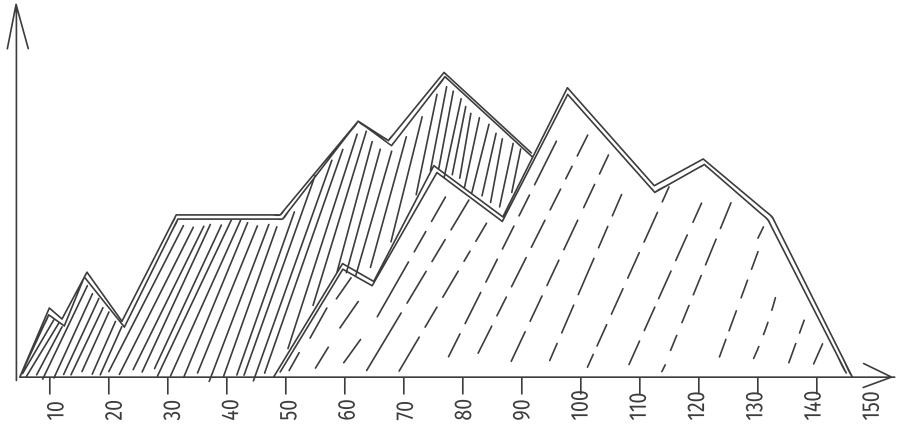
To assists all firms (but particularly smaller ones), it is recommended that the sector, with the assistance of governments and industry associations, create shared HR services bureaus in strategic locations where the industry operates. The bureaus could be staffed by HR and finance professionals to provide firms with expert advice and services on a temporary, as-needed basis. Services could include:

- recruitment and hiring assistance
- researching government and other HR-related programs (e.g., subsidies and grants)
- application completion/proposal writing assistance
- assistance with the completion of Labour Market Impact Assessments required under the Temporary Foreign Worker Program.
- raising awareness of job/career opportunities by forging closer links with secondary and post-secondary schools, as well as assisting with the development of experiential learning programs.
- coordinating with other sectors that operate in opposite seasons to fish and seafood to maximize the utilization of domestic workers – in effect sharing workers so they work in more than one season, possibly even year-round. As a first step, it is recommended that the potential uptake from workers and businesses be studied, including potential impacts on EI claims.

The concept of "work-sharing" has a long history in Canada, including within provisions of the EI program. It is recommended that sector employers, possibly in collaboration with ESDC, apply this concept (albeit in reverse) by examining ways of coordinating with other non-industry employers to "share" the local, seasonal labour supply (e.g., combining seafood processing in summer with snowplowing in winter).

FPSC could support the bureaus at a national level by developing training modules and tools.

| Key Players | Initial Step |
|---|---|
| • Industry associations<br>• Industry members (including HR professionals)<br>• Federal government<br>• Employment and Social Development Canada (ESDC)<br>• Food Processing Skills Canada (FPSC) | • Study potential uptake from workers and businesses, including potential impacts on EI claims. |



## RECOMMENDATION: SOCIAL ASSISTANCE RE-SKILLING

The industry has a prevalence of positions that require neither a high school diploma nor previous training. At the same time, there is a need to increase the local labour supply and to attract youth to the sector.

It is recommended that one or more community partnership models be developed involving the sector, provincial social assistance programs and community organizations that work with social assistance recipients, to 1) raise awareness among social assistance recipients of employment opportunities within the sector, and 2) help equip them to take advantage of these opportunities.

For example, a specialized program could be developed to allow social assistance recipients to continue to receive some benefits while receiving on-the-job training and/or completing a probationary work period. Another program could focus on work readiness and essential skills. It is envisioned this training would lead to employment opportunities for trainees who are willing and able to continue in their positions.

| Key Players | Initial Step |
|---|---|
| • Industry associations<br>• Provincial ministries with responsibility for social assistance<br>• Community organizations working with social assistance recipients and other segments facing employment challenges<br>• Food Processing Skills Canada (FPSC) | • Explore the feasibility of this recommendation under current social assistance rules, regulations and legislation, and estimate potential uptake by SA recipients. |

## RECOMMENDATION: INDUSTRY LEARNING PROGRAMS (LEADING TO CERTIFICATE)

The sector lacks clear pathways for employee advancement and, relatedly, suffers from high turnover rates.

It is recommended that the sector work with FPSC to develop online and other training programs that lead to a certificate. Certificates could help employees advance their careers, as well as count towards requirements for certification.

It is also recommended that the sector work with community colleges and adult education providers to develop education programs for the more highly skilled and well-paying positions in the sector (e.g., quality control, processing lead hand, processing foreperson).

| Key Players | Initial Step |
|---|---|
| • Industry associations<br>• Provincial ministries with responsibility for social assistance<br>• Community organizations working with social assistance recipients and other segments facing employment challenges<br>• Food Processing Skills Canada (FPSC) | • Explore the feasibility of this recommendation under current social assistance rules, regulations and legislation, and estimate potential uptake by SA recipients. |

## RECOMMENDATION: SUMMER EMPLOYMENT

It is recommended that the sector market summer employment opportunities to Canadian and international post-secondary education students as unique income-generating adventure opportunities. The sector could emulate hotel and hospitality employers in some of Canada's resort destinations (e.g., Banff) by providing low-cost accommodations (e.g., build a "staff house"), extended time off to allow for local travelling/exploration, and amenities that are popular with Millennials. Other models to draw from include Katimavik programs.

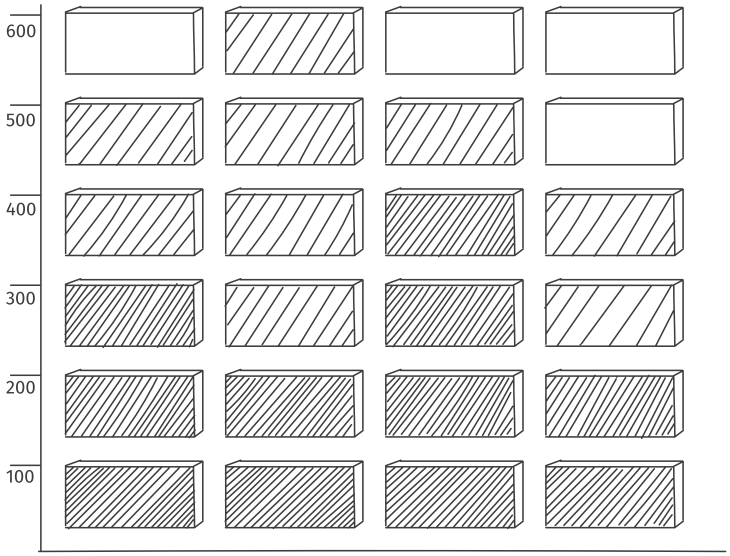
| Key Players | Initial Step |
|---|---|
| • Provincial ministries of training and colleges/universities<br>• Industry associations<br>• Post-secondary education student associations | • Assess the feasibility, potential up-take and potential Return on Investment (ROI) of such programs. |

## RECOMMENDATION: ATTRACTING IMMIGRANTS TO SETTLE IN FISH AND SEAFOOD PROCESSING COMMUNITIES

Major cities in Atlantic Canada, such as Halifax and Moncton, have a significant number of immigrants, including some who are unemployed or underemployed. We also know from the Choicebook™ attitudes research that newcomers are relatively open to working in the sector.

It is recommended that the sector, government departments and immigration settlement agencies work together to raise awareness among immigrants of the benefits of working in the sector (e.g., salary/benefits, small community quality of life, affordability of housing).

| Key Players | Initial Step |
|---|---|
| • Immigration, Refugees and Citizenship Canada (IRCC)<br>• Industry associations<br>• Local immigrant settlement agencies | • Discuss merits of the recommendation with local immigrant settlement agencies, including their capacity to become involved, potential sources of funding, potential up-take from immigrants. |



## RECOMMENDATION: FIRST NATIONS PARTNERSHIPS

Members of First Nations communities own and operate a few processing plants. The research also suggests these communities are a potential source of labour.

It is recommended that sector associations and the federal government develop partnerships with First Nations communities to 1) support First Nations processors, and 2) raise awareness among members of those communities of opportunities in First Nations processing plants, as well as employment opportunities in the industry more broadly.

As part of these efforts, local economic development agencies and Service Canada offices should work with local First Nations communities to better understand how various factors can help or hinder First Nations community members becoming part of the industry's labour force. These agencies and offices could also serve as conduits or go-betweens for First Nations communities and employers who have had little or no contact with these communities in the past.

| Key Players | Initial Step |
|---|---|
| • Industry associations<br>• First Nations processors<br>• First Nations community leaders<br>• Local/regional economic development agencies<br>• Service Canada | • Explore the receptivity of First Nations plants and communities to implementing this recommendation. |

## RECOMMENDATION: SECTOR EMPLOYMENT OPPORTUNITIES AWARENESS CAMPAIGNS

The image of the industry ranges from neutral to positive for a large portion of the public, including youth, Indigenous Canadians and immigrants. The industry could capitalize on this relative openness by providing labour market participants with opportunities to enhance their awareness and knowledge of jobs in the industry.

Methods could include open houses, organized tours and virtual tours that youth, employment counsellors, etc. could easily access online. The research also provides guidance for tailoring outreach and awareness campaigns to various segments. Potential overarching messages include:

- "The sector produces quality products that reach dining tables around the world."
- "The sector is the linchpin between the sea and the chef's kitchen."
- "Producing healthy, life-sustaining food is more than just a job."

It is recommended that the sector develop closer ties with secondary and post-secondary schools to help build awareness of employment possibilities among students and to develop and expand experiential learning programs (e.g., employment readiness).

| Key Players | Initial Step |
|---|---|
| • Service Canada offices<br>• Post-secondary institutions<br>• High schools<br>• Community organizations that work with youth<br>• Industry associations<br>• Industry members<br>• Food Processing Skills Canada (FPSC) | • Explore the receptivity of schools to increasing awareness of career opportunities in the sector. |

# RECOMMENDATIONS THAT ARE EXPECTED TO PRODUCE IMPACTS OVER THE LONG TERM

## RECOMMENDATION: INNOVATION PARTNERSHIPS

Advanced processing technologies and automation developed specifically for Canada are needed in order to compete in global markets, but current circumstances do not support investment in the development of these technologies.

To close the automation and productivity gap, it is recommended that a partnership be developed among government, the fish and seafood processing sector, technology development and manufacturing firms, and universities to develop specialized technology for use in the sector, and possibly for export. Increased automation could also help retain older "core" workers by lessening the physically demanding nature of some positions. It could also help to lengthen the work season and minimize peaks and reduce overall labour requirements.

The core strategic priorities for the Ocean Supercluster are to formulate a shared innovation map to guide technology leadership projects and to undertake a program of cluster building to enhance the quality of collaborations while also extending their benefits widely. The Innovation Partnership should work with the Oceans Supercluster to ensure the needs of fish and seafood processing companies are considered and addressed by the Supercluster strategy.

It is also recommended that the Innovation Partnership:

- help address funding gap in prototype commercialization
- include an industry education component to raise awareness of available technology that could be adopted/adapted by processors
- include an avenue to communicate the most significant technology gaps to governments.

| Key Players | Initial Step |
|---|---|
| • Fisheries and Marine Institute<br>• Canadian Centre for Fisheries Innovation<br>• Dalhousie University<br>• FoodTech Canada – Fisheries and Seafood Innovation Centres<br>• Coastal Zone Research Institute<br>• Atlantic Fisheries Fund<br>• Federal government<br>• Industry associations | • Form an industry committee to enter into partnership discussions with key players. |

# 3.0 INTRODUCTION AND STUDY OVERVIEW

This technical report summarizes the main findings and conclusions from various components of an extensive labour market information study undertaken in 2017-2018 for Atlantic Canada's fish and seafood processing industry entitled *Securing Canada's Fish + Seafood Workforce: Real Challenges, Practical Solutions, Fresh Perspectives*. This report builds upon the various technical reports that were prepared for each of the components, integrating key quantitative evidence and qualitative examples according to themes and areas.

The study was designed to identify the scope of human resource challenges for Atlantic Canada's fish and seafood processing sectors and the human resource best practices, which will help employers meet their labour force needs.

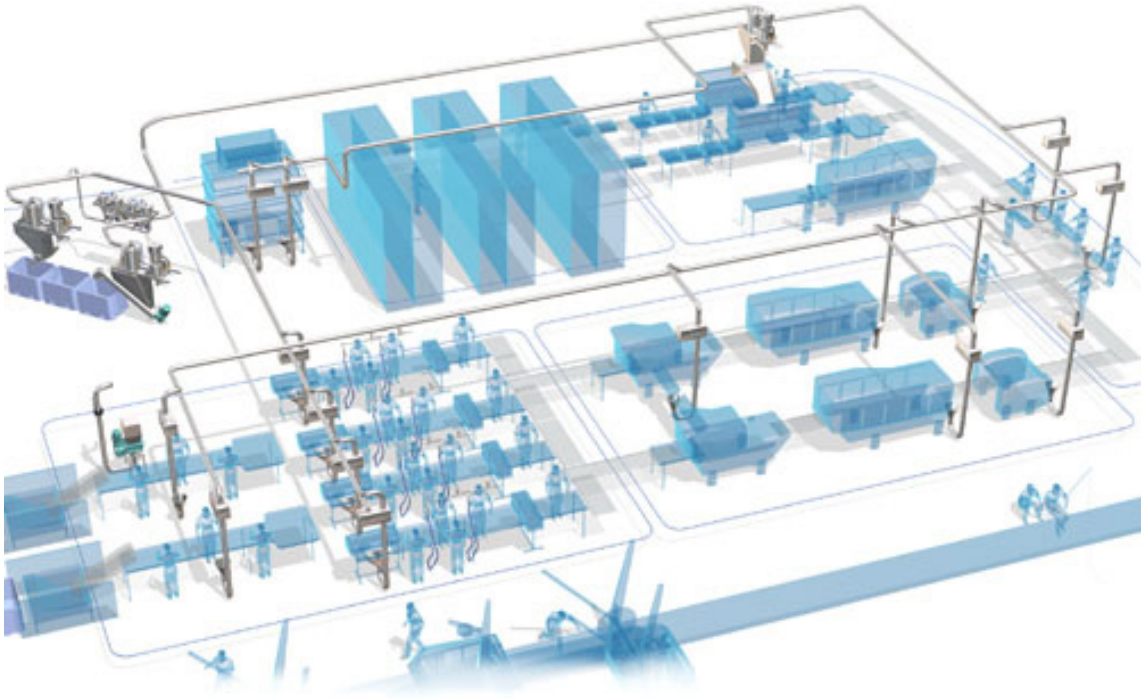
The study was undertaken by Food Processing Skills Canada (FPSC) in partnership with industry, federal and provincial governments. The study was funded under the Government of Canada's Sector Initiative Program via Employment and Social Development Canada.

An advisory group made up of industry and partners assisted by refining the scope of the study, identifying regional concerns, and providing oversight and key input on selected methods, validating assumptions and providing access to data sources and reports. In addition to individual companies representing each of the four Atlantic provinces participating on the advisory group, partners also included the Fisheries and Marine Institute of Memorial University, Lobster Processors Association of New Brunswick and Nova Scotia, and the Nova Scotia Fisheries Sector Council.

A large consulting team from multiple research firms supported the FPSC in undertaking the research.

For more details on study structure, please refer to Appendix A.

The structure of the present report includes an overview of the methods and key data sources consulted for the study (Section 2), followed by an overview of the Atlantic fish and seafood processing sector (Section 3). Section 4 contains a description of key occupations in the industry, while Section 5 provides details on specific labour sources for the sector. The main findings from the supply and demand forecasting are provided at provincial levels in Section 6. Section 7 presents an overview of the surveys of the general population and target audiences on their perceptions of working in the sector. An overview of human resource challenges in the industry is provided in Section 8. The final section outlines promising practices and solutions along with innovations that can potentially be considered in addressing HR challenges in the sector to contribute to a sustainable workforce.



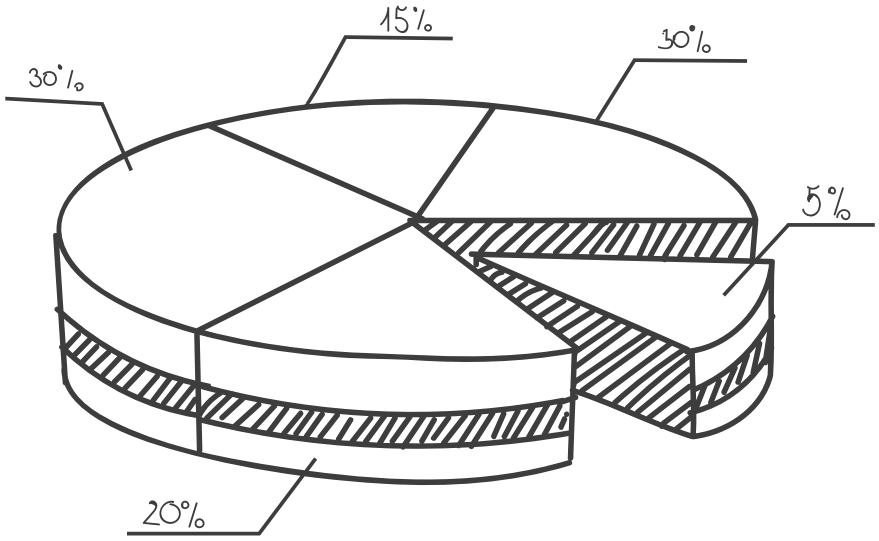
# 4.0 METHODS AND KEY DATA SOURCES

One of the main objectives of undertaking a large, complex and detailed labour market information study such as the current study is to attempt to quantify many of the issues and challenges with labour supply and demand that employers give voice to through qualitative methods such as interviews. The current study endeavoured to provide a balance of quantitative and qualitative methods using both primary sources of data (collected specifically for this study through industry surveys and interviews) and secondary sources of data (collected for previous studies or other purposes such as previous industry reports, Statistics Canada data, and industry statistics).

The main study components included the following:

1. A phone and online survey of Atlantic fish and seafood processors resulting in n=100 completions with firms that covered an estimated 69% of the total workforce in the sector;
2. Development of regional and provincial demand models for current and future projections of employment in the fish and seafood processing sector using various sources of consumption, export and revenue data;
3. Development of regional based supply models for current and future projections of labour supply overall and lower-skill levels, according to 12 different regions across the four Atlantic provinces;
4. Surveys of the general population and key target audiences (youth, Indigenous Canadians, new Canadians, unemployed) to collect insights into the perceptions, interests and motivations as they relate to working in the fish and seafood processing industry;
5. Interviews and site visits with employers, workers, unions, provincial government representatives, and community groups involved with the fish and seafood processing sector with a primary focus on the 12 identified regions across the four provinces;
6. A study of the key occupations and career progression (career ladders) characteristic of the sector; and,
7. A review of technology utilization among the sector's plants in relation to other countries.

For more detailed descriptions of methods and data sources used for each of these components, please refer to Appendix B.



# 5.0 PROFILE OF THE ATLANTIC FISH AND SEAFOOD PROCESSING SECTOR

## 5.1 SIZE OF SECTOR AND PROCESSING ACTIVITIES


**SUMMARY**

The sector directly employed approximately 15,000 workers in 2017 and contributed $963 million to GDP. There are currently more than 700 companies in the sector. The value of fish and seafood processing exports in 2017 was estimated at $3.84 billion[1], which indicates that the sector is heavily reliant on exports.


### CONSIDERATIONS

The sector is composed primarily of small businesses with only one quarter of companies having more than 120 employees. Solutions to HR challenges will need to be very pragmatic and easy to implement as many small businesses do not necessarily have the capacity (financial; skills; time) to adapt complex solutions to their specific situations.

The reliance on international markets can present both opportunities and challenges for the sector. Growth and demand for products can rapidly increase, but there can also be fluctuations in prices and demand for certain products. As export markets fluctuate, it can be challenging to absorb and accommodate this within a very tight labour market. The lobster industry is heavily reliant on export markets and is also is one of the most labour-intensive segments of the sector making this a particular challenge.

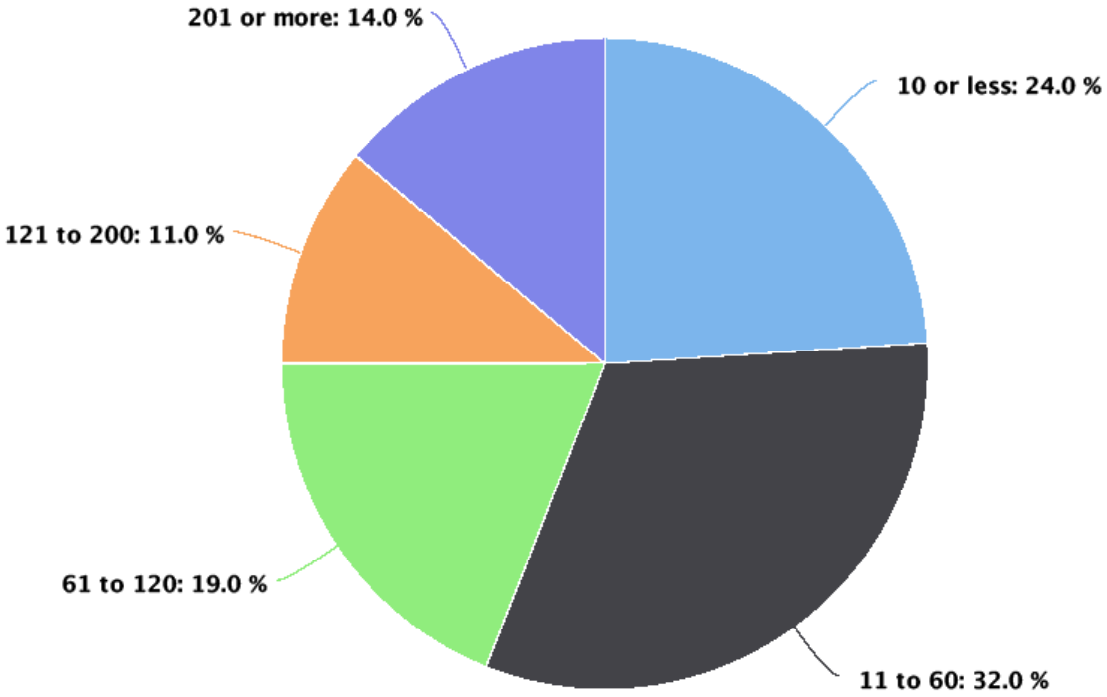
### ASSOCIATED RECOMMENDATIONS

- Regional solutions
- Shared HR services bureaus

1. Trade Data Online - accessed: Oct. 12, 2018

The Atlantic fish and seafood processing sector contributed approximately $963M[2] to the 2017 GDP and employed approximately 15,000 workers in 2017. The listing of companies in the sector used for the survey frame for the current study indicated that there are more than 700 companies in the industry. According to the survey of firms, the average-sized firm (mean) has 108 workers; however, there is considerable diversity with the majority of firms having less than 60 workers, and one-quarter (24%) being very small businesses with 10 employees or less (See Figure 1).

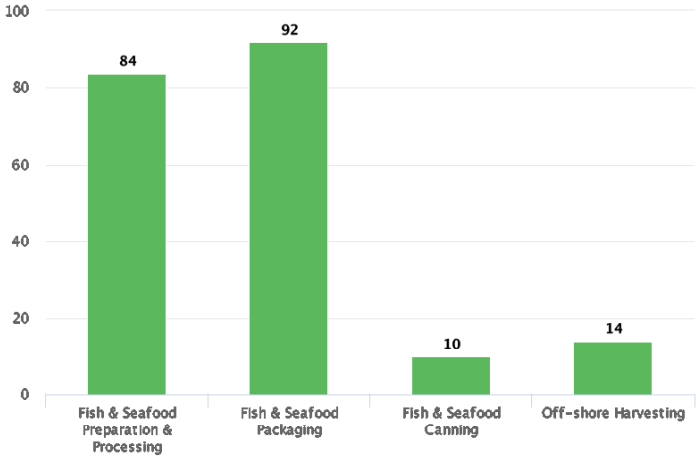
**FIGURE 1: SIZE OF SEAFOOD PROCESSING FACILITIES, SHARE (%) OF TOTAL**




Source: FPSC – LMI Survey of Atlantic Fish + Seafood Processing, 2017

The main activities undertaken by processors in the industry, according to the survey of firms were fish and seafood packaging (92%) and fish and seafood preparation and processing (84%). Smaller proportions indicated fish and seafood canning (10%) or off-shore harvesting (14%) as primary activities (see Figure 2).

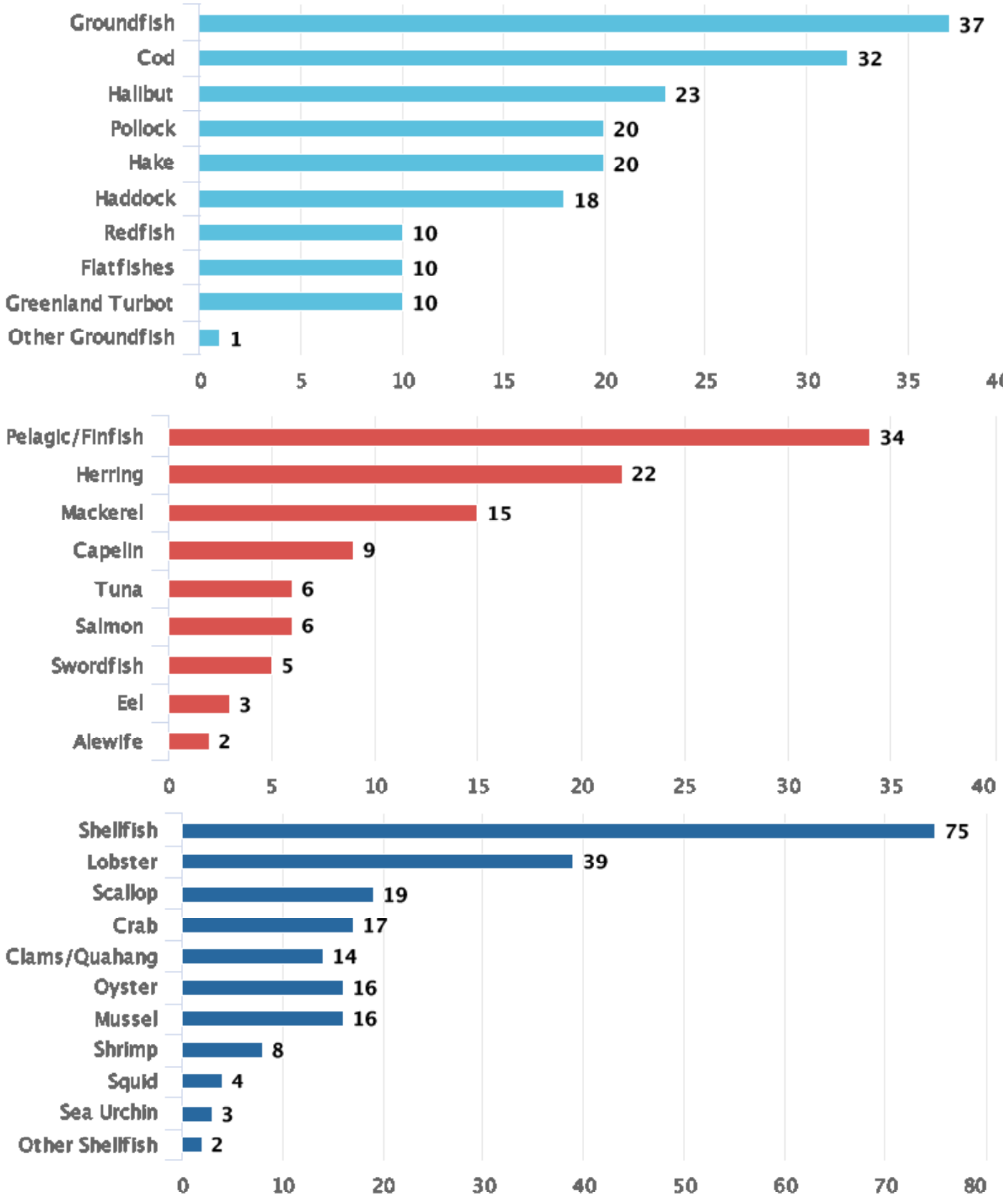
**FIGURE 2: MAIN PROCESSING ACTIVITIES, SHARE (%) OF TOTAL**




2. Statistics Canada. Table 36-10-0402-01. Expressed in chained 2007 $CA. Includes contribution from Atlantic Provinces for Aquaculture [NAICS:1125] and Seafood Product Preparation and Packaging [NAICS:3117].

The majority of firms responding to the survey reported that they process shellfish (75%), of which the most frequently cited species was lobster (39%) (see Figure 3). Similar proportions reported processing groundfish (37%) and pelagic or finfish (34%) with common species, including cod (32%), halibut (23%) and herring (22%).

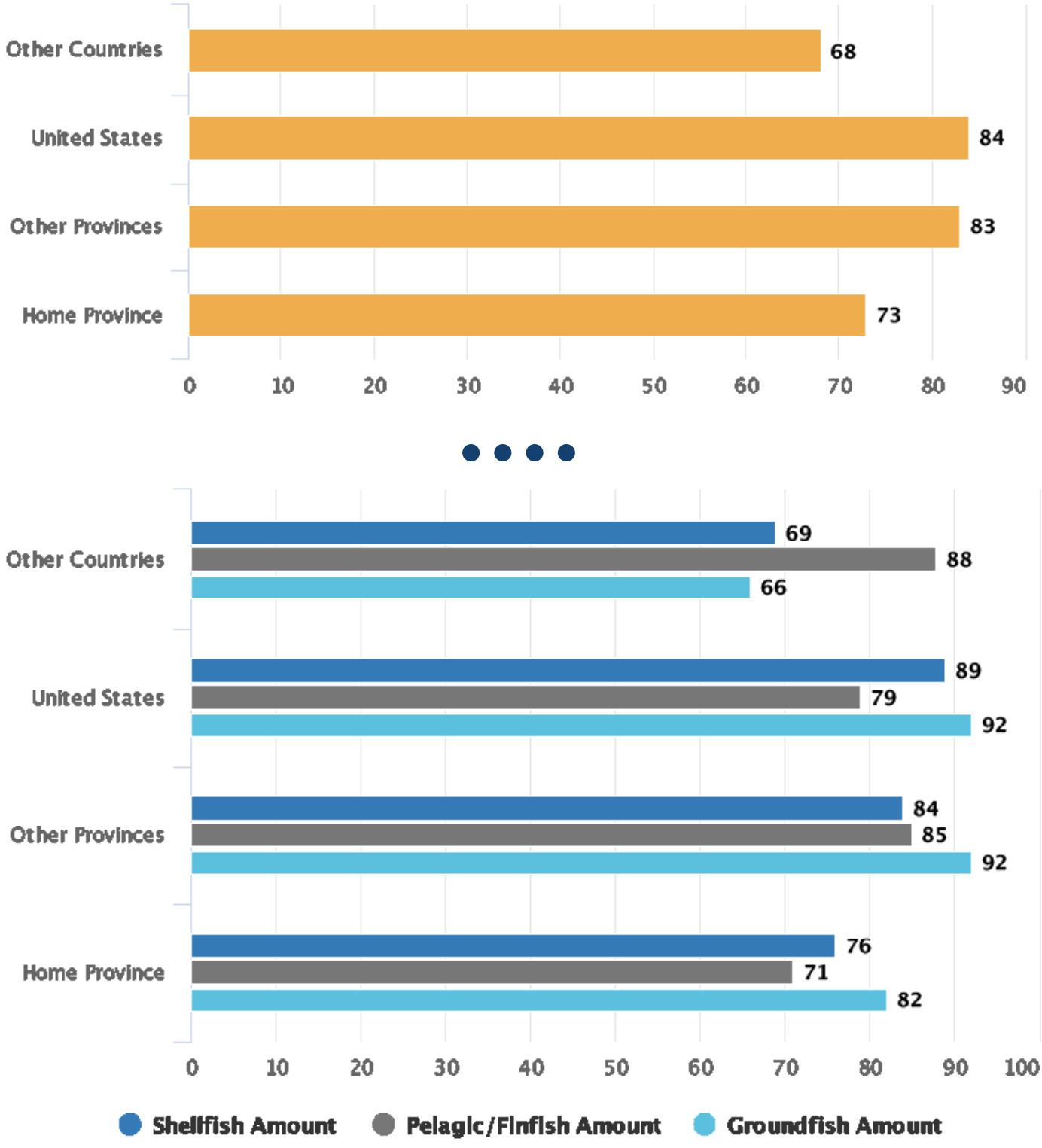
**FIGURE 3: SEAFOOD PROCESSOR SPECIES PROFILE, SHARE (%) OF TOTAL**




Source: FPSC – LMI Survey of Atlantic Fish + Seafood Processing, 2017

The value of fish and seafood processing exports in 2017 was estimated at $3.84B[3], which indicates that the sector is heavily reliant on exports. This was confirmed through a survey of firms that reported exports continue to be the dominant market for seafood processors with lobster processors most dependent on international markets. As noted in Figure 4, the majority of processors export to the United States (84%), and other countries (68%).

**FIGURE 4: OVERVIEW OF EXPORT MARKET ACTIVITIES**




3. Trade Data Online - accessed: Oct.12, 2018

# 5.2 CURRENT AND FUTURE ECONOMIC POSITIONING


**SUMMARY**

Key determinants linked to the fish and seafood processing sector, includes the demand factors of global and Canadian economic environment, exchange rate, international exports, demographics. These are then combined with the supply factors such as fish quotas, aquaculture and fish/seafood landings.


## CONSIDERATIONS

The supply factors such as fish quotas and fish/seafood landings are outside of the processing sector's influence and largely external to the harvesters' influence (particularly quotas). If the fish and seafood processing sector overall is experiencing greater demand for their products, they can not encourage harvesters to fish more. This is quite different from some other food processing sectors such as the meat industry that has the capacity to increase the amount of raw product available. As a result, for the fish and seafood processing industry, given its limited access to raw product, the processing becomes crucial to extracting as much value-added as possible if industry growth is going to occur. This value-added component can be labour intensive (e.g., special packaging, product preparation), which is particularly challenging to achieve in tight labour markets. An additional challenge is that the value-added component often requires investments in technology/automation, which for the small businesses that make up a large part of the industry can be cost prohibitive.

## ASSOCIATED RECOMMENDATIONS

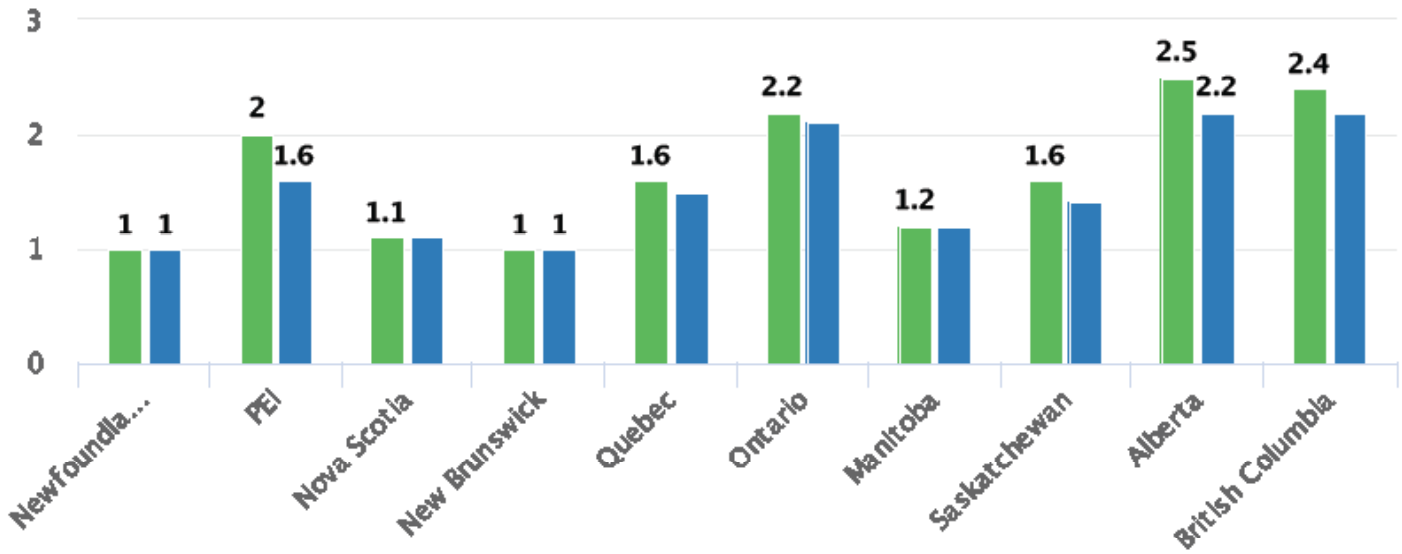
- Regional solutions
- Industry learning programs
- Innovation partnerships

A large number of determinants linked to the performance of the fish and seafood processing sector were examined during the course of the project, particularly in the development of the demand forecasting models. The key determinants reviewed included:

- **Global Economic Environment –** The global environment is important to seafood processors because a significant share of these products is shipped internationally. When considering the impact of the global economic environment related to seafood exports, there is a need to consider various assumptions regarding the economic performance of key trading partners. According to U.S. Congressional Budget Office, World Bank, International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD) and United Nations (UN) outlooks, there is considerable uncertainty surrounding the world outlook, particularly given the policy stance of the current U.S. administration and the unknown impacts of Brexit. The IMF outlook expects global growth to accelerate modestly from 3.1% to average 3.7% from 2017 to 2022.

- **Canadian Economic Environment** – Canadian provincial economic environments are linked to seafood consumption, interprovincial trade, interindustry sales and international exports via the value of the Canada/U.S. exchange rate. The overall Canadian economy is expected to expand on average by 2.1% over the 2017 to 2026 period and average 2% growth rate over the 2027 to 2030 period. As illustrated in Figure 5, the gains will be led by Alberta, British Columbia and Ontario, all of which have growth above the national average. New Brunswick and Newfoundland and Labrador are forecasted to average around 1% growth over the forecast period. Nova Scotia and Manitoba are expected to average between 1% and 1.5% growth. PEI, Quebec and Saskatchewan are expected to average between 1.5% and 2% growth.

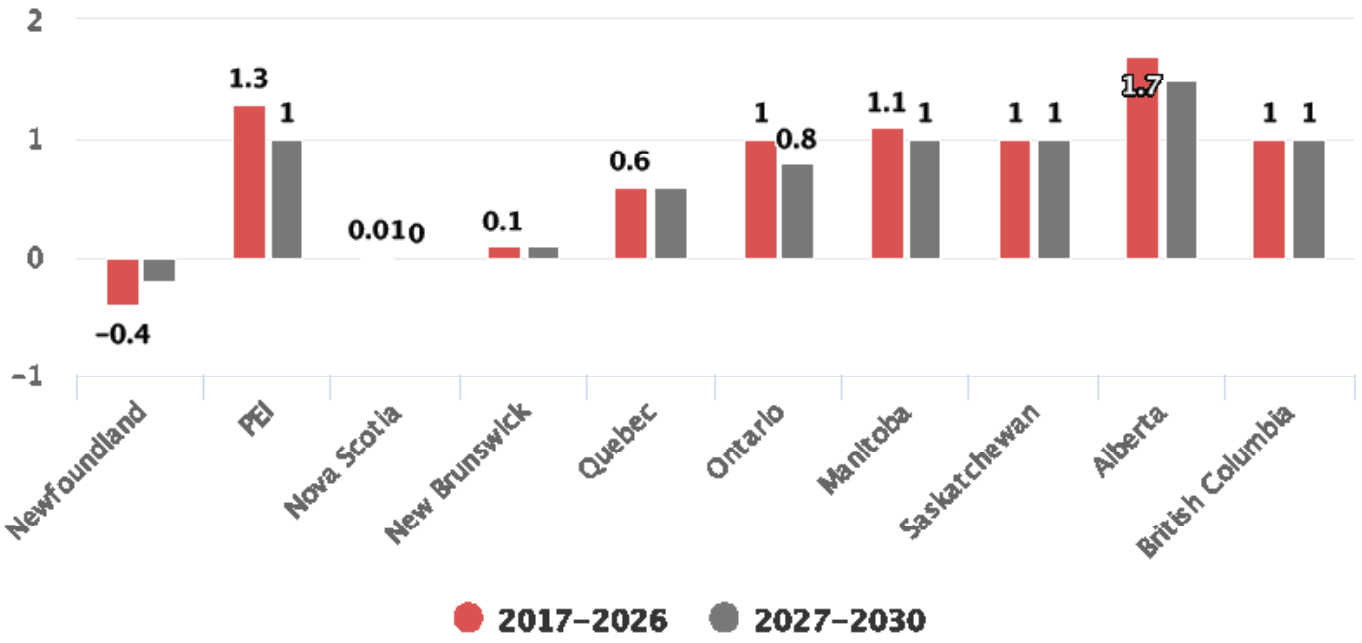
**FIGURE 5: REAL AVERAGE ANNUAL GDP GROWTH BY PROVINCE; 2017-2026 AND 2027-2030**




- **Exchange Rate** – The Canadian dollar is expected to recover steadily throughout the forecast period from the significant declines associated with the earlier commodity price decline. The Canadian dollar is forecasted to rise back toward fair value of around 84 cents, which reflects its purchasing power parity value. Given the recent actions of the U.S. administration, there is the risk of near-term turbulence in the exchange rate.

- **Demographics** – Canada's age structure ensures that Canada's natural increase (births less deaths) will slowly diminish over the forecast horizon. The vast baby boom generation is in the years of rising death rates, while the aggregate birth rate remains at a low ebb. As a counterweight, Canada's immigration target has increased from 260,000 in 2010-2014 to 280,000 in 2015 and 300,000 in 2016. It is planned to rise incrementally to 340,000 by 2020. The outlook calls for the target to remain at that level over the rest of the projection period. This combination of factors that influence population growth leads to total population growth slowing from slightly above 1% over 1997 to 2016, to slightly below 1% over 2017 to 2026 and around 0.9% over 2027 to 2030.

**FIGURE 6: POPULATION, AVERAGE ANNUAL GROWTH RATE (%) BY PROVINCE; 2017-2026 AND 2027-2030**




- **Fish Quotas** – Fishing quotas have a direct impact on the amount of raw product available and are therefore a strong determinant linked to the performance of the fish and seafood processing sector. The quota system is based on fisheries management plans and is specific to species, season and geographic area. Fishing quotas are determined by the federal Department of Fisheries and Oceans (DFO) and depending on the species and areas, can fluctuate from year to year. For an overview of the fisheries management plans for some of the common species in Atlantic Canada, please refer to Appendix C. For the current study, the demand models maintained quotas at the 2017 levels considering some adjustments for exceedances due to bycatch where this has historically been the case. Challenges in forecasting for the processing industry are highlighted when future quota levels are unknown.

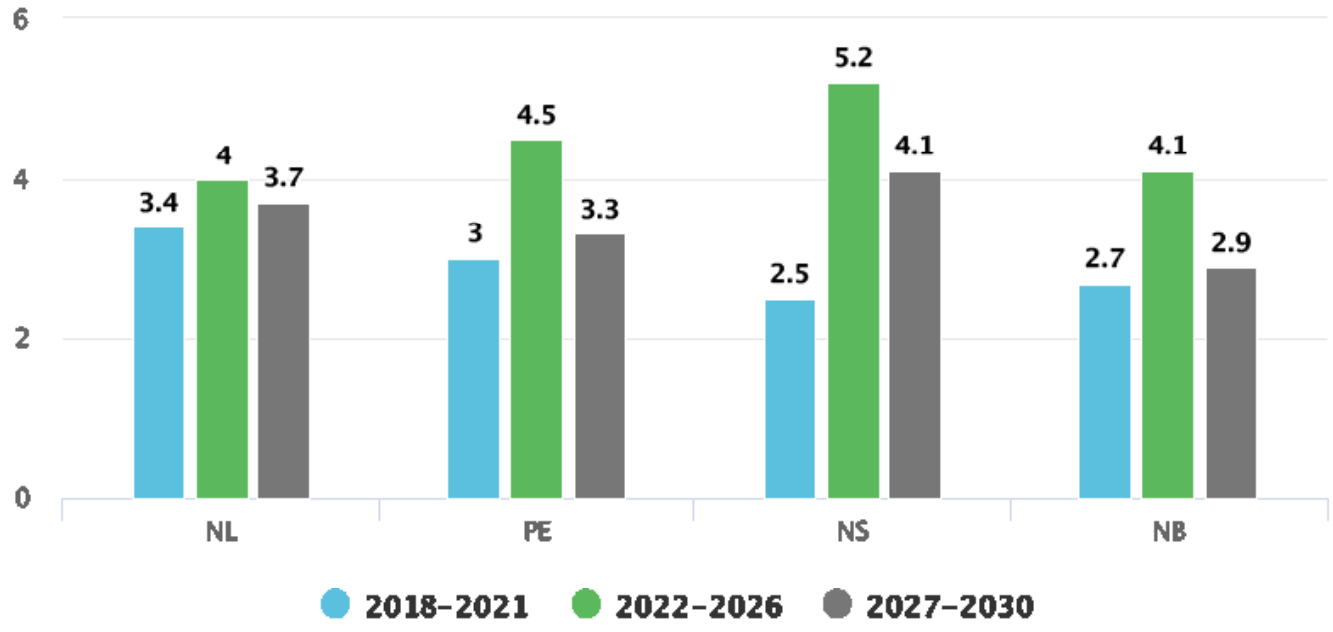
- **Fish and Seafood Landings** – Tightly tied to quotas are actual landings, which in essence are the amounts of raw product available for the Atlantic fish and seafood processing industry taking into account that there is raw product imported from other areas, and not all fish and seafood landed in Atlantic Canada is necessarily processed in Atlantic Canada plants. Landings vary considerably from year-to-year and economic factors do not seem to have significant explanatory power. Seafood landings by species, province and by value, quantity (weight) and real or inflation-adjusted dollars terms are included in the model used to predict demand (see Appendix D for landings by province and species).

- **Aquaculture** – Aquaculture production varies considerably over time and aligns with different demands and growth potential for the fish and seafood processing sector in Atlantic Canada depending on species, location and volumes. From the data used for the model, it appears that provincial production for some species has disappeared, while production for other species has expanded exponentially at incredibly fast rates. The growth of aquaculture in some regions (e.g., mussel or oyster farming) is having a direct impact on the demand for labour with often different opportunities compared to the larger, more seasonal lobster processing plants that may be present with the same regions.

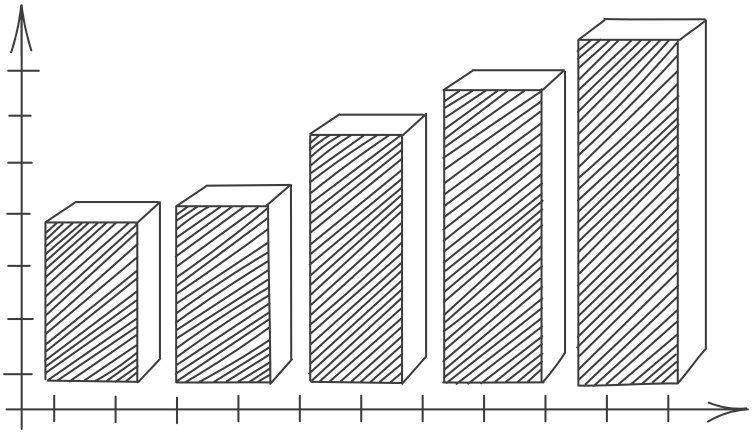
- **International Exports** – As previously noted, international exports of fish and seafood products are a key driver of growth. In understanding the potential growth of international exports for the industry, a number of variables were considered including the impact of various trade agreements (Canadian – European Comprehensive Economic and Trade Agreement (CETA); Comprehensive and Progressive Agreement for Trans-Pacific Partnership (TPP11)). CETA is anticipated to have a significant impact on fish and seafood exports with Canadian producers expected to experience significantly larger gains than European firms by 2030 for specifically fish and seafood exports (20.7%) and processed foods more generally (61.5%)

Export growth in fish and seafood exports will be experienced by all Atlantic provinces (see Figure 7). Newfoundland and Labrador leads the short-term outlook with an annual average growth of 3.4%, while growth in Nova Scotia is expected to outperform other Atlantic provinces between 2022 and 2026.

**FIGURE 7: EXPORT GROWTH, AVERAGE ANNUAL GROWTH RATE (%) BY PROVINCE; 2018-21, 2022-26 AND 2027-30**




Given the constraints on raw product due to quotas, the growth outlook assumes that there will be a shift toward higher value-added products over time. Stronger growth is anticipated for many of the finfish export categories, with particularly strong growth for herring, capelin and salmon. The strong gains in salmon export reflect strong production gains in fish farming. Several shellfish categories are forecast to experience strong growth, particularly shrimp and crab over all the sub-periods. Lobster is expected to experience moderately strong growth over the forecast period. Prepared seafood products are also expected to see moderately strong growth over the forecast period, particularly crustaceans, molluscs and other aquatic invertebrates.



# 5.3 UTILIZATION OF TECHNOLOGY BY SECTOR


**SUMMARY**

For Canada to compete in global markets for seafood products, advanced processing technologies and automation developed specifically for Canada are needed. Currently, Canada lags behind in both R&D and technology/automation implementation in the seafood processing sector. Particular challenges include species-specific needs related to technology, lack of interest in the industry from Canada's technology sector, industry uncertainty and seasonality and industry structure (e.g., small, multiple species plants).


## CONSIDERATIONS

The seafood processing industry in Atlantic Canada appears to currently be at a crossroads with respect to further development. The sector is presently characterized by a heavy reliance on a seasonal, low-wage, low-skilled labour force to produce lower value products. This makes it challenging to potentially transition to higher value products that rely upon advanced automated methods that require significant upfront investment (technology, R&D investments), as well as potentially different skill levels among the workforce (and likely higher labour costs).

## ASSOCIATED RECOMMENDATIONS

- Regional solutions
- Sector employment opportunities awareness campaigns
- Summer employment
- Attracting immigrants to settle in fish and seafood processing communities
- Flexible workplaces
- Innovation partnerships

The study undertook a review of the positioning of Canada's seafood processing industry in relation to other countries and examined some of the contributing factors, particularly as they relate to human resource needs and challenges. Overall, the main conclusion from this review was that...

> **"...for Canada to compete in global markets for seafood products, advanced processing technologies and automation developed specifically for Canada are needed."**

The review noted that compared with Scandinavian countries such as Iceland and Norway which lead the seafood processing industry for many of the same species, Canada lags behind in both the R&D and implementation of technology and automation for the seafood processing sector. Some of the contributing factors outlined by the review include:

- **Species-specific needs** – Currently, Canada is a major global supplier of lobster and crab when compared with other countries, so if better technology is required for processing these species (currently, some of the most labour-intensive areas of seafood processing), then the onus will likely be on the Canadian R&D community and technology sector to develop better technology for processing these species.

- **Lack of technology sector interest** – Development of new technologies must come from the technology sector or R&D organizations. Canadian technology companies do not tend to see the fishery as an attractive market, and government support for R&D organizations has been unreliable and viewed as difficult to access.

- **Seasonality of industry** – The capture portion of the industry (large proportion currently compared with aquaculture) is largely reliant on fishing quotas, which are seasonally based. The processing industry has a relatively short period of time within which to process many of the products, which in turn limits the number and type of processing that is possible and hinders investments in automation and robotics (through decreased return on investment). The review noted that Canada produces large volumes of fresh raw material in short periods of time and often at a time of the year that does not yield the highest quality product.

- **Uncertainty in industry** – The Atlantic Canadian seafood processing industry faces considerable uncertainty because of various factors such as the state of the resources, ongoing impacts of climate change, resource management regimes, and supply of labour from both local and temporary sources. Fluctuations in quota and declining resources are negatively impacting the ability of companies to invest in operations or secure funding for technological investment. This uncertainty reduces investments, returns are unclear, and consequently it is challenging for the industry to raise capital.

- **Diversity of species, plant sizes and number of producers** – Many of the seafood processing plants in Canada are relatively small, process multiple species and focus on a single or limited number of product forms. This contrasts with the European processing plants that tend to be highly specialized according to species and produce an array of product forms. The Canadian approach tends to result in many species being processed to minimal requirements and a general lack of investment in state-of-the-art processing technologies. This may be changing within the Canadian context as the processing sector has recently been experiencing a consolidation in the number of individuals and companies engaged in the industry. However, the review noted that the consolidation is happening slowly, as the main areas of access needed are for raw product and labour supply, which is difficult to transfer across owners.

- **Current investment dilemma of Canada's seafood processing industry** – The seafood processing industry is currently caught between low-cost, low-value products that are processed with labour expense (labour-intensive; low wages) and high-value products that rely upon advanced automated methods, which require significant upfront investment (technology, R&D investments). This is a particularly difficult dilemma within the context of uncertainty surrounding access to raw product, sometimes poor quality of raw materials, and a shrinking abundance of some species. These are generally not the circumstances that allow companies to make investments in technology and automation.

- **Fragmented industry structure** – The review noted that the industry is fragmented with inconsistent supply and a lack of vertical integration. For various reasons, there is a lack of consolidation among harvesters, processors and marketers, which in turn challenges processing companies from making investments in technology and automation. The current industry structure does not support fewer, larger plants that specialize and operate year-round with a consistent supply of year-round product and vertical co-operation (e.g., Iceland).

The comparatively limited investment in technology and R&D in the Atlantic Canadian seafood processing industry contributes to some of the following impacts for the sector:

- **Heavy reliance on a seasonal, low-wage, low-skilled labour force** – For many processors, the current business structure requires access to seasonal workforces that are relatively low-skilled and requiring low-wages in order to process large volumes of raw materials into a limited number of product forms, generally at a primary processing level. As labour supply becomes increasingly tight and labour forces are gaining higher levels of skills and education in many regions, this reliance becomes a liability for the industry.

- **Limited capacity to extract maximum value from the resource** – The review noted that a recent report concluded that "Canada's seafood industry…fails to extract maximum value from the resource."[4] It was noted that opportunities for value maximization have not yet been adopted and implemented in Canada for various reasons, including the unpredictable availability of raw material, quality of raw material, lack of capital to process by-products, and failure to develop industry-wide approaches. It was noted that minimally processed products are not "branded" as from Canadian processors as there is currently no mechanism to brand unprocessed or semi-processed products. This can have an impact on the benefits from trade agreements, which may not be realized by an industry focused on supplying raw material, and ultimately the value of Canadian fish and seafood.

In interviews with plant managers and industry representatives, many of the same themes and issues were identified. Across various regions and sites, there was a wide range of approaches to investing and integrating into technology. These ranged from plants that reported using the same equipment installed more than 30 years ago, to considerable recent investments in infrastructure and technology. Many of the more recent investments were reported to be related to trying to extend seasons by holding or preserving raw or lightly processed product until it could be further processed (e.g., holding tanks, cold storage). The reasons for this was to address the labour shortage issues, to improve product quality and to work at developing value-added products through further processing.

The challenges with adopting and adapting technology to the Canadian context were also readily apparent from the interviews with plant managers with various examples of attempts at investing in technology or automation with at times poor results. One manager remarked that they had "a shed full of equipment that was supposed to work." As well, given the competitive nature of the industry, in plants where there had been successful integration of technology or specialized processes put in place to assist with automation or develop a new product/process, the companies interviewed considered this information as proprietary, and, not surprisingly, were often less willing to describe it in detail.

During interviews there were also discussions on how investing large amounts in technology or plant infrastructure is challenging given the uncertainties with respect to supply (e.g., one plant visited was sitting idle for the year given that the supply of raw material was no longer available), the seasonality of the industry (e.g., investing in equipment that will sit idle for six months of the year).

4. Gardner Pinfold Consultants Inc. (2017) Extracting maximum value from Canada's fisheries and aquaculture resources. Agriculture and Agri-Food Canada.

# 6.0 FISH AND SEAFOOD PROCESSING OCCUPATIONS

One component of the current study was to gain a more thorough, detailed understanding of the various occupations within the fish and seafood processing sector. Work was undertaken to define occupations and career paths by collecting and analyzing job descriptions, advertisements, organizational charts and other occupational information from a variety of processors, conducting interviews with processors, and reviewing the results with an industry-led advisory group.

# 6.1 FISH AND SEAFOOD PROCESSING OCCUPATIONS


## SUMMARY

Fish and seafood processing occupations consist of six main levels ranging from foundational occupations (e.g., fish/seafood plant labourer, fish/seafood packer) to intermediate (e.g., fish/seafood cutter, fish trimmer) to higher skill (e.g., lead hand and foreperson) and supervisory occupations (e.g. processing supervisors). In addition, there are levels of management positions as well as senior executive leadership occupations (e.g. VP Operations). The other closely connected group of occupations is related to quality control and quality assessment. There are five occupational levels ranging from foundational (e.g. quality control inspector) through to senior executive leadership occupations (e.g. senior quality assurance manager).

Observations found to be related to the diversity of how occupational levels are represented in firms included: 1) unionization has a significant impact on division of labour in facilities; 2) the size of the facility has an impact on distinctions and difference between occupations; 3) there are significant physical requirements for many of the positions; and 4) there are different skill requirements between fish and seafood processing.


## CONSIDERATIONS

There is a heavy reliance in the seafood processing industry on on-the-job training with four out of the six occupational categories requiring no specific post-secondary training or education, and three out of the six occupation categories not necessarily requiring high school diplomas. This presents both opportunities and challenges for the sector.

One key opportunity is that entry into the sector is easy. There are very few educational or training barriers in the way for lower-skill level workers who have limited formal education to be considered for a job in the industry. Another opportunity is that there is room for career progression within the industry based on work experience rather than upgrading or a return to formal training/education.

One challenge with respect to the lower educational and skill level requirements for many of the occupations is that the sector can be perceived as a low-skill sector with limited career progression opportunities. This can make it challenging for recruiting and retaining workers. Another challenge with the lower educational requirements and reliance on experience is that the sector can be easily overlooked as a potential career by youth given there are no specific training programs or diplomas associated with many of the occupations. Career decision-making is often decided by what "program" a student selects to follow at the post-secondary level. If there is no close association between a sector's occupations and post-secondary training and education programs, sectors may not even be considered by youth or their parents as viable career options.

The career ladder for fish and seafood processing is based on six occupational levels ranging from the Foundational Skill Level (typical entry-point into the industry) to the Senior Executive Leadership Skill Level (manage corporate affairs and lead the strategic direction of an organization). As illustrated in Table 1, the first four levels of occupation do not usually require any post-secondary education, but instead, there is a heavy reliance on experience in the industry and on-the-job training.

## ASSOCIATED RECOMMENDATIONS

- Summer employment
- Attracting immigrants to settle in fish and seafood processing communities
- Social assistance re-skilling
- Industry learning programs
- Sector employment opportunities awareness campaigns

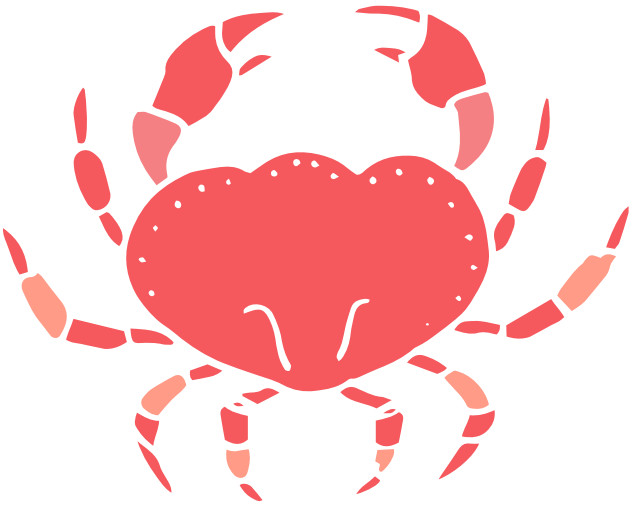
**TABLE 1: FISH AND SEAFOOD PROCESSING OCCUPATIONS**

| LEVEL | SAMPLE TITLES | NOC | EXPERIENCE/EDUCATION |
|---|---|---|---|
| Senior Executive Leadership | Director of Operations<br>VP of Operations | 0016<br>0911 | Experience in the seafood processing industry is the most significant requirement |
| Management | Fish/seafood processing manager<br>Fish/seafood processing plant manager | 0911 | Minimum of 5 years of experience in seafood processing industry; Degree or diploma in Food Science may be considered an asset; Leadership experience |
| Supervisory | Fish/seafood processing supervisor<br>Raw room supervisor<br>Process room supervisor | 9213 | 3-5 years of experience in seafood processing industry; High school diploma |
| High Skill | Fish/seafood processing lead hand<br>Fish/seafood processing foreperson | 9213 | Minimum 1 year of experience as fish/seafood processing worker; High school diploma may be required |
| Intermediate | Fish/seafood cutter<br>Fish/seafood plant worker<br>Fish/seafood processor<br>Fish/seafood cleaner<br>Fish trimmer<br>Fish cutter | 9463 | Experience as a labourer may be required; Some high school education may be considered an asset |
| Foundational | Fish/seafood processing labourer<br>Fish/seafood packer<br>Fish/seafood plant labourer<br>Fish/seafood handler | 9618 | No experience required; Some high school education may be considered an asset |

Some observations regarding fish and seafood processing occupations that were made during the study included:

- **Impact of Unionization on Occupational Levels** – Unionization of workers (and collective agreements) have a significant impact on the division of labour (tasks often classified by rate groups) as well as the degree of worker mobility across functions and departments within a facility. Collective agreements tend to stipulate the duties that workers in specific rate groups can perform. Non-unionized job positions and non-unionized facilities appear to have more flexibility in regard to cross-training workers and moving workers based on aptitudes, skills and personal competencies.
- **Facility Size Impacts Occupational Levels and Titles** – Job titles are dependent upon the size of the organization. In larger organizations, job titles reflect more subdivided and specific processes/tasks. In small operations, the titles tend to be more generic/broader, and individuals perform numerous functions on an as-needed basis.
- **Physical Environment and Manual Labour Requirements are Significant** – Fish and seafood processing requires a high degree of manual labour (in addition to automation). In addition to the physicality of the jobs, the environment is also a critical factor for these areas. Working with live product and the physical environment (e.g. cold, hot, wet, odorous, etc.) adds another layer of complexity to these jobs.
- **Differing Skill Requirements for Fish vs. Seafood Processing** – Through the research, it became apparent that there is more skill differentiation and development in fish processing facilities as compared to seafood processing facilities when it comes to cutting/filleting fish. There is more of a differential between Foundational, Intermediate and High Skill Level workers on the processing line within a fish processing facility than a seafood processing facility, mostly due to the knife skills required in fish processing.

In addition to the fish and seafood specific occupations, other key occupations in the industry include those under the areas of quality control and quality assurance (QA/QC). Each plant will have a number of workers in these areas, and they often are integral to career progression for some of the workers. As outlined in Table 2, the Foundational level occupations have no requirement for post-secondary education, but often do have industry experience requirements. There are quality functions (in regard to inspecting and grading) that are performed by processing workers who have received extra training to perform this specific function. They perform this quality function on the line and most often report to a production/processing supervisor, not the QA department.



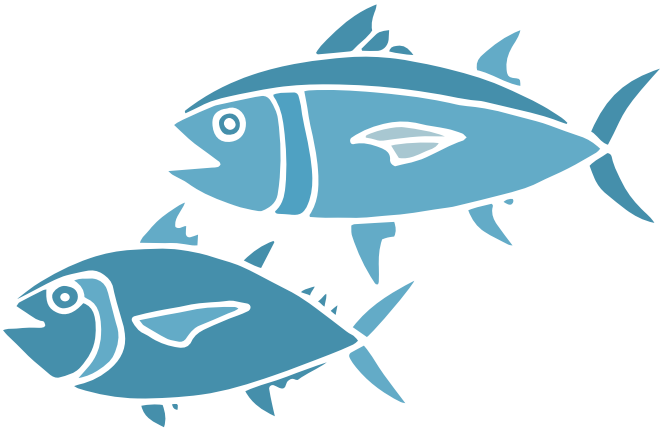


**TABLE 2: QUALITY CONTROL AND QUALITY ASSURANCE OCCUPATIONS**

| LEVEL | SAMPLE TITLES | NOC | EXPERIENCE/EDUCATION |
|---|---|---|---|
| Senior Executive Leadership | Senior quality assurance manager<br>Director, Corporate food safety and quality | 0016<br>0911 | Significant QA/QC experience (e.g. 10+ years) within food and beverage processing facilities; Graduate level education and significant leadership experience often required |
| Management | Quality Control<br>Quality control manager<br>Food safety and systems manager<br>Quality Assurance<br>Quality assurance manager<br>Food safety manager<br>Quality assurance program compliance manager | 0911 | Bachelor of Science (master's degree may be preferred); Minimum 5 years QA experience |
| Supervisory | Quality Control<br>Quality control supervisor<br>Quality Assurance<br>Quality assurance supervisor<br>HACCP co-ordinator<br>Quality assurance trainer | 9213 | Bachelor's degree in Food Science and Technology or related disciplines; 2-5 years of experience in food processing industry |
| Intermediate | Quality Control<br>Quality control technician<br>Quality Assurance<br>Quality assurance technician<br>Food safety and quality assurance technician<br>HACCP technician<br>Quality assurance coordinator | 2211 | Degree or diploma in Food Science or related field; Experience in a food processing facility an asset |
| Foundational | Quality Control<br>Quality control inspector<br>Presenter/detector<br>HIP (HACCP Based Inspection Program) technician<br>Quality control checker<br>Product grader<br>Quality Assurance<br>QA inspector<br>QA raw materials inspector<br>HACCP assistant | 9465C<br>2222 | High school diploma or equivalent; 1 year of experience in food processing and/or QA |

*Source: FPSC (2017) – Climbing the Ladder: Understanding Career Paths in Quality Control + Quality Assurance*

# 6.2 FISH AND SEAFOOD PROCESSING CAREER PROGRESSION


## SUMMARY

Within the fish and seafood processing sector, the usual path for career progression involves starting at the foundational or intermediate level occupations and potentially moving up toward higher skill and possibly supervisory positions. Given that the clear majority of jobs in the industry are at the foundational or intermediate levels, many of the workers who remain in the industry will work at the foundational or intermediate levels, with a few moving into the higher skill, supervisory and management levels.

The fish and seafood processing sector occupations do intersect with the QC/QA occupations where workers in higher skill fish/seafood occupations could move into a QC/QA occupation at the foundational level. However, further advancement in the QC/QA stream would likely require additional educational requirements.


## CONSIDERATIONS

The largest number of jobs in the industry are at the foundational and intermediate levels, which indicates that there will only be a small proportion of workers who advance their way into supervisory positions. For example, in 2017 there was one supervisor for every 13 workers at the foundational and intermediate levels. This indicates that while career progression is possible, it will not necessarily be fast or certain for new entrants. With the current higher level of turnover combined with the higher levels of anticipated retirements, this may create opportunities for newer employees to progress into supervisory positions.

In interviews with employers and employees, it was noted that it can be challenging to fill supervisory positions from the core staff. One reason provided was that the workers who had considerable experience and return for multiple seasons were not necessarily motivated to work in supervisory positions. They were generally more comfortable in familiar jobs and positions and did not wish to be in a supervisory role with their co-workers. Another reason provided was that the amount of extra pay associated with supervisory positions did not sufficiently compensate for the amount of extra stress that they associated with the job.

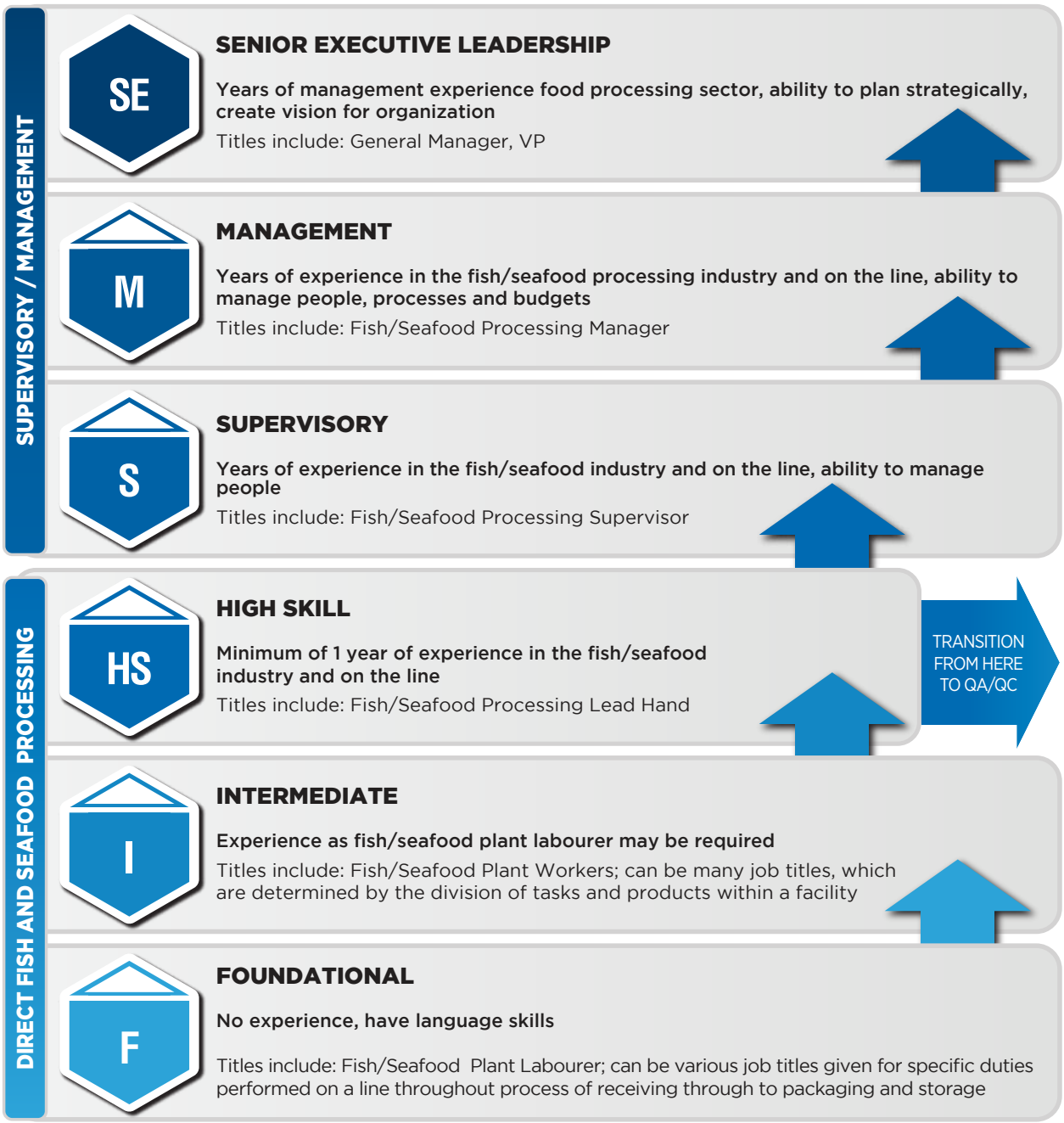
## ASSOCIATED RECOMMENDATIONS

- Social assistance re-skilling
- Industry learning programs
- Regional solutions

The research found that typical career progression within the fish and seafood processing sector follows the sequential steps from Foundational Levels progressing to Intermediate and Higher Skill Levels with some then potentially moving into supervisory and management levels (see Figure 8). From interviews with plant managers and workers, the vast majority of the workforce is generally at the Foundational and Intermediate Levels, with many of the core workers in this group having remained in these positions for decades. As a result, while this shows a potential career path, the majority of workers entering the industry remain at a Foundational/Intermediate Level.

As the graphic illustrates (Figure 8), workers within High Skill Level occupations (such as Lead Hand) may move to the Quality Control/Quality Assurance Department and assume a role of Quality Control Inspector. This position is still a production/processing line position, but the Quality Control Inspector performs quality control tests and inspections on the processing line.

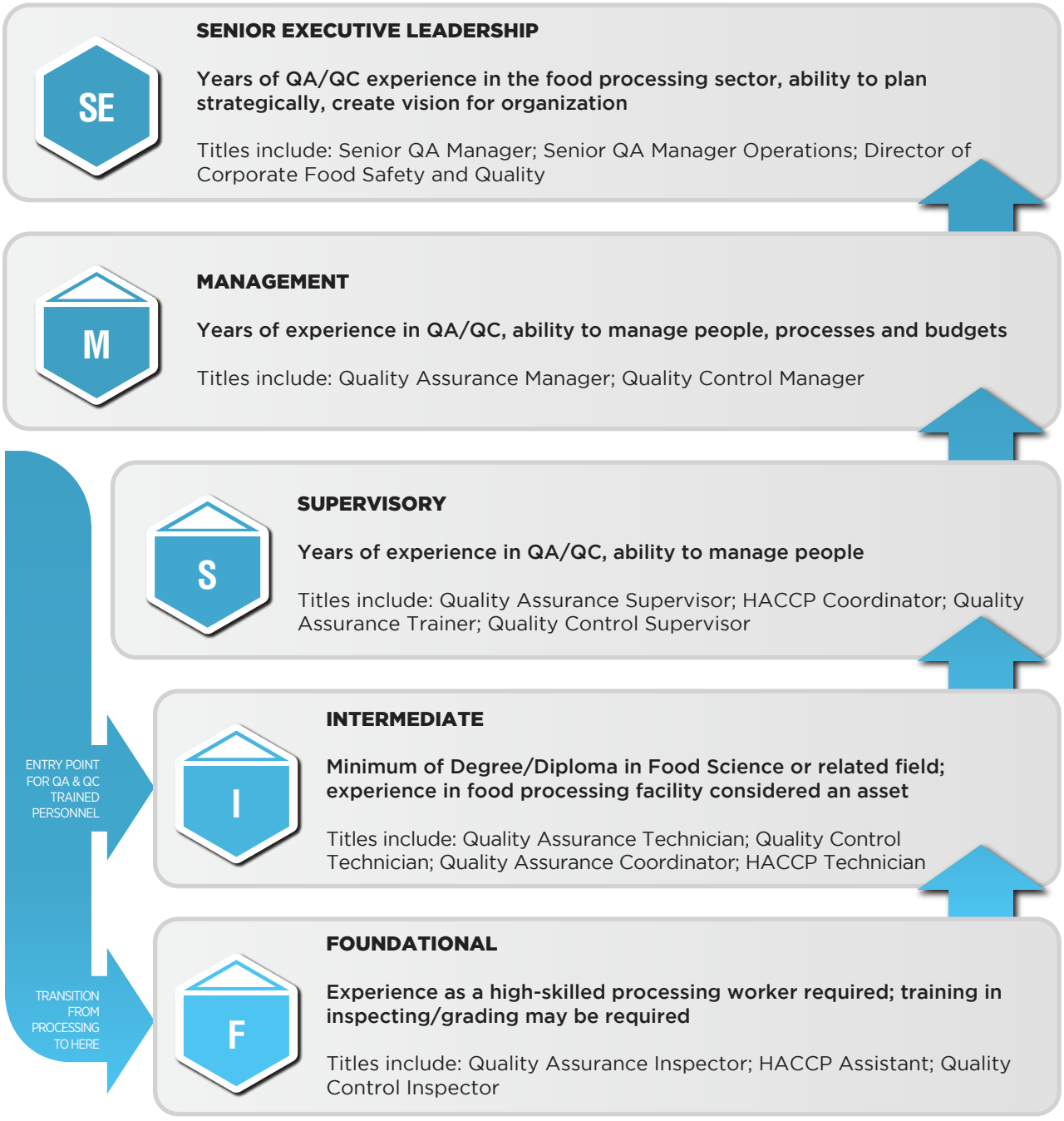
**FIGURE 8: CAREER PROGRESSION FOR FISH AND SEAFOOD OCCUPATIONS**




*Source: FPSC (2017) – Climbing the Ladder: Understanding Career Paths in Quality Control + Quality Assurance*

The intersection between the career ladder for Fish and Seafood Processing Occupations and those found in Quality Control/Quality Assurance is outlined in Figure 9. Those entering the QA/QC occupations directly from industry are generally entering at a foundational level, while those entering with some relevant post-secondary training in food science or related areas will generally enter starting at the Intermediate level.

**FIGURE 9: CAREER PROGRESSION FOR QUALITY ASSURANCE AND QUALITY CONTROL OCCUPATIONS**




*Source: FPSC (2017) – Climbing the Ladder: Understanding Career Paths in Quality Control + Quality Assurance*

# 7.0 SOURCES OF POTENTIAL WORKERS

The study examined multiple sources of potential workers for the fish and seafood processing industry considering various groups' current representation in the sector's workforce, their availability, as well as various opportunities and challenges that have been identified in recruiting greater numbers from these groups into the sector. The main groups of focus for the study included youth, unemployed workers, immigrants and temporary foreign workers, and Indigenous Canadians.

# 7.1 REGIONS' LOCAL SOURCES OF LABOUR


## SUMMARY

The industry is characterized by having a large number of small- to medium-sized plants dispersed along the coastal small towns and villages of the four Atlantic provinces. This results in particularly small populations from which to draw an adequate labour force. Reviewing the local regional sources of labour, it was noted that women play a significant role in the industry making up 43% of the workers in 2017. Similarly, there is a strong reliance by the industry on older workers with more than one-third (37%) currently aged 55 years or older. According to interviews with employers, workers who temporarily relocate from another region or another province to work in the seasonal industry has decreased. This is largely believed to be a consequence of more local opportunities being available, better-paying jobs in Western Canada, and the overall aging of this segment of the workforce.


## CONSIDERATIONS

While the geographic placement and dispersion of the numerous processing plants are largely historically based, this can produce challenges for obtaining an adequate local workforce as many of the plants are located in small towns and villages in rural Atlantic Canada. The continued demographic shift toward more urbanized settings and the consequential depopulation of parts of rural Atlantic Canada increases the challenges in finding an adequate local workforce.

Employers expending the ongoing effort that is needed to continue to recruit and retain local labour forces should consider the specific needs and preferences of the available groups. Employers who have workforces that consist of large proportions of women may need to consider aspects such as childcare provision, school holidays and parental leave factors. Workforces made up of larger proportions of older workers may need additional considerations such as length of shifts, time off for medical appointments, provision of health benefits and transition into semi-retirement stages.

## ASSOCIATED RECOMMENDATIONS

- Regional solutions
- Attracting immigrants to settle in fish and seafood processing communities
- First Nations partnerships
- Employing temporary foreign workers

As noted in Section 5, the Atlantic fish and seafood processing industry is characterized by having a relatively large number of small to medium plants dispersed along the coastal areas in the four provinces. The geographic locations and dispersion of plants are connected to the structure of the fishery and landing sites, which in turn is often linked to the historical placement of previous generations of the current plants. In only a few situations are fish and seafood processing plants within a traditional commute from the larger urban centres (e.g., Halifax, Moncton, St. John's). Many of the sector's employers are located in relatively small coastal towns

and villages that have a long history of fish harvesting and processing but are also experiencing population declines and considerable demographic shifts as youth and young families are moving into more urban settings to pursue educational and employment opportunities. In many cases, communities are noticing declines in their labour supply as workers of various ages and skill levels choose to temporarily locate to other regions in Canada to take advantage of well-paid employment in sectors such as oil and gas, construction, and other skilled trades. These ongoing shifts and changes make it particularly relevant to study the labour force at a relatively small, defined regional level in order to understand the actual labour sources available for local industry.

The detailed analysis of labour sources for the current study occurred primarily at the regional levels as specific supply-and-demand projections were developed for 12 regions in Atlantic Canada. These results are presented in separate regional reports prepared for each region. In addition, through the survey of establishments and various interviews, some overall themes and findings on current labour sources more broadly emerged. These included:

- **Women play a significant role in the industry representing nearly one half of the workers** – The survey of processing establishments found that 43% of workers in the industry are women. This is consistent with the findings from interviews and site visits that indicated approximately one-half of employees are women. From interviews, it was noted that women traditionally have played a key role in fish and seafood processing, as historically many fishing families and communities had men more likely to work as harvesters and women involved in processing particularly during the earlier periods when canning and salting were the primary modes of processing. Observations from interviews and visits noted that women are integrated throughout the various occupational levels ranging from plant workers through to management.

- **Reliance on older workers** – One of the main labour sources for the industry is older workers (age 55+) who make up more than one-third (37%) of the current workforce, according to the survey of establishments. From interviews and site visits, most of these employees have worked in the industry for many years, often with the same employer. There were many examples of workers well over the traditional retirement age of 65 years working in the plants. Employers noted in interviews that this group of older workers is often their "core workforce" who are dependable, return season after season, assist in training and integrating new employees, and have adapted to the various changes in technology and processes that many of the plants have undertaken during their tenure as employees. If the plant is one where they provide performance/piece bonuses, these employees are often the highest paid given their levels of skill and experience. They often live in the local community and rely on the plant to provide them with sufficient employment duration to qualify for Employment Insurance (EI).

- **Temporary regional relocations are less frequent** – In a few regions such as areas in Newfoundland and New Brunswick, the core workforce made up of older workers who return for multiple seasons to the same employer, also includes workers temporarily relocating from other regions (often from regions in Newfoundland) for the processing season. While this was noted in Newfoundland as continued common practice, for areas in other provinces that had traditionally relied on a workforce temporarily relocating from Newfoundland, the employers indicated that this has been less frequent within the past decade. The reasons provided for this decline was that there are better opportunities in Western Canada for this group of workers, and the group that had traditionally relocated were now older and retiring from the industry.

- **Heavy reliance on internal sourcing of supervisors and management** – The source of workers for higher skill levels occupations is observed as matching very closely the career progression paths outlined previously in Section 4. During interviews and site visits, most of the supervisors and managers interviewed had "come up through the company" starting out on the plant floor as a labourer or on the processing line as a young employee. This included a wide range of management positions including human resources, marketing, operations and quality assurance.

# 7.2 YOUTH AS A LABOUR SOURCE


## SUMMARY

The availability of youth as a labour source for the fish/seafood industry is decreasing as youth unemployment rates continue to decline, youths' participation in post-secondary education increases, and youth move out of rural Atlantic Canada. Some employers are focusing on students as a desirable cohort from which to recruit. Challenges identified in recruiting youth to work in the sector include students wishing to match summer employment with their career interests, the unpredictability of the sector and working conditions that require long hours, and increased employment opportunities for the youth (as reflected in lower unemployment rates).


## CONSIDERATIONS

Youth is continuing to be a challenging segment of the labour force for the fish and seafood processing sector to successfully recruit and retain. Some of these challenges are related to the trends of greater participation in post-secondary education by youth, along with an overall decrease in the youth unemployment trends and increased urbanization of youth as they move out of rural Atlantic Canada where many of the fish/seafood processing plants are currently located.

Where there has been some success in the recruitment and retainment of youth is by focusing on student segment and presenting opportunities in the sector as dependable, good-paying summer jobs. Some employers have accompanied this by developing a "team" approach with students and emphasizing their contributions to a sector that produces high quality Canadian seafood for the global market, in essence attempting to make it more than "just a job" and in addition focus on engagement with the industry.

Given the lower barriers and entry requirements for the industry, the fish/seafood processing sector may be a good fit for youth who are experiencing significant employment barriers. This type of initiative would need to be implemented with the proper supports, but could extend to community/training agencies working with at-risk youth on essential skills and employment-readiness training during the shoulder and non-peak seasons, which then transition into supported work placements in the peak seasons with fish/seafood processing employers. This would require the development of partnerships between the sector's employers and youth-serving agencies to ensure ongoing support of youth as they transition between skills training and work placements in the industry.

## ASSOCIATED RECOMMENDATIONS

- Regional solutions
- Sector employment opportunities awareness campaigns
- Summer employment
- Industry learning programs

## 7.2.1 Current representation of youth in the seafood processing

Although not directly measured on the survey of establishments, the proportion of youth currently in the industry appears to be somewhat variable according to region and plant. Overall, the industry workforce is aging with employers indicating greater challenges in recruiting and retaining youth in the industry resulting in proportionally fewer youth becoming engaged with the industry.

## 7.2.2 Availability of youth as a labour source

Youth employment is challenging to generalize given the various nuances and broad scope of issues combined with the diversity of youth as they make various transitions. Combined with the regional considerations with the labour market, the analysis of youth as a labour source would be most accurate at the regional level for the fish and seafood processing industry. That being said, some of the main themes and issues regarding youth availability highlighted by the study results included:

- **Declining youth unemployment rates** – Recently the Canada youth unemployment rate had reached a 40-year low at 10.3% (December 2017[5]) compared with rates in the 1980s in the 20%+ range. While still generally higher than for the working age population overall, youth unemployment rates have continued a relatively steady downward trend. This indicates that for the seafood processing industry, hiring youth has become increasingly competitive as employers from various sectors are attempting to hire the same group.

- **Increased education levels in youth cohort** – Participation rates in post-secondary education continue to increase among the youth cohort resulting in higher education levels among youth compared to other age groups. Given the occupational structure of the seafood processing industry, the majority of the positions are targeted toward a lower-skill level with many positions not requiring any specific educational requirements. This is a mismatch with the increasing proportion of youth who are pursuing post-secondary studies contributing to the challenge of identifying many within the youth group as a viable labour source for the industry.

- **Urbanization of youth** – As noted previously, there is a continued trend toward youth and young families leaving rural settings and moving into more urban areas. Part of this is likely related to the need to often move to urban settings to pursue post-secondary education, combined with the availability of employment opportunities within selected career paths, ease of school to work transitions, and a generally more mobile generation with greater opportunities for travel and networking across geographical boundaries. As a result, there are fewer youth in many of the rural communities than previously, and those who do remain have increasingly more choices regarding employment.

5. Statistics Canada (2017) The Daily – Labour Force Survey December 2017

## 7.2.3 Opportunities for engaging youth as a labour source

According to interviews with employers, some of the success they have had in recruiting local youth has been with respect to student summer employment opportunities. Youth who have gone away to study in urban centres for the fall/winter return to their home communities for the summer (to live rent-free with parents) and are often looking for summer employment. While in some communities there is considerable competition for summer students from other sectors (e.g., tourism, agriculture), in other regions there are plants that are employing summer students to make up to 10% of their peak staff levels. While often these students have connections to the plant through family members, there were some plants that had been successful engaging with international students who are eligible to work in Canada while on student visas. In one jurisdiction there is a joint industry-provincial-federal project focused on recruiting students to work in the seafood processing industry (Team Seafood PEI), which offers perks such as transportation and scholarships for working in the industry during the summer.

## 7.2.4 Challenges in engaging youth as a labour source

Many of the challenges experienced by the seafood processing industry engaging with youth are with respect to their decreasing availability for these types of job opportunities. The declining number of youth within the communities that are within commuting distance of plants is the largest challenge. Other challenges noted in interviews included:

- **Matching summer employment with career interests** – Many youth are working toward a post-secondary certification or degree. In most cases, students are now viewing their summer employment as an opportunity to find career-related work experience, even though it may pay less than seasonal opportunities in other sectors. This focus on resumé building very early in careers can present challenges in the availability of a student workforce for more lower-skill, labour-intensive summer work opportunities. As well, there are increasingly more post-secondary programs that have "co-op" placements as employment portions of programs, which in turn decreases the number of students that are looking for more traditional non-career related summer employment opportunities.

- **Unpredictability and working conditions** – Employers noted that youth can find the unpredictability of the work schedule for plants challenging, particularly the lack of days off during peak work season. The working conditions are such that days can get extended to 10-14 hours, and scheduled days off can get cancelled due to plant workload. For youth and particularly students who are also involved in other activities (e.g., sports, social activities, part-time studies), this level of unpredictability and working conditions are not viewed as desirable for temporary summer employment. This can be particularly challenging over the summer period when employment is often "fit" in among other activities and events in young people's lives.

- **Increasing number of local opportunities for youth** – As youth become a smaller source of labour, those who are locally available are often experiencing an increasing number of opportunities for employment, as evidenced by the decreasing youth unemployment rate in many regions. Given some of the challenges with perceptions of seafood processing along with other challenges related to working conditions (seasonality, unpredictability), employers participating in interviews indicate that it is getting increasingly challenging to identify local youth to hire and hopefully join (and eventually replace) the aging "core group" of employees who return for subsequent seasons.

# 7.3 UNEMPLOYED WORKERS AS A LABOUR SOURCE


**SUMMARY**

The high degree of seasonality in employment necessitates large pools of reserve labour to meet peak employment requirements in seafood processing and many other sectors. Unemployed workers are the main labour source available to meet these peak requirements. The EI Program plays a central role in supporting the necessary reserve pools of workers.


## CONSIDERATIONS

Relying on seasonally unemployed workers as a primary labour source can be challenging. The labour pool can shrink quite quickly at the local regional level if another employer is offering more attractive, longer duration employment opportunities that are targeting similar workers with respect to education, skill level and experience (e.g., call centres, other types of manufacturing).

Other challenges relying on a workforce that accesses EI benefits on a regular basis is that the employment requirements need to match current EI requirements in order for an adequate workforce to be recruited and retained. For example, this would include being able to provide enough weeks/hours of employment for workers to qualify for EI, not necessarily offer year-round employment for all employees (not desired by a significant portion of the local workforce), and potentially adjust work hours to match the EI policies regarding working with an open EI claim.

## ASSOCIATED RECOMMENDATIONS

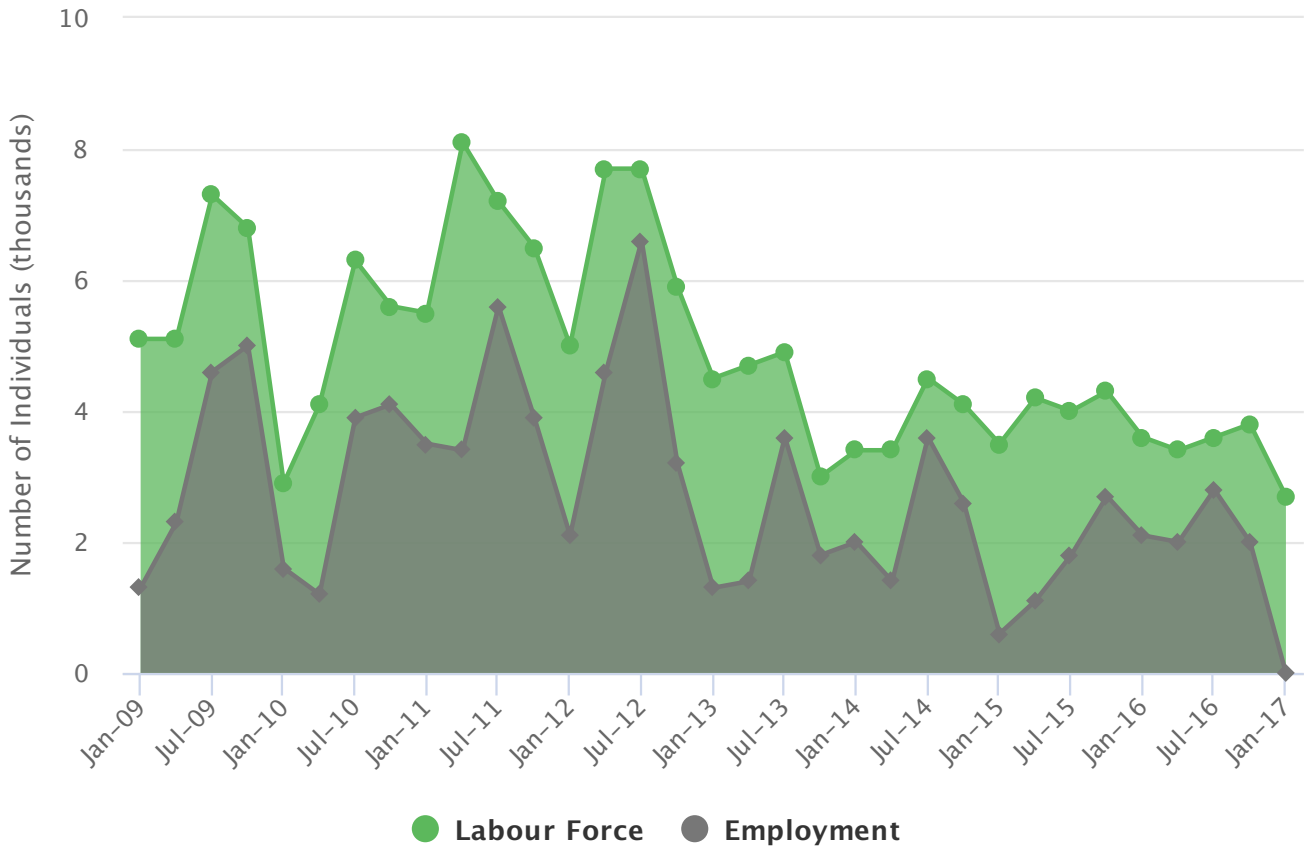
- Regional solutions
- Flexible workplaces

## 7.3.1 Availability of unemployed workers as a labour source

Given the seasonality of the industry, unemployed workers are a key source for the seafood processing sector. Large proportions of the workforce rely on EI as a component of their annual income. The high degree of seasonality in employment necessitates large pools of reserve labour to meet peak employment requirements in both seafood processing and many other sectors (see Figure 10).

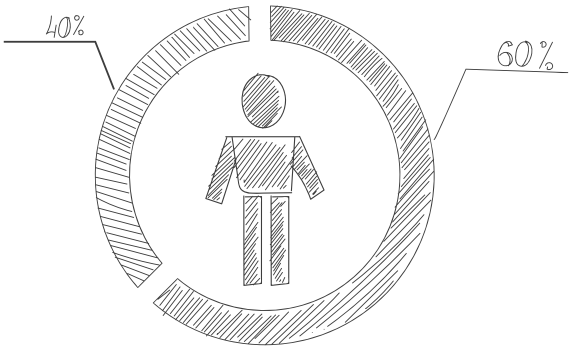
The EI program plays a central role in supporting this necessary reserve pool of workers in Atlantic Canada. If attractive, full-time, year-round job opportunities become more plentiful in communities (e.g., call centres, other manufacturing plants), then this can directly impact the availability of unemployed workers who serve as a labour source for plants. Given the small labour force attached to the communities in which plants are located, one or two shifts in the availability and nature of employment in the area can deeply impact the extent to which there are unemployed workers available during peak seasons for seafood processing plants.

**FIGURE 10: EMPLOYMENT AND LABOUR FORCE, FISH AND SEAFOOD PLANT WORKERS (MONTHLY, 2009 TO 2017)**




## 7.3.2 Challenges in engaging unemployed workers as a labour source

Employment Insurance (EI) beneficiaries are commonly cited as an available pool of labour for employers. It is important to note that differences in seasonal demands between sectors and of individual employers contribute to the significant number of EI beneficiaries over the year. Recruiting workers receiving EI benefits with established patterns of seasonal work with individual employers poses significant challenges, especially if the work pays higher wages such as construction or certain service sector jobs. This pool also includes apprentices in the skilled trades attending in-school apprenticeship training who are not available to the labour force. Individuals who receive special benefits to take time off work due to specific life events (illness; pregnancy; caring for a newborn or newly adopted child, etc.) are also not available.



# 7.4 IMMIGRANTS AND TEMPORARY FOREIGN WORKERS AS A LABOUR SOURCE


## SUMMARY

The current workforce in fish and seafood processing in Atlantic Canada has relatively small proportions of new immigrants or refugees (2%) or workers that are involved with the Provincial Nominee Program (1%) or have come to Canada as a temporary foreign worker (7%). In 2017, there were 1,830 temporary foreign workers approved for employment by Atlantic fish and seafood processors. Current challenges in engaging immigrants as a labour source for the sector have been related to the willingness of established immigrants to live and work in the rural communities in which plants are located. The challenges related to the Temporary Foreign Worker program have been related primarily to the costs of applying to the program, challenges with developing the required Labour Market Impact Assessments, and the limitations placed on the number of TFWs allowed.


## CONSIDERATIONS

Under the current immigration pathways available in the Atlantic provinces, it can be challenging for immigrants to come to Canada on a permanent pathway as a fish/seafood plant worker. This is in part due to the limited number of employment opportunities that can be offered full-time on a year-round basis, and also due to the lower-skill level classifications of the occupations involved.

The need for TFWs to supplement local labour forces appears to be quite region-specific and concentrated heavily in the lobster and crab processing sub-sectors.

## ASSOCIATED RECOMMENDATIONS

- Regional solutions
- Attracting immigrants to settle in fish and seafood processing communities

## 7.4.1 Current representation of immigrants and temporary foreign workers in the seafood processing workforce

According to the survey of establishments, approximately 2% of their workforce is composed of new immigrants or refugees, while there is an additional 1% that are currently associated with the Provincial Nominee Program (PNP). Overall, employers reported 7% of their workforce consisted of Temporary Foreign Workers. According to data provided by ESDC, there were 1,433 TFW positions approved in 2016 and 1,830 TFW positions approved in 2017 for fish and seafood plant workers (NOC 9463) and labourers in fish and seafood processing (NOC 9618).

## 7.4.2 Availability of immigrants and temporary foreign workers as a labour source

The availability of immigrants to work in the industry is connected to overall immigration policy and decisions on areas of priority for immigration. Similarly, the availability of TFWs is reliant upon the federal TFWP's structure and policies. The potential supply of immigrants and TFWs for the Canadian seafood processing sector is extremely high as based on the eagerness with which many foreign workers apply to the limited positions available in Canada. Accessing this supply is then contingent on the priorities, programs and policies put in place by federal and provincial governments.

## 7.4.3 Challenges in engaging immigrants and temporary foreign workers as a labour source

Current challenges in engaging immigrants as a labour source for the sector have been related to the willingness of established immigrants to live and work in the rural communities in which plants are located. The services and supports for immigrants can be somewhat less compared to what might be received in larger urban centres. As well, some employers seem to have minimal connections between themselves and relevant community organizations working with recent immigrants. In contrast, there are other employers who view community organizations as key partners in identifying new employees and supporting their current employees who are recent immigrants.

# 7.5 INDIGENOUS CANADIANS AS A LABOUR SOURCE


## SUMMARY

From the data obtained, Indigenous Canadians appear to be underrepresented in the fish and seafood processing sector with employers indicating approximately 1.5% of their workforce identifying as Indigenous compared with an overall population in the 5.6% range for the Atlantic provinces with considerable variation between provinces (1.9% to 8.8%).

While there are a few examples of Indigenous-owned businesses and partnerships in the fish and seafood processing industry, in general, there appears to be a lack of knowledge among processors of the local Indigenous communities as a potential supply of workers. As well, Indigenous communities are also perceived by processors as being more interested in harvesting and aquaculture than they are in processing.

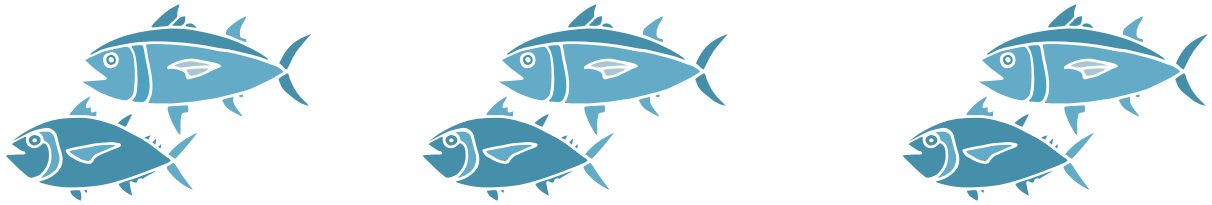

## CONSIDERATIONS

The extent to which Indigenous communities will become more involved in fish and seafood processing will depend on the communities and their proximity to the existing plants, as well as the extent to which Indigenous communities build and manage their own facilities. The study found an example of one Indigenous-owned processing plant that was successful and growing as well as one that had been shut down. Similarly, there were examples of some processors working in partnership with local Indigenous communities from which 25% of their workforce were sourced, and then examples where processors located in close proximity to Indigenous communities reported having no contact and little knowledge of the community.

Developing an understanding of how various factors can detract or contribute to greater engagement of local Indigenous communities as a labour source for processing plants will need to continue. Some areas requiring further exploration are: understanding the potential Indigenous local labour force available (e.g., labour market information and skills inventories), economic and development priorities of Indigenous communities as they pertain to both fish/seafood harvesting and processing, and the support required from both the community and employers to obtain positive results in the areas of training, recruitment, and retention of Indigenous employees.

## ASSOCIATED RECOMMENDATIONS

- Regional solutions
- Attracting immigrants to settle in fish and seafood processing communities



## 7.5.1 Current representation of Indigenous Canadians in the seafood processing workforce

According to the survey of establishments, Indigenous Canadians make up approximately 1.5% of the seafood processing workforce in Atlantic Canada. In comparison, Census data for 2016 indicates that 5.6% of the population in the Atlantic provinces are Indigenous (ranging from 1.9% in PEI to 8.9% in Newfoundland). The apparent difference between the Indigenous composition of the sector workforce and that of the broader population suggests that Indigenous Canadians are likely underrepresented. Employers in interviews indicated that they generally do not track Indigenous identity or status among their employees, so the survey result may be an underestimation.

## 7.5.2 Opportunities and challenges in engaging Indigenous Canadians as a labour source

In some regions, there is ongoing collaboration between seafood processors and local Indigenous communities to identify and support Indigenous workers in the industry. For example, one plant indicated that 25-30% of their workforce is from a local Indigenous community where they communicate regularly with the leadership and employment centre in the community to help in identifying potential workers, providing feedback where additional supports are needed for workers, and exploring other areas of potential collaboration and partnerships. Other examples include Indigenous-owned processing facilities that hire Indigenous workers from their own community along with non-Indigenous locals.

In interviews and site visits it was noted that some of the challenges employers encounter in this area are a lack of knowledge about local Indigenous communities and possible labour sources available along with any required supports to assist in recruiting this group. As well, in some regions the Indigenous communities are focused primarily on the fish harvesting industry and less on processing, or on other segments such as aquaculture hatcheries.

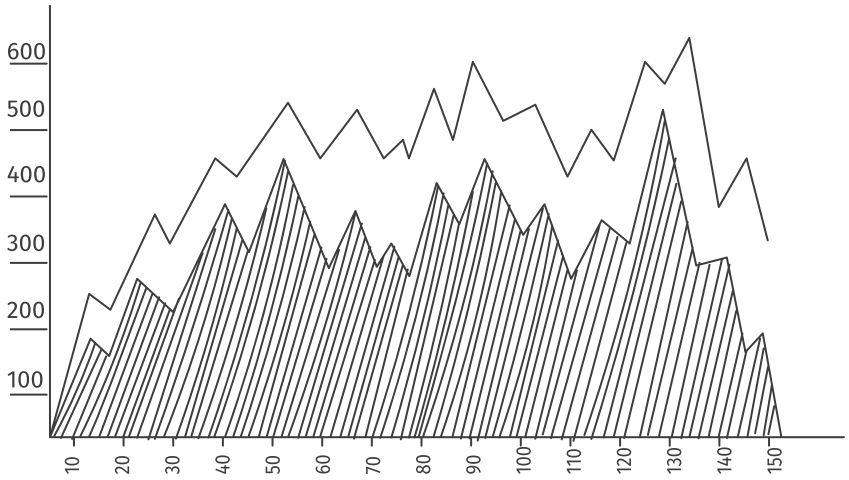
# 8.0 CURRENT AND FUTURE LABOUR DEMAND VS. SUPPLY


**SUMMARY**

Overall, the hiring requirements for workers in the Atlantic fish and seafood industry is expected to amount to approximately 7,500 workers over the 2018 to 2030 period. This equates with approximately 50% of the current average workforce of 15,000 (2017). This hiring requirement of approximately 600 workers on average per year is due to the replacement of anticipated retirements over this period while considering projected industry growth and labour productivity gains.

Unfortunately, this recruitment will be occurring within the context of very tight regional labour markets that are currently experiencing labour shortages during peak seasons and which are predicted to continue during this period. This tightness in the labour market is contributing to the high number of current vacancies experienced by employers in seafood processing (estimated at 12% in Atlantic Canada), and to some degree the higher turnover rates in the industry as workers have more employment opportunities from which to choose, particularly in the lower-skill level occupations (estimated turnover rate of 40% for Atlantic Canada in seafood processing industry).

All of these factors contribute to the substantial challenges facing Atlantic Canadian seafood processors in their attempts to recruit enough workers to replace retirements, fill ongoing vacancies, work to address turnover rates, while also trying to grow, remain competitive and increase productivity.

## CONSIDERATIONS

Many of the regions studied are operating in local labour markets where the supply is insufficient to meet local industry's needs at peak season. While there are opportunities perhaps to go more aggressively after the local workers who are available (e.g., substantial wage hikes, changes to working conditions), this, in essence, will only serve to develop shortages in other sectors in a particular region. In many regions there are just too few people to meet the local employment requirements overall. Likely a multi-prong approach is required in order to address these types of complex, challenging issues.

With this type of situation, there are limited options available for employers. They can attempt to bring in more workers (e.g., regional relocation, temporary foreign workers). They can try to change processes to require less labour (e.g., automation, technology). Or they can choose to move the processing plants closer to more readily available labour sources.

For communities and local agencies, they also have few options. They can work to develop communities and hope to retain current residents and attract new residents, thus maintaining or potentially growing their population and labour force. They can also support employers attempts at bringing in workers on a temporary basis such as regional relocations and temporary foreign workers knowing that this type of activity helps to maintain the employment opportunities for local residents (avoidance of plant closings) and in some cases may increase the population as temporary/relocated workers consider more permanent stays if possible.

Areas in which governments can potentially act include considering the impacts on labour availability as a result of their choices in various areas in which they support local industry and communities on various levels. These include a wide breadth of areas such as R&D funding, assistance with marketing exports, immigration policies, EI policies, rural development initiatives, post-secondary education support, employment-related training, childcare support and many other areas.

## ASSOCIATED RECOMMENDATIONS

- Regional solutions
- First Nations partnerships
- Summer employment
- Sector employment opportunities awareness campaigns
- Attracting immigrants to settle in fish and seafood processing communities

> **A primary focus of the current study was to assess the current and future labour demand and supply for the fish and seafood processing industry. This was completed for the Atlantic provinces overall, at the provincial level and for 12 identified smaller regions. The models used to estimate demand and supply considered various factors outlined in Section 3 such as fish quotas, economic outlooks, consumption, exports and productivity.**

# 8.1 DEMAND FOR WORKERS IN THE ATLANTIC FISH AND SEAFOOD PROCESSING INDUSTRY

**Overall, the hiring requirements for workers in the Atlantic fish and seafood industry is expected to amount to approximately 7,500 workers over the 2018 to 2030 period. This equates with approximately 50% of the current average workforce of 15,000 (2017). This hiring requirement of approximately 600 workers on average per year is due to the replacement of anticipated retirements over this period while considering projected industry growth and labour productivity gains.**

## 8.1.1 Demand attributable to growth and productivity

Based on the global and domestic economic environment and assumptions made about other key determinants, average annual seafood processing employment is expected to remain near 15,000 between 2018 and 2020. Rising exports alongside strengthening domestic demand while considering assumptions about continued productivity all combined are expected to contribute to modest average annual employment growth of approximately 1% per year after 2020 (see Table 3). This will result in an approximate 5% increase in total employment between 2018 and 2030.

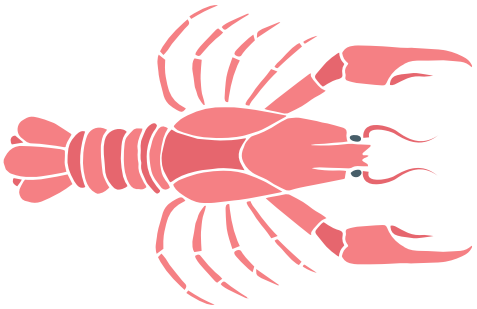
**TABLE 3: TOTAL SEAFOOD PROCESSING EMPLOYMENT, ATLANTIC CANADA, BY KEY OCCUPATIONS (2018 TO 2030)**

| ATLANTIC CANADA | 2016 | 2017 | 2018 | 2019 | 2020 | ANNUAL AVG | | CHANGE 2018 TO 2030 | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 2020 TO 2025 | 2026 TO 2030 | # | % |
| **Total Employment** | **16,475** | **15,044** | **15,009** | **14,797** | **14,902** | **15,212** | **15,819** | **1,028** | **5.2%** |
| **FOUNDATIONAL (NOC 9618)** | | | | | | | | | |
| Shellfish Processing Labourer | 3,626 | 3,295 | 3,288 | 3,242 | 3,263 | 3,333 | 3,466 | 227 | 5.2% |
| Fish Processing Labourer | 2,149 | 1,953 | 1,949 | 1,922 | 1,934 | 1,975 | 2,055 | 135 | 5.2% |
| **INTERMEDIATE (NOC 9463)** | | | | | | | | | |
| Shellfish Plant Worker | 1,975 | 1,785 | 1,782 | 1,755 | 1,768 | 1,802 | 1,871 | 115 | 4.8% |
| Fish Plant Worker | 1,192 | 1,077 | 1,075 | 1,059 | 1,066 | 1,087 | 1,129 | 69 | 4.8% |
| **SUPERVISORY (NOC 9213)** | | | | | | | | | |
| Supervisors | 699 | 627 | 626 | 617 | 622 | 637 | 667 | 51 | 6.3% |
| **MANAGEMENT (NOC 0911; 0016)** | | | | | | | | | |
| Management | 512 | 476 | 474 | 468 | 472 | 482 | 501 | 33 | 5.3% |
| **OTHER CATEGORIES** | | | | | | | | | |
| Maintenance | 560 | 511 | 510 | 503 | 507 | 517 | 538 | 36 | 5.2% |
| Skilled Trades | 1,014 | 929 | 927 | 914 | 921 | 941 | 979 | 65 | 5.3% |
| Quality Control Technician | 207 | 190 | 190 | 187 | 188 | 192 | 199 | 12 | 4.9% |
| Office Staff | 881 | 836 | 834 | 822 | 828 | 842 | 872 | 48 | 4.2% |
| Other Occupations* | 3,660 | 3,362 | 3,354 | 3,307 | 3,333 | 3.403 | 3,541 | 236 | 6.0% |

* this includes occupations in areas such as transport, logistics, material handlers that do not fall within the mainNOC codes identified above.

## 8.1.2 Hiring requirements

Hiring requirements consider both industry growth as well as demand for workers to replace workers who have retired or died. As noticed in the previous section, the net hiring requirements due to growth in the period between 2018 and 2030 are estimated to be 1,028 workers (see Table 3). Of much greater magnitude is the hiring requirements attributable to replacement demands (deaths and retirements). Given the sector's aging workforce, these requirements are substantial and are expected to total 6,500 over the 2018 to 2030 time period. In the short term, this includes a pressing 1,500 between 2018 and 2020. Taking into account the requirements due to the expected growth, it is estimated that the industry will need to replace 7,500 workers during the 2018 to 2030 period, which is equivalent to half (50%) of the current workforce. As of 2020, this requirement will translate to approximately 600 new hires on an annual basis (see Figure 11). It must be noted that these hiring requirements do not include many of the new hires that are required due to turnover or the attempts to fill current vacancies. To provide some context, the imputed annual turnover rate for Atlantic Canadian fish and seafood processors was estimated at approximately 40% based on the results from the survey of establishments. In addition, the industry reported via the survey that they are attempting to find a sufficient number of workers to fill a large number of current vacancies in the industry (estimated at approximately 12% of positions or the need for 1,800 workers).



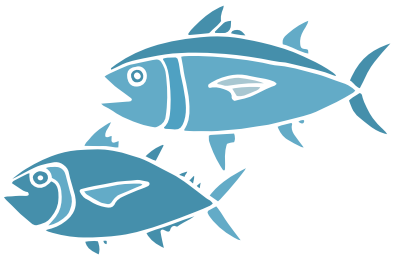
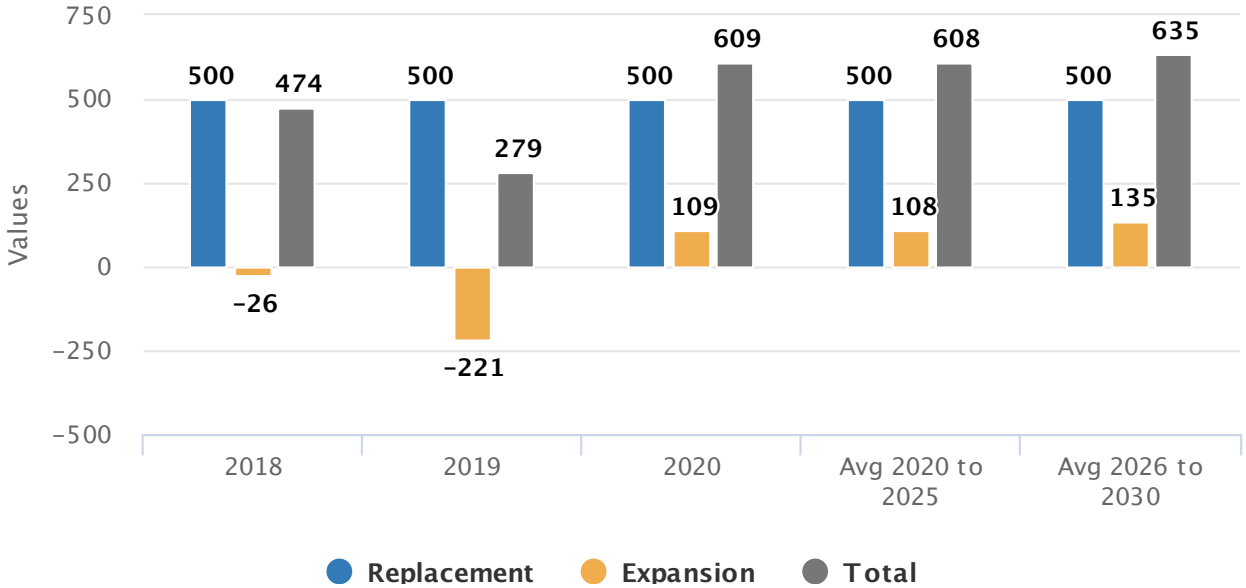


**FIGURE 11: ANNUAL HIRING REQUIREMENTS (EXCLUDING TURNOVER), ATLANTIC CANADA**

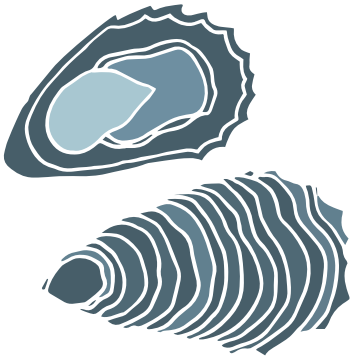


## 8.2 SUPPLY OF WORKERS: THE ATLANTIC CANADA WORKFORCE

**To meet the anticipated hiring demands or requirements outlined in the previous section, fish and seafood processing employers will need to compete with both other seafood processors in addition to various employers in other industries.**

When examined within the context of Atlantic Canada's workforce, this task will be made more challenging given the anticipated increase in retirements among the workforce. Atlantic Canada is significantly older compared to the rest of Canada and faces a decade of flat population and labour force growth. These demographics will contribute to falling rates of unemployment, exacerbating current recruitment challenges for all employers in the Atlantic region across various sectors.

While employment is expected to rise by 27,000 by 2030, the labour force is expected to decline by close to 18,000 (Table 3). This causes the anticipated average rate of unemployment for the overall workforce to decline from 10% to 6% over the forecast period. The effect of the anticipated decline will tighten labour markets for all sectors, including fish and seafood processing.



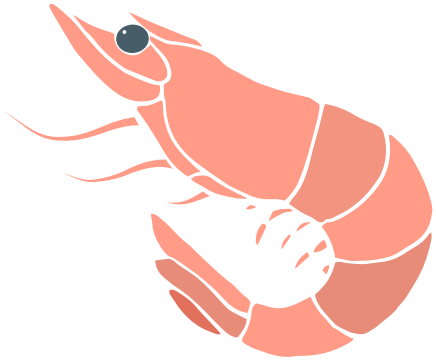
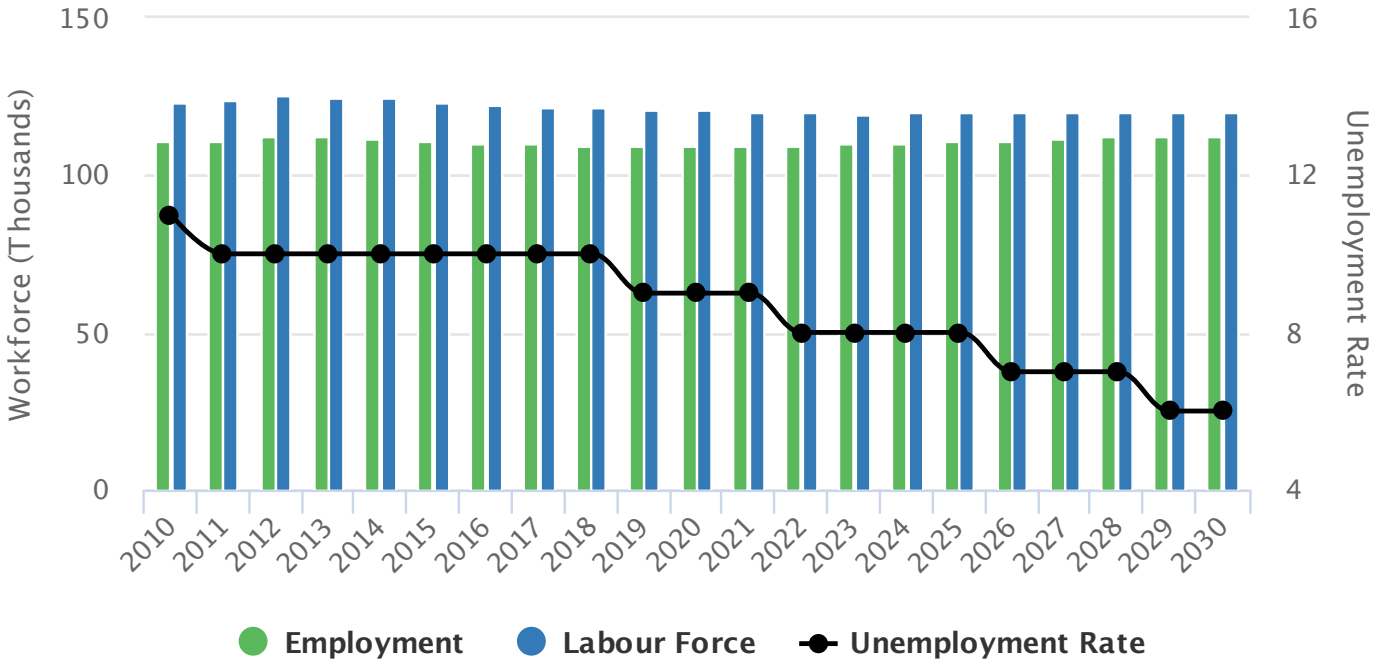


**FIGURE 12: PROJECTED OVERALL LABOUR FORCE, EMPLOYMENT AND UNEMPLOYMENT RATE (%) – ATLANTIC CANADA**




Source: C4SE

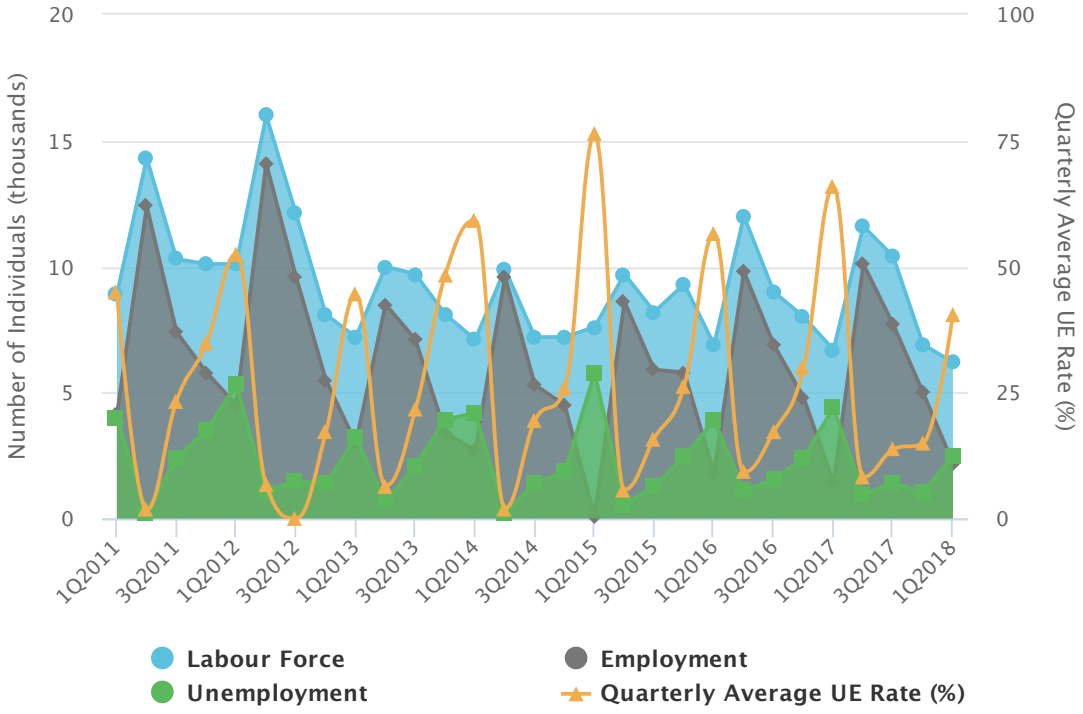
## 8.2.1 Atlantic Fish and Seafood Processing Workforce

The share of the labour force available to seafood processors depends on numerous factors including competing demands from other industries, patterns of regional migration and the alignment between skills and qualifications. Skills and qualifications are an especially important determinant of available supply for the sector. The share of lower-skilled production level workers[6] in the seafood processing sector is estimated at 75%. This is significantly higher compared to many other sectors. With fewer skill or qualification barriers for production level jobs, workers are more mobile between various employers, jobs and industries in a particular region (or labour market) compared to those with qualifications in a specific field (e.g. electricians, accountants, nurses). The competition for this lower-skill pool of labour often comes down to wages, working conditions and alignment between work environment and worker preference rather than qualification. Availability of supply for this category of workers, measured by rates of unemployment, tends to be determined by overall labour market conditions in a particular region rather than any individual sector.

The high degree of seasonality in employment is a distinctive feature of the seafood labour market. Demands for production level workers, which make up the majority of the employment in seafood processing, can fluctuate by 100% in many regions. These seasonal fluctuations necessitate a significant reserve pool of available labour between peaks to meet demands at peak. Without this pool, workers would simply not be available.

As illustrated in Figure 13, quarterly employment has fluctuated between 14,000 in Q2 of 2012 and almost zero in Q1 of 2015. Historically, the labour force has risen to meet peaks and receded as workers find other jobs or temporarily exit the labour force to wait out the low season. These dynamics result in significant month-to-month swings in the unemployment rate – anywhere from 80% during lows to between 0% and 9% at peak. Although the average rate of unemployment over the last five years is estimated at near 21%, for seafood processing labour markets conditions (and unemployment rates) are only relevant at the peak.

**FIGURE 13: EMPLOYMENT, LABOUR FORCE AND UNEMPLOYMENT RATE, FISH AND SEAFOOD PLANT WORKERS AND LABOURERS IN FISH AND SEAFOOD PROCESSING, QUARTERLY, Q1 2011 TO Q1 2018**



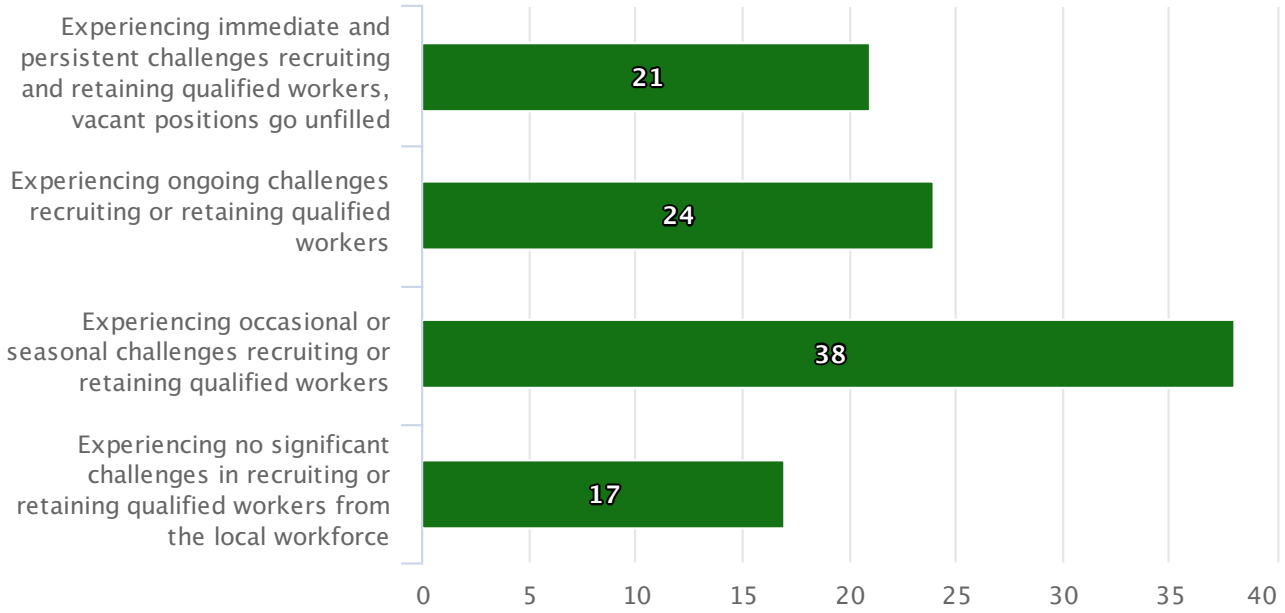

Source: Labour Force Survey, Statistics Canada

6. Production level workers refers to NOC 9618 Labourers in fish and seafood processing and NOC 9463 Fish and seafood plant workers. These two categories make up 55% of total industry employment.

## 8.2.2 Evidence of labour market challenges

Insights from the survey of establishments found that 87% of Atlantic seafood processors reported some form of recruitment challenges in 2017-2018 (see Figure 14). Nearly one-quarter (24%) of seafood processors reported not being able to fill positions, resulting in an estimated 1,800 positions going unfilled over the last year. A further 21% of employers reported experiencing chronic, ongoing recruitment challenges. Finally, an additional 38% reported experiencing some form of seasonal challenges recruiting or retaining qualified workers. Employers most commonly cited production workers and general labourers as most difficult to recruit. This finding was confirmed through interviews with employers who indicated that during peak season, they were often running processing lines with significant staff shortages and were reluctant to add new product lines given the challenges in staffing.

**FIGURE 14: HIRING CHALLENGES (EMPLOYERS %)**



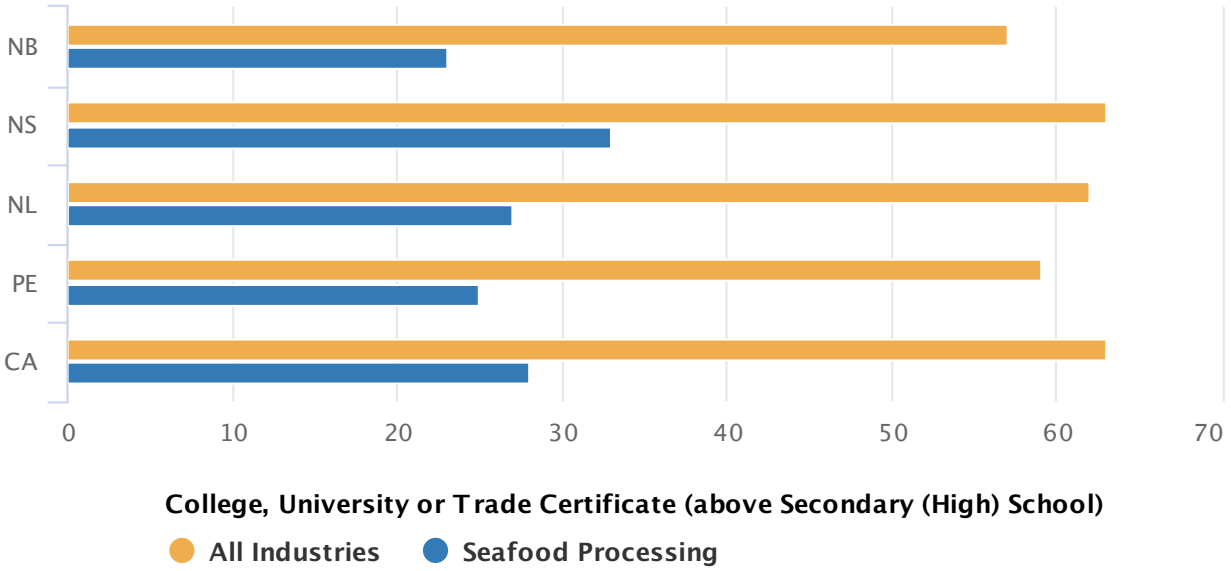

Source: FPSC – LMI Survey of Atlantic Fish + Seafood Processing, 2017

Low levels of retention and high turnover provide further evidence of labour market challenges faced by seafood processors. Atlantic seafood processors hired an estimate of 6,300 workers over the past year, according to the survey of establishments. Compared to average annual employment this represents an imputed 40% overall turnover rate in the industry. In other words, on average, the industry must hire 1.4 workers for every open position. The turnover rates are reported as highest for fish and shellfish plant workers, labourers and maintenance workers (which includes sanitation workers).

## 8.2.3 Decreasing Supply of Lower Skill Level Workforce

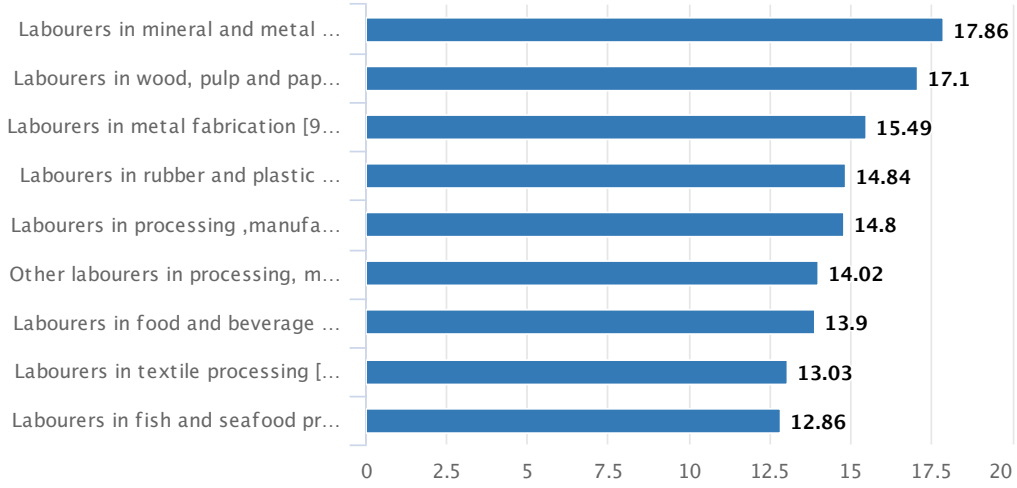
Another challenge faced by seafood processors is the decreasing supply of workers with lower levels of educational attainment. The seafood processing industry employs a broad spectrum of trades and occupations with a broad range of skills and qualifications. However, the industry employs a much higher proportion of production level workers who do not tend to require specific education requirements compared to many other industries. Figure 15 compares the share of workforce with a college, university or trades certificate in the seafood processing industry to the all industry average across individual Atlantic provinces. Nationally, the proportion of the seafood workforce with education above secondary (high) school is 28%, compared to a 63% overall (all industry). Rising levels of educational attainment among youth have caused this pool of workers with no post-secondary qualifications to shrink relative to the overall labour force over time.

**FIGURE 15: EDUCATION ATTAINMENT COMPARISON OF SEAFOOD PRODUCTION INDUSTRY AND ALL INDUSTRY BY PROVINCE**




Source: 2016 Census, Statistics Canada

**FIGURE 16: AVERAGE HOURLY WAGE (Q1 2017 TO Q1 2018), PRODUCTION LEVEL WORKERS (NOC 961), CANADA**

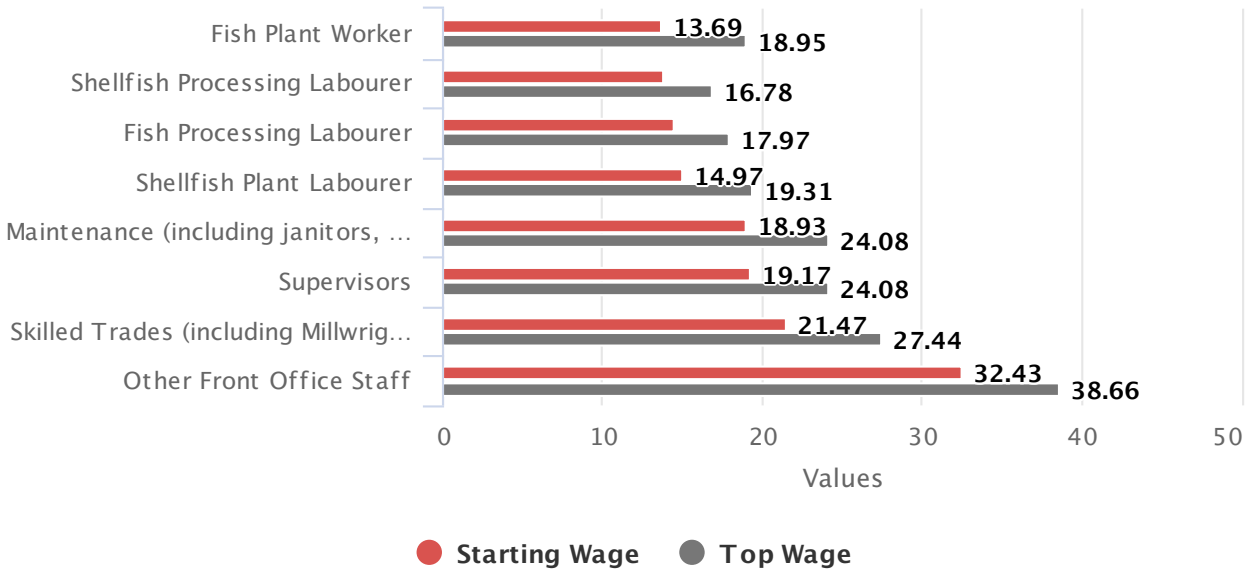



Source: Statistics Canada

## 8.2.4 Competition from other sectors – wages

As the labour market tightens, competition for other sectors increases. One factor among others that can influence the competition from other sectors are wages in addition to various other factors including working conditions, seasonality and perceptions of the industry. Examining national level data, it appears that despite recent increases, production labourers in the fish and seafood processing sector have lower hourly wages when compared with labourers in other sectors. A comparison of average hourly wages at the national level suggests food production level workers with an average hourly wage of $12.86 (labourers in fish and seafood processing NOC 9618) earn less compared to other production level occupations and other industries in general (see Figure 16). It is important to note that occupational differences at the national level, shown below, are influenced by regional differences in earnings, and that many of the industries outlined in the data are not actually located in the same regions in which many of the fish and seafood processing employers are located. From the survey of establishments, the average hourly wages for shellfish processing labourers were reported slightly higher with an average starting wage of $13.82 and top hourly average wage of $16.78 (see Figure 17). This higher wage was more reflective of the information collected from employers through the site visits and interviews as well. In the 12 regional level analyses, a review of median hourly wages for other "C" and "D" level occupations (minimal education requirements; lower skill levels) suggested that the median hourly wage for fish and seafood processing labourers was similar to or slightly higher than the median wages in the other occupations (e.g., retail, farm worker, food service).

**FIGURE 17: AVERAGE HOURLY WAGE RANGES ($) BY OCCUPATION**



## 8.2.5 Summary of Measures of Seafood Processing Workforce Availability – Regional Labour Market Tightness

The primary challenge of quantifying the supply of workers available to meet seafood processing sector demand is delineating the seafood labour force from other industries. This is especially difficult for production level workers with no tracked skills or qualifications to attach them to a specific sector other than experience. This makes it difficult to discern and measure any differences between worker availability and labour market conditions in one industry from another.

The method adopted in this analysis is a residual labour supply approach, which estimates the potential labour supply left for seafood processors once demands of other industries are met at their respective normal rates of unemployment[7]. The interpretation of the analysis is that if the potential residual labour supply meets estimated seafood processing demand requirements, then there is a sufficient number of workers in the local labour force to meet seafood processor demands. However, there is no guarantee that seafood processors are actually able to attract and employ all of the workforce in this pool. Conversely, if seafood processing demands exceed the potential residual labour supply, this signals that in order to meet demands, workers will likely have to be attracted from outside the local labour market or from other industries drawing unemployment below normal rates.

To account for the seafood processing sectors higher dependence of lower-skilled production labour the residual labour supply estimates were adjusted for educational attainment. This analysis estimated current and future employment requirements for workers with educational attainment of high school or below in competing industries to determine the residual labour supply. This assumed a constant workforce education attainment profile for individual industries. This estimated lower-skill production workforce residual labour supply was then compared to seafood processing lower-skill production worker employment requirements.

Given the analysis depends on local labour market data, each analysis was conducted at the regional level (see regional reports for specific details for each region). Overall, the analysis indicated that of the 12 regions studied in-depth, 8 were facing very tight labour markets where the current or projected demand for workers (total and lower skill level) from the regional industries was higher than the existing local labour market (see Table 4). This would indicate that in these regions studied, the fish and seafood processing employers were faced with an insufficient local labour supply to meet all of the regions' labour requirements (for all industries) leaving an overall potential gap, which increases during peak periods. This trend for most regions continues all the way through to 2030.

Within this very tight, competitive labour market, it was generally determined that the industry employers have had some success recruiting as evidenced by employers being able to recruit in numbers that exceeded the residual labour force. This means that the seafood processing industry was likely recruiting workers from other industries, while potentially also recruiting workers from outside the local region. While the industry did experience vacancies, these would likely have been substantially higher had it not been successful in recruiting labour external to the region, and/or competing with other industries in recruiting workers.

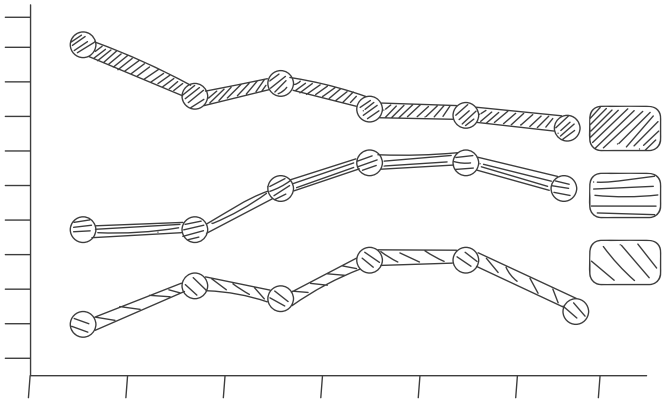
7. Normal rate of unemployment refers to the five-year annual average rate of unemployment based on the LFS.

**TABLE 4: SUMMARY OF REGIONAL LABOUR TIGHTNESS ANALYSES**

| Region | Total Labour Force | | | Lower Skill-Level Labour Force | | |
|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2020 | 2018 | 2019 | 2020 |
| **Very tight (average and peak season)** | | | | | | |
| Old Perlican, NL | 3 | 3 | 3 | 3 | 3 | 3 |
| Clare, NS | 3 | 3 | 3 | 3 | 3 | 3 |
| Charlotte, NB | 3 | 3 | 3 | 3 | 3 | 3 |
| Lunenburg, NS | 3 | 3 | 3 | 3 | 3 | 3 |
| Richmond, NS | 3 | 3 | 3 | 3 | 3 | 3 |
| Burin Peninsula, NL | 2 | 2 | 3 | 3 | 3 | 3 |
| New Bandon-Caraquet, NB | 2 | 2 | 2 | 3 | 3 | 3 |
| Prince, PE | 2 | 2 | 2 | 3 | 3 | 2 |
| **Tight (peak season – lower skill levels)** | | | | | | |
| Kings, PE | 2 | 2 | 2 | 3 | 2 | 2 |
| Pictou, NS | 1 | 1 | 2 | 3 | 3 | 3 |
| Cornerbrook, NL | 1 | 1 | 2 | 2 | 2 | 2 |
| Kent-Westmorland, NB | 1 | 1 | 1 | 1 | 2 | 2 |

1 = Regional labour force meets seafood processing employment demand at annual average and peak employment levels
2 = Regional labour force meets seafood processing employment demand at annual average levels only
3 = Regional labour force does not meet seafood processing employment at annual average or peak levels

***Provincial level overviews of supply and demand are presented in Appendix E to Appendix H.***



# 9.0 PERCEPTIONS OF WORKING IN SEAFOOD PROCESSING


## SUMMARY

According to the Choicebook™ survey, the audiences identified as targets are significantly more open than members of the general public to consider working in the meat and seafood processing sector. This is especially true of new Canadians; the keenest of the four segments.

Among the most common perceptions of employment in meat and seafood processing are that jobs are located in rural locations, offered right out of school and do not always require specific education. The most significant perceptual challenges are the seasonal nature of the jobs, the killing of animals, the presence of strong odours and the physical nature of the work.

The most compelling result of the Choicebook™ survey is the significant increase in the proportion of respondents who say they would consider a job in the sector by the end of the survey (as compared to when they began it). For the general public, the increase is eight percentage points. The corresponding increases for youth, Indigenous Canadians and the unemployed are essentially the same at between 7 to 9 percentage points. For new Canadians, however, the increase reaches 14 percentage points.


## CONSIDERATIONS

The research suggests that providing people with factual information about employment in the sector has a positive impact on their willingness to consider working in it.

The combination of low awareness levels about employment in the sector and relative open-mindedness about topic suggests that there is potential to increase the labour pool through communications across all four targeted audiences, but most notably among new Canadians.

Regarding inducements and messaging, analysis reveals that the information with the strongest positive impact on ones' willingness to work in the sector is offers of: performance bonuses, retention bonuses, predictable full-time work, transportation to and from work. For the youth segment, offering to cover tuition and school supplies is also a key driver.

## ASSOCIATED RECOMMENDATIONS

- Regional solutions
- Sector employment opportunities awareness campaigns

According to interviews with plant managers, employees and other industry stakeholders, the significant challenges employers have been facing with respect to recruiting a sufficient workforce for the fish and seafood processing industry is in part related to the current perceptions of industry among the general public as well as target audiences for recruitment efforts (e.g., youth, Indigenous people, new Canadians, unemployed workers). One component of the current study was to examine in detail the actual perceptions of these groups focusing on areas such as awareness of the industry, including employment advantages and challenges, and gauging level of willingness to consider employment opportunities in the sector.

Choicebook™ was the method used to gain a better understanding of perceptions of the industry, which involves audience input based on in-depth consideration and engaging experiences. This method measures deep-rooted perspectives by providing participants with key information before posing questions, including background, facts, scenarios and data. Choicebook™ insights provide actionable data about how to move forward with initiatives, and how audiences can be best informed to increase alignment, participation and collaboration.

> **“Overall, 1,248 participated from the general public and an additional 2,089 from the four target audiences: 972 from the youth audience, 506 from the Indigenous Canadian audience, 500 new Canadians and 1,205 of the unemployed audience. Due to the nature of these audiences, there was some overlap between them.”**

**An overview of the findings is provided in this section, according to overall awareness of the fish and seafood processing sector, the advantages and challenges of working in the sector and the likelihood of applying to work in the sector.**

## 9.1. FAMILIARITY AND IMPRESSIONS OF FISH AND SEAFOOD PROCESSING SECTOR

Overall, there tended to be higher levels of familiarity with the broader food and beverage manufacturing sector when compared to the more specific meat and seafood manufacturing sector[8] (see Table 5). As well, most of the target audiences were more likely to indicate higher levels of familiarity with the sectors when compared with the general public. Among the target audiences, there is approximately one-quarter that report relatively high familiarity with the meat and seafood manufacturing sectors (23% to 26%). This would indicate that there is some potential room for developing higher levels of familiarity with the sectors among not only the general public but also among the target audiences.

**TABLE 5: HOW FAMILIAR ARE YOU WITH THE SECTOR?**

| GROUP | FOOD AND BEVERAGE MANUFACTURING SECTOR | | MEAT AND SEAFOOD MANUFACTURINTG SECTOR | |
|---|---|---|---|---|
| | "very familiar" (5 RATING) | higher familiarity (5 & 4 RATINGs) | "very familiar" (5 RATING) | higher familiarity (5 & 4 RATINGs) |
| **General Public** | **8%** | **24%** | **4%** | **16%** |
| Youth | 13% | 36% | 8% | 26% |
| Indigenous | 17% | 37% | 12% | 26% |
| New Canadians | 14% | 33% | 6% | 23% |
| Unemployed | 15% | 35% | 10% | 26% |

Scale 1 to 5: 5. Very familiar – 1. Not at all familiar
Source: Labour Market Information: Key Audience Choicebook™

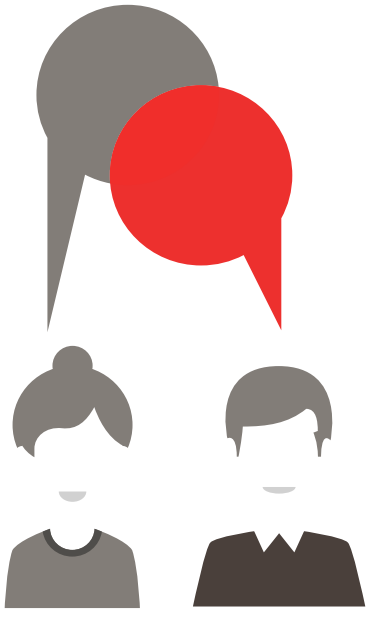
8. The meat and seafood manufacturing sectors were combined in the Choicebook™ exercise for some of the overall perception areas, but broken out for other areas such as specific occupations, locations, etc.

When participants were asked if they had a more positive or negative impression of jobs in the sectors, the most frequent ratings among all groups was neutral (3 on a 5-point scale ranging from very negative (1) to very positive (5)). This may be linked to the lower levels of familiarity with the sectors as outlined in Table 5. Overall, among all groups, the impressions of jobs in the sector were more positive than negative (see Table 6) once the larger neutral responses were considered. This pattern of positive impressions was also demonstrated when participants were asked to select various characteristics to describe the sectors. More positive descriptors (e.g., happy workforce, innovative, high pay) were more frequently selected than the countering negative descriptors (e.g., unhappy workforce, not innovative, low pay). There was a trend among the target audiences to report more frequently positive impressions of jobs in the sectors (both food and beverage manufacturing and meat and seafood) (see Table 6).

**TABLE 6: DO YOU HAVE A POSITIVE OR NEGATIVE IMPRESSION OF JOBS IN THE SECTOR?**

| GROUP | FOOD AND BEVERAGE MANUFACTURING SECTOR | | MEAT AND SEAFOOD MANUFACTURINTG SECTOR | |
|---|---|---|---|---|
| | "very familiar" (5 RATING) | higher familiarity (5 & 4 RATINGs) | "very familiar" (5 RATING) | higher familiarity (5 & 4 RATINGs) |
| **General Public** | **8%** | **31%** | **9%** | **28%** |
| Youth | 11% | 34% | 10% | 30% |
| Indigenous | 16% | 38% | 14% | 34% |
| New Canadians | 11% | 37% | 11% | 31% |
| Unemployed | 16% | 39% | 13% | 34% |

Scale 1 to 5: 5. Very familiar – 1. Not at all familiar
Source: Labour Market Information: Key Audience Choicebook™



## 9.2 ADVANTAGES AND CHALLENGES IN THE SECTOR

One main component of the Choicebook™ exercise was to understand how aware participants were of specific advantages and challenges of jobs in the meat and seafood manufacturing sectors, as well as how important these selected advantages and challenges were when they are considering employment opportunities in the sectors. In addition, participants were asked to rate the believability of the information about specific advantages.

**The eight job advantages selected to highlight include:**

- Jobs are located in rural locations across the country, including near a number of reserves
- The sector offers jobs right out of school
- The jobs do not always require specific education/ post-secondary education
- Jobs are currently available across the country
- The sectors offer a wide range of jobs (e.g., engineers, manager, plant workers)
- The sectors offer opportunities for skills training
- Jobs allow for career progression
- The sectors offer competitive pay and benefits

**The seven job challenges selected to highlight include:**

- Meat and seafood manufacturing involves animals being killed
- Some of these jobs involve working in environments with strong odours
- Some of these jobs require physical work
- Seafood manufacturing jobs are seasonal and do not always offer employment year-round
- Jobs are often located outside cities or near rural communities
- Seafood manufacturing jobs are mostly located in Eastern Canada
- Seafood manufacturing jobs can be unpredictable and require short notice

### 9.2.1 Youth Perspectives on Job Advantages and Challenges

Considerable efforts are required when reviewing the results from the perspective of youth on the advantages and challenges characteristic of the meat and seafood manufacturing sector (see Table 7 & 8). The pattern of results overall indicates the following:

- **Awareness of challenges tends to be higher than awareness of advantages**. Only one-third to one-half (34% to 47%) of youth indicate high awareness of the advantages of jobs in the sectors. This would indicate that the sector would need to focus on getting the word out more clearly on the potential benefits of working in the industry, in part to help in balancing the relatively better-known challenges.
- **Importance of advantages tends to be higher than importance of challenges.** This is key to focusing on the positives of working in the sector – the benefits or advantages are less well-known, but of considerably greater importance when youth are deciding where they would consider working.
- **Low awareness and credibility of information in the areas of greatest importance.** The areas of highest awareness and believability or credibility (green-shaded areas in table) of advantages are actually counter to those that they indicate are most important for them regarding interest in working in the sector. This type of finding can help identify areas of focus for efforts into developing and providing relevant, reliable and accessible information to better engage with this target audience.
- **Awareness of the seafood industry is lower.** Awareness of potential geographic and seasonality challenges of working in seafood manufacturing tends to be lower among youth compared to some of the other work environment challenges.
- **Unpredictability of employment is an important challenge for youth.** The seasonality and level of unpredictability of jobs in seafood manufacturing are important top challenges cited by youth when considering working in the sector.
- **Association with killing animals is challenging.** The challenge of working in a sector involving animals being killed is of high awareness and importance for youth in considering employment in the sector.

**TABLE 7: YOUTH PERCEPTIONS ON JOB ADVANTAGES IN MEAT AND SEAFOOD MANUFACTURING**

| JOB ADVANTAGE | AWARENESS | | | IMPORTANCE | | | BELIEVABILITY | | |
|---|---|---|---|---|---|---|---|---|---|
| | R | "very aware" (5 rating) | higher awareness (5+4 rating) | R | "very important" (5 rating) | higher importance (5+4 rating) | R | "very believable" (5 rating) | higher believable (5+4 rating |
| No specific education | *1* | 22% | 47% | *8* | 20% | 42% | *1* | 29% | 55% |
| Available across country | *2* | 20% | 47% | *5* | 22% | 48% | *T2* | 28% | 54% |
| Rural locations | *3* | 20% | 46% | *6* | 24% | 45% | *T2* | 28% | 54% |
| Right out of school | *4* | 19% | 46% | *7* | 21% | 45% | *4* | 25% | 54% |
| Wide range of jobs | *5* | 16% | 43% | *4* | 24% | 51% | *5* | 23% | 51% |
| Skills training available | *6* | 14% | 38% | *3* | 26% | 51% | *6* | 20% | 48% |
| Career progression | *T7* | 12% | 34% | *2* | 29% | 54% | *7* | 15% | 39% |
| Competitive pay/ benefits | *T7* | 12% | 34% | *1* | 32% | 55% | *8* | 14% | 39% |

Source: Labour Market Information: Key Audience Choicebook™
**R = RANKING**

**TABLE 8: YOUTH PERCEPTIONS ON JOB CHALLENGES IN MEAT AND SEAFOOD MANUFACTURING**

| JOB CHALLENGE | AWARENESS | | | IMPORTANCE | | |
|---|---|---|---|---|---|---|
| | R | "very aware" (5 rating) | higher awareness (5+4 rating) | R | "very important" (5 rating) | higher importance (5+4 rating) |
| Involves animal being killed | *1* | 48% | 68% | *2* | 28% | 48% |
| Environments with strong odours | *2* | 42% | 64% | *T3* | 26% | 48% |
| Requires physical work | *3* | 41% | 58% | *5* | 22% | 44% |
| Jobs located outside cities | *4* | 26% | 52% | *6* | 21% | 43% |
| Seafood jobs located in Eastern Can | *5* | 22% | 47% | *7* | 21% | 41% |
| Seafood jobs are seasonal | *6* | 23% | 46% | *T3* | 26% | 48% |
| Seafood jobs can be unpredictable | *7* | 18% | 40% | *1* | 24% | 49% |

Source: Labour Market Information: Key Audience Choicebook™
**R = RANKING**

## 9.2.2 Indigenous Canadians' Perspectives on Job Advantages and Challenges

When examining Indigenous Canadians' views on the various job advantages and challenges of the meat and seafood manufacturing sector (see Table 9 & 10), there are areas that stand out as more advantageous in addressing this segment. The pattern of results overall indicates the following:

- **Awareness of challenges tends to be higher than awareness of advantages.** Only one advantage (jobs being available right out of school) recorded awareness of more than half (51%) compared to all but two challenges. Only a third of Indigenous respondents were aware of some of the more attractive advantages (in terms of importance ratings), such as competitive pay and benefits (35%), career progression (35%) and skills training opportunities (35%). As with youth, there is a need for the sector to focus on communicating information about advantages.
- **Importance of advantages tends to be higher than importance of challenges.** Specifically, for the aforementioned advantages in pay and benefits (58%), career progression (57%), and skills' training opportunities (56%). These outweigh the top three disadvantages; the top-ranked of which is mentioned as important by 50% as a comparison (malodorous working environments).
- **Some awareness and credibility of information in the areas of greatest importance.** The areas of highest awareness and credibility (green-shaded areas in table 8) of advantages indicate that respondents are more likely to place credibility in ideas that they are aware of – making awareness key to creating a preferential perception of the sector. The research points to seemingly more intuitive ideas, such as variety in jobs and available skills' training, being more credible despite lower awareness, thus making them important advantages to communicating. Especially so as these are also ranked highly on the list of important advantages.
- **Awareness of the seafood industry is lower.** As with youth, awareness of potential geographic and seasonality challenges of working in seafood manufacturing tends to be lower among Indigenous respondents compared to the other work environment challenges.
- **Unpredictability, seasonality, and physical challenges deter Indigenous Canadians.** These three challenges rank in a virtual tie (rounded to 50%) as the top most important. Location and the potential of killing animals rank as less important.

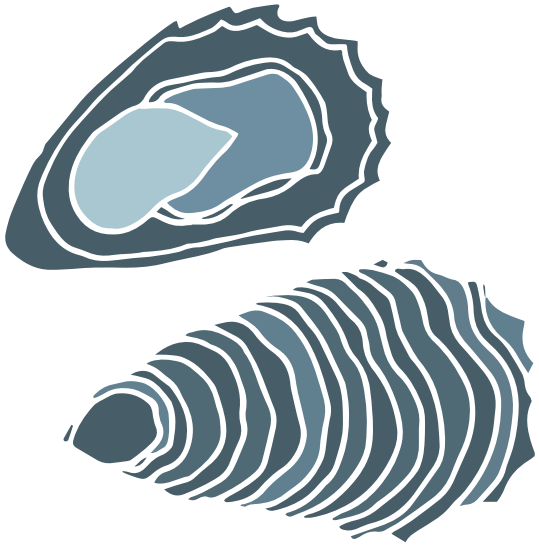


**TABLE 9: INDIGENOUS CANADIANS' PERCEPTIONS OF JOB ADVANTAGES IN MEAT AND SEAFOOD MANUFACTURING**

| JOB ADVANTAGE | AWARENESS | | | IMPORTANCE | | | BELIEVABILITY | | |
|---|---|---|---|---|---|---|---|---|---|
| | R | "very aware" (5 rating) | higher awareness (5+4 rating) | R | "very important" (5 rating) | higher importance (5+4 rating) | R | "very believable" (5 rating) | higher believable (5+4 rating |
| Available across country | 1 | 23% | 44% | 7 | 26% | 47% | 3 | 27% | 53% |
| Right out of school | 2 | 23% | 51% | 6 | 26% | 49% | 4 | 26% | 56% |
| No specific education | 3 | 20% | 42% | 8 | 23% | 48% | 2 | 27% | 50% |
| Wide range of jobs | 4 | 20% | 43% | 4 | 29% | 53% | 1 | 28% | 54% |
| Rural locations | 5 | 17% | 39% | 5 | 26% | 45% | 5 | 24% | 50% |
| Competitive pay/ benefits | 6 | 15% | 35% | 1 | 39% | 58% | 8 | 18% | 42% |
| Career progression | 7 | 15% | 35% | 3 | 33% | 57% | 7 | 19% | 43% |
| Skills training available | 8 | 14% | 35% | 2 | 33% | 56% | 6 | 23% | 53% |

Source: Labour Market Information: Key Audience Choicebook™
**R = RANKING**

**TABLE 10: INDIGENOUS CANADIANS' PERCEPTIONS ON JOB CHALLENGES IN MEAT AND SEAFOOD MANUFACTURING**

| JOB CHALLENGE | AWARENESS | | | IMPORTANCE | | |
|---|---|---|---|---|---|---|
| | R | "very aware" (5 rating) | higher awareness (5+4 rating) | R | "very important" (5 rating) | higher importance (5+4 rating) |
| Involves animals being killed | 1 | 54% | 69% | 4 | 28% | 45% |
| Requires physical work | 2 | 50% | 73% | 3 | 29% | 50% |
| Environments with strong odours | 3 | 47% | 65% | 1 | 32% | 50% |
| Seafood jobs are seasonal | 4 | 32% | 53% | 2 | 30% | 50% |
| Jobs located outside cities | 5 | 26% | 51% | 7 | 20% | 41% |
| Seafood jobs can be unpredictable | 6 | 23% | 43% | 5 | 28% | 50% |
| Seafood jobs located in Eastern Can | 7 | 22% | 48% | 6 | 25% | 44% |

Source: Labour Market Information: Key Audience Choicebook™
**R = RANKING**

## 9.2.3 New Canadians' Perspectives on Job Advantages and Challenges

New Canadians present a similar set of challenges (see table 11 and 12) in terms of how to effectively communicate the advantages of working in the meat and seafood manufacturing sector. The pattern of results overall indicates the following:

- **Awareness of challenges tends to be higher than awareness of advantages.** Particularly, in very high awareness of the top three challenges: animals being killed, physical work and malodorous working environments (45% or more very aware for each of these challenges). The top challenges by awareness also closely correlate to the top important challenges, while this relationship is somewhat inversed for advantages. One important exception is the advantage of varied jobs, where a comparably larger proportion of new Canadians are aware (46%) and also likely place a high amount of importance (58% - ranked 3rd) in the advantage.
- **Low awareness and credibility of information in the areas of greatest importance.** Except for the advantage of a wide range of jobs being available (3rd in awareness, importance and believability), the topmost important advantages are also in the bottom of the most credible advantages. Overall, believability is higher than awareness (measured by collapsed 4+5 ratings), indicating that some new Canadians are susceptible to a change in perception.
- **Awareness and importance of challenges are closely aligned.** As noted by the green colouring as well as rank indicator, the top challenges by awareness are also higher up in importance. This indicates that challenges are more top of mind among new Canadians and serve as a barrier to parts of this segment viewing employment in the sector favourably.
- **Awareness of the seafood industry is lower.** As with youth and Indigenous Canadians, awareness of potential geographic and seasonality challenges of working in seafood manufacturing tends to be lower among new Canadians compared to some of the other work environment challenges.

**TABLE 11: NEW CANADIANS' PERCEPTIONS OF JOB ADVANTAGES IN MEAT AND SEAFOOD MANUFACTURING**

| JOB ADVANTAGE | AWARENESS | | | IMPORTANCE | | | BELIEVABILITY | | |
|---|---|---|---|---|---|---|---|---|---|
| | R | "very aware" (5 rating) | higher awareness (5+4 rating) | R | "very important" (5 rating) | higher importance (5+4 rating) | R | "very believable" (5 rating) | higher believable (5+4 rating |
| Rural locations | 1 | 31% | 50% | 7 | 25% | 56% | 8 | 13% | 63% |
| No specific education | 2 | 24% | 46% | 8 | 21% | 44% | 1 | 28% | 54% |
| Wide range of jobs | 3 | 20% | 46% | 3 | 34% | 58% | 3 | 23% | 54% |
| Available across country | 4 | 20% | 46% | 5 | 27% | 53% | 2 | 28% | 55% |
| Skills training available | 5 | 17% | 41% | 4 | 33% | 58% | 5 | 19% | 49% |
| Right out of school | 6 | 17% | 42% | 6 | 26% | 49% | 4 | 21% | 48% |
| Competitive pay/ benefits | 7 | 14% | 32% | 1 | 39% | 62% | 6 | 13% | 37% |
| Career progression | 8 | 13% | 36% | 2 | 35% | 59% | 7 | 13% | 37% |

Source: Labour Market Information: Key Audience Choicebook™
**R = RANKING**

**TABLE 12: NEW CANADIANS' PERCEPTIONS OF JOB CHALLENGES IN MEAT AND SEAFOOD MANUFACTURING**

| JOB CHALLENGE | AWARENESS | | | IMPORTANCE | | |
|---|---|---|---|---|---|---|
| | R | "very aware" (5 rating) | higher awareness (5+4 rating) | R | "very important" (5 rating) | higher importance (5+4 rating) |
| Involves animals being killed | 1 | 51% | 70% | 2 | 28% | 49% |
| Requires physical work | 2 | 46% | 74% | 4 | 28% | 52% |
| Environments with strong odours | 3 | 45% | 68% | 1 | 30% | 54% |
| Jobs located outside cities | 4 | 30% | 58% | 5 | 27% | 53% |
| Seafood jobs are seasonal | 5 | 24% | 46% | 3 | 28% | 52% |
| Seafood jobs can be unpredictable | 6 | 18% | 40% | 6 | 26% | 50% |
| Seafood jobs located in Eastern Can | 7 | 15% | 35% | 7 | 20% | 44% |

Source: Labour Market Information: Key Audience Choicebook™
**R = RANKING**

## 9.2.4 Unemployed Workers' Perspectives on Job Advantages and Challenges

Similar trends exist when considering unemployed workers (see Table 13 & 14) and it is clear that similar efforts will have to be applied to overcome some of the obstacles to changing perceptions among this segment. The pattern of results overall indicates the following:

- **Awareness of challenges tends to be higher than awareness of advantages.** Less than half of unemployed respondents were aware of each of the listed advantages, and awareness was particularly low for those advantages deemed most important. On the other hand, only two challenges (unpredictable jobs and locations in Eastern Canada) recorded less than 50% awareness among unemployed respondents. The most important challenges are also the ones unemployed respondents are most aware of.
- **Importance of advantages tends to be higher than importance of challenges.** In particular for advantages in pay (59%) and career development (56%). In fact, all the top four important advantages are rated important by a larger proportion of respondents than the top challenge (physical work requirements – 52%).
- **Lower awareness and credibility of information in the areas of greatest importance.** Particularly, in the top two important advantages, competitive pay (36% awareness/ 41% believability) and career progression (34%/ 42%). It is noteworthy that believability in these advantages is somewhat higher than awareness (five points for competitive pay and eight for career progression), indicating the possibility of a successful communications campaign.
- **Awareness of the seafood industry is lower.** Again, awareness of the challenges specific to the seafood industry is lower, particularly when looking at 4+5 ratings combined. Simultaneously, unpredictability and seasonality of seafood jobs are deemed to be in the top four ranked challenges by importance.
- **There is a group within respondents that are very challenged by the killing of animals.** While this subsegment (29%) rates the challenge of potentially killing animals as highly important, the challenge is not among the top four by 4+5 ratings combined. This indicates that while close to a third of unemployed respondents are strongly challenged by the proposition of killing animals, this is not among the most important challenges for the group as a whole.

**TABLE 13: UNEMPLOYED WORKERS' PERCEPTIONS OF JOB ADVANTAGES IN MEAT AND SEAFOOD MANUFACTURING**

| JOB ADVANTAGE | AWARENESS | | | IMPORTANCE | | | BELIEVABILITY | | |
|---|---|---|---|---|---|---|---|---|---|
| | R | "very aware" (5 rating) | higher awareness (5+4 rating) | R | "very important" (5 rating) | higher importance (5+4 rating) | R | "very believable" (5 rating) | higher believable (5+4 rating |
| No specific education | *1* | 26% | 47% | *7* | 24% | 46% | *2* | 30% | 56% |
| Rural locations | *2* | 22% | 45% | *6* | 25% | 45% | *3* | 28% | 51% |
| Available across country | *3* | 22% | 45% | *5* | 27% | 50% | *1* | 31% | 58% |
| Right out of school | *4* | 19% | 46% | *8* | 23% | 47% | *4* | 27% | 53% |
| Wide range of jobs | *5* | 19% | 44% | *4* | 30% | 53% | *5* | 26% | 54% |
| Skills' training available | *6* | 15% | 36% | *3* | 30% | 54% | *6* | 21% | 50% |
| Competitive pay/ benefits | *7* | 14% | 36% | *1* | 38% | 59% | *7* | 17% | 41% |
| Career progression | *8* | 13% | 34% | *2* | 31% | 56% | *8* | 17% | 42% |

Source: Labour Market Information: Key Audience Choicebook™
**R = RANKING**

**TABLE 14: UNEMPLOYED WORKERS' PERCEPTIONS OF JOB CHALLENGES IN MEAT AND SEAFOOD MANUFACTURING**

| JOB CHALLENGE | AWARENESS | | | IMPORTANCE | | |
|---|---|---|---|---|---|---|
| | R | "very aware" (5 rating) | higher awareness (5+4 rating) | R | "very important" (5 rating) | higher importance (5+4 rating) |
| Involves animals being killed | *1* | 49% | 69% | *1* | 29% | 47% |
| Requires physical work | *2* | 48% | 72% | *4* | 28% | 52% |
| Environments with strong odours | *3* | 46% | 67% | *3* | 28% | 51% |
| Seafood jobs are seasonal | *4* | 28% | 50% | *2* | 29% | 50% |
| Jobs located outside cities | *5* | 27% | 56% | *7* | 24% | 47% |
| Seafood jobs can be unpredictable | *6* | 22% | 45% | *5* | 26% | 48% |
| Seafood jobs located in Eastern Can | *7* | 22% | 48% | *6* | 25% | 44% |

Source: Labour Market Information: Key Audience Choicebook™
**R = RANKING**

## 9.3. PERCEPTIONS ON SPECIFIC OCCUPATIONS

Overall, there is a sizeable segment within each target audience that considers themselves qualified for each of the example jobs. Naturally, the subset of interested applicants is lower than the pool of qualified candidates for most of the positions. The operations manager job stands out as the exception amongst the examples offered, both in terms of the general interest in applying, which sometimes outsizes the proportion of qualified candidates, and in terms of reasons for and against applying to the position.

Generally, the reasons most likely to be given as to why respondents are interested in applying to the job are opportunities in pay and benefits and interest in the work. This is true within each target audience.

The job opportunity examples included:

- Fish filleter
- Industrial butcher/ industrial meat cutter
- Lobster processor
- Operations manager

### 9.3.1 Youth Perspectives on Specific Occupation

**There is a gap between qualified candidates and likely applicants.** For all but one job example (operations manager), youth are more likely to think they are qualified than they are to apply. A sizeable segment of young Canadians respondents considers themselves qualified for the job examples. Of the jobs considered, respondents are most likely to say they are qualified for the fish filleter job (54%), followed by the lobster processor (49%). Only one in three (30%) consider themselves qualified for the operations manager position. Despite ranking last in terms of qualified respondents, the operations manager position is the one most likely to draw applicants (30%).

**The combination of pay and benefits is generally the most likely selected reason for why youth respondents would want to apply to the jobs presented.** Interest is a close second in most cases and for the lobster processor example the top reason (selected by 54%). Interest (or the lack of) is, on the other hand, by far the top reason why youth respondents are unwilling to apply to all but the operations manager job. Notably, pay and advancement opportunities are not likely barriers to interest in applying for any of the jobs. Viewed in terms of the most important advantages discovered in the previous section, this indicates that those interested in applying make a connection between the job and advantages in compensation and career advancement opportunities.

**The operations manager job stands out as the most attractive job in terms of potential applicants.** Potential applicants are more likely to believe this job comes with advancement opportunities compared to those interested in applying to the other job examples. Those deterred from applying are more likely to say a lack of experience is the reason why.

**TABLE 15: YOUTH RESPONDENTS' QUALIFICATIONS AND WILLINGNESS TO APPLY TO SPECIFIC JOB EXAMPLES**

| JOB | QUALIFIED | | APPLY | |
|---|---|---|---|---|
| | Qualified | Unqualified | Would | Would Not |
| Fish Filleter | 54% | 30% | 27% | 57% |
| Industrial Butcher / Industrial Meat Cutter | 38% | 44% | 22% | 61% |
| Lobster Processor | 49% | 34% | 25% | 57% |
| Operations Manager | 30% | 53% | 32% | 56% |

## TABLE 16: YOUTH RESPONDENTS' REASONS FOR APPLYING AND NOT APPLYING TO SPECIFIC JOB EXAMPLES

| REASON | FISH FILLETER | | | | INDUSTRIAL BUTCHER / IND MEAT CUTTER | | | | LOBSTER PROCESSOR | | | | OPERATIONS MANAGER | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | WA | R | WN | R | WA | R | WN | R | WA | R | WN | R | WA | R | WN |
| Pay and benefits | 1 | 60% | 2 | 25% | 1 | 56% | 3 | 18% | 2 | 53% | 2 | 33% | 1 | 63% | 3 | 12% |
| Interest | 2 | 60% | 1 | 58% | 2 | 53% | 1 | 50% | 1 | 51% | 1 | 55% | 2 | 56% | 2 | 35% |
| Neces-sary ex-perience | 4 | 31% | 3 | 22% | 4 | 33% | 2 | 34% | 4 | 34% | 3 | 21% | 4 | 28% | 1 | 65% |
| Advance-ment opportu-nities | 3 | 39% | 4 | 17% | 3 | 36% | 4 | 15% | 3 | 40% | 4 | 19% | 3 | 51% | 4 | 9% |

**R = RANKING WA=WHY APPLY WN=WHY NOT**

## 9.3.2 Indigenous Canadians' Perspectives on Specific Occupations

**There is a gap between qualified candidates and likely applicants.** Indigenous respondents are more likely to think they are qualified than to be willing to apply for all positions with the exception of operations manager, where they are equally likely. Approximately half of Indigenous respondents say they are qualified for the fish filleter and the lobster processor jobs, whereas only a third or less say they would apply. Industrial butcher/meat cutter and operations manager are both jobs with a lower likelihood of qualified candidates. Notably, the fish filleter is the most likely job for Indigenous respondent applicants (32%), unlike the other three groups where the operations manager was the most likely position.

**The combination of pay and benefits is the most likely selected reason for why Indigenous respondents would want to apply to the jobs presented.** Of those that would apply, interest is a close second likely reason selected, whereas for those that are not willing to apply, interest is the most likely reason for not applying for all but the operations manager position. Notably, pay and advancement opportunities are not likely barriers to interest in applying for any of the jobs. This suggests that advantages in compensation and career advancement opportunities are recognized by those that are interested in applying for these positions.

**The operations manager job stands out.** Again, like among youth respondents, this position attracts the most potential applicants. Those deterred from applying are more likely to say a lack of experience is the reason why.

**TABLE 17: INDIGENOUS RESPONDENTS' QUALIFICATIONS AND WILLINGNESS TO APPLY TO SPECIFIC JOB EXAMPLES**

| JOB | QUALIFIED | | APPLY | |
|---|---|---|---|---|
| | Qualified | Unqualified | Would | Would Not |
| Fish Filleter | 52% | 27% | 32% | 52% |
| Industrial Butcher / Industrial Meat Cutter | 36% | 46% | 24% | 61% |
| Lobster Processor | 49% | 34% | 28% | 57% |
| Operations Manager | 28% | 58% | 28% | 56% |

## TABLE 18: INDIGENOUS RESPONDENTS' REASONS FOR APPLYING AND NOT APPLYING TO SPECIFIC JOB EXAMPLES

| REASON | FISH FILLETER | | | | INDUSTRIAL BUTCHER / IND MEAT CUTTER | | | | LOBSTER PROCESSOR | | | | OPERATIONS MANAGER | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | WA | R | WN | R | WA | R | WN | R | WA | R | WN | R | WA | R | WN |
| Pay and benefits | 1 | 60% | 2 | 27% | 1 | 57% | 3 | 15% | 1 | 59% | 2 | 30% | 1 | 64% | 4 | 8% |
| Interest | 2 | 55% | 1 | 38% | 2 | 52% | 1 | 38% | 2 | 51% | 1 | 38% | 2 | 56% | 2 | 22% |
| Neces-sary ex-perience | 4 | 30% | 3 | 20% | 4 | 40% | 2 | 34% | 4 | 37% | 3 | 20% | 4 | 29% | 1 | 61% |
| Advance-ment opportu-nities | 3 | 41% | 4 | 14% | 3 | 48% | 4 | 9% | 3 | 46% | 4 | 18% | 3 | 44% | 3 | 11% |

**R = RANKING WA=WHY APPLY WN=WHY NOT**

## 9.3.3 New Canadians' Perspectives on Specific Occupations

**There is a gap between qualified candidates and likely applicants.** In the same way as the previous two groups, a sizeable group of new Canadian respondents are confident in being qualified for the job examples, particularly the fish filleter and lobster processor positions. In the same way, they are also less likely to say they would apply than that they are qualified with the exception of the operations manager position, where more say they would apply (37%) than are qualified (34%).

**Pay and benefits and interest in the position are the most likely selected reasons for why new Canadian respondents would want to apply to the jobs presented.** Notably, interest is the top reason given for potential applicants for the top jobs ranked by qualified applicants (fish filleter and lobster processor), edging out pay and benefits, while for industrial butcher/meat cutter and operations manager this relationship is inverted. Those that would not apply are most likely to give a lack of interest as the reason with the exception of the operations manager position, where a lack of experience sits at the top.

**The operations manager job stands out.** New Canadian respondents are 10 percentage points more likely to say they would apply to this position than the runner-up, fish filleter (37% would apply for operations manager and only 27% for fish filleter). Those that would apply are more likely to believe this job comes with advancement opportunities compared to those interested in applying to the other job examples. Those deterred from applying are more likely to say a lack of experience is the reason why.

**TABLE 19: NEW CANADIAN RESPONDENTS' QUALIFICATIONS AND WILLINGNESS TO APPLY TO SPECIFIC JOB EXAMPLES**

| JOB | QUALIFIED | | APPLY | |
|---|---|---|---|---|
| | Qualified | Unqualified | Would | Would Not |
| Fish Filleter | 50% | 31% | 27% | 54% |
| Industrial Butcher / Industrial Meat Cutter | 35% | 47% | 21% | 61% |
| Lobster Processor | 45% | 39% | 25% | 60% |
| Operations Manager | 34% | 48% | 37% | 45% |

## TABLE 20: NEW CANADIAN RESPONDENTS' REASONS FOR APPLYING AND NOT APPLYING TO SPECIFIC JOB EXAMPLES

| REASON | FISH FILLETER | | | | INDUSTRIAL BUTCHER / IND MEAT CUTTER | | | | LOBSTER PROCESSOR | | | | OPERATIONS MANAGER | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | WA | R | WN | R | WA | R | WN | R | WA | R | WN | R | WA | R | WN |
| Pay and benefits | 2 | 58% | 3 | 26% | 1 | 59% | 4 | 18% | 2 | 57% | 2 | 33% | 1 | 69% | 3 | 13% |
| Interest | 1 | 66% | 1 | 57% | 2 | 57% | 1 | 50% | 1 | 60% | 1 | 56% | 2 | 60% | 2 | 29% |
| Neces-sary ex-perience | 4 | 17% | 4 | 26% | 4 | 23% | 2 | 38% | 4 | 19% | 3 | 31% | 4 | 25% | 1 | 67% |
| Advance-ment opportu-nities | 3 | 35% | 2 | 28% | 3 | 44% | 3 | 19% | 3 | 38% | 4 | 21% | 3 | 59% | 4 | 7% |

**R = RANKING WA=WHY APPLY WN=WHY NOT**

## 9.3.4 Unemployed Workers' Perspectives on Specific Occupations

**There is a gap between qualified candidates and likely applicants.** Both the fish filleter and the lobster processor jobs are likely to be viewed as within the skillset of a sizeable portion of unemployed respondents. The example of industrial butcher/ meat cutter is slightly less likely to be in this category, while only a quarter of unemployed respondents feel qualified for the operations manager position. As with the previous groups, the proportion of unemployed respondents that say they would apply for the job examples is lower than the proportion that is qualified for all but the operations manager position.

**Interest in the position is generally the most likely selected reasons for why unemployed respondents would want to apply to the jobs presented.** The difference between interest and the second-ranked reason, pay and benefits, is minimal however and these should be considered side by side when considering these results. For those that would not apply, a lack of interest is the clear likely reason given.

**The operations manager job stands out.** The differences between this and the other jobs are less pronounced, however, than what was true for the other groups. For example, unemployed respondents are similarly likely to apply for both the fish filleter and lobster processor jobs, as for the operations manager job. Again, the notable difference is in the perception of the required qualification. This is shown in the low number of qualified respondents as well as by those deterred from applying being more likely to say a lack of experience is the reason why than those deterred from the other positions.

**TABLE 21: UNEMPLOYED RESPONDENTS' QUALIFICATIONS AND WILLINGNESS TO APPLY TO SPECIFIC JOB EXAMPLES**

| JOB | QUALIFIED | | APPLY | |
|---|---|---|---|---|
| | Qualified | Unqualified | Would | Would Not |
| Fish Filleter | 48% | 32% | 27% | 55% |
| Industrial Butcher / Industrial Meat Cutter | 32% | 49% | 20% | 63% |
| Lobster Processor | 45% | 36% | 25% | 59% |
| Operations Manager | 27% | 56% | 28% | 55% |

## TABLE 22: UNEMPLOYED RESPONDENTS' REASONS FOR APPLYING AND NOT APPLYING TO SPECIFIC JOB EXAMPLES

| REASON | FISH FILLETER | | | | INDUSTRIAL BUTCHER / IND MEAT CUTTER | | | | LOBSTER PROCESSOR | | | | OPERATIONS MANAGER | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | WA | R | WN | R | WA | R | WN | R | WA | R | WN | R | WA | R | WN |
| Pay and benefits | 2 | 57% | 2 | 26% | 2 | 56% | 4 | 14% | 1 | 57% | 2 | 32% | 2 | 61% | 3 | 9% |
| Interest | 1 | 58% | 1 | 47% | 1 | 57% | 1 | 43% | 2 | 54% | 1 | 49% | 1 | 63% | 2 | 25% |
| Necessary experience | 4 | 26% | 3 | 24% | 4 | 31% | 2 | 36% | 4 | 30% | 3 | 22% | 4 | 28% | 1 | 64% |
| Advancement opportunities | 3 | 37% | 4 | 18% | 3 | 39% | 3 | 14% | 3 | 39% | 4 | 20% | 3 | 47% | 4 | 7% |

**R = RANKING WA=WHY APPLY WN=WHY NOT**

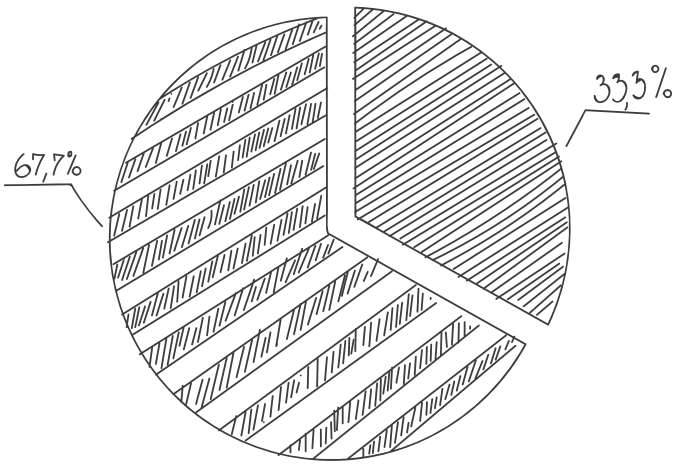
## 9.4 LIKELIHOOD OF CONSIDERING EMPLOYMENT OPPORTUNITIES IN THE SECTOR

The most compelling result when examining the likelihood of considering employment opportunities in the sector is the increase in the proportion of likely applicants as a result of information gleaned throughout the ChoiceBook™, which amounted to eight percentage points in difference. Each target audience saw an increase to the proportion of respondents willing to apply for a job in the meat and seafood manufacturing sector and, in particular, the new Canadian respondents (28% at the start of the study to 37% after absorbing the information).

Overall, the potential of bonuses – both for performance and retention – were the most likely perquisites to positively influence the likelihood of respondents to consider employment opportunities in the sector. In general, the more tangible offers, such as bonuses, transportation and predictable full-time work attracted the highest proportion of respondents within each of the segments studied.

**The potential perquisites included:**
*Would you be more or less willing to work in the meat and seafood sector if employers:*

- Covered the costs of childcare during work hours
- Have facilities near a school
- Offer bonuses based on performance
- Offer bonuses based on retention (e.g. bonus if stay six months)
- Offer co-op credits for work
- Offer jobs concentrated in select months of the year, allowing for extended time off
- Offer opportunities for language training
- Offer part-time work, allowing for more flexibility
- Offer predictable full-time work
- Offer to cover costs of tuition and school supplies
- Prepare meals for staff
- Provide a path to citizenship
- Provide financial literacy training
- Provide immigration legal support
- Provided fitness facilities on-site/paid for access to facilities nearby
- Take care of transport for employees living on reserve
- Take care of transport to and from work



## 9.4.1 Youth Perspectives on Considering Employment Opportunities

**Young respondents are motivated by available bonuses.** Bonuses based on performance and retention are the most likely potential offers to be selected by youth to improve their willingness to work. However, there is a virtual tie among the top five employer actions to improve the attractiveness of jobs. This tie includes the offer of covering tuition and school supply costs, unique to this segment. Notably, the results tail off with three less tangible actions, namely financial literacy training, co-op credits and proximity to schools.

**Information works.** Following learning about the sector as part of the process of the ChoiceBook™, young respondents are nine percentage points more likely to say they would apply to a nearby job in the meat and seafood sector, increasing to almost one in three would be applicants. One in five says they would move for such an opportunity.

**TABLE 23: YOUTH RESPONDENTS LIKELIHOOD TO CHANGE IN WILLINGNESS TO WORK IN THE SECTOR**

| Employer Offer | Change to willingness to work | |
|---|---|---|
| | More (4-5 combined) | Less (1-2 combined) |
| Offer bonuses based on performance | 56% | 10% |
| Offer bonuses based on retention (e.g. bonus if stay six months) | 55% | 9% |
| Offer to cover costs of tuition and school supplies | 55% | 9% |
| Take care of transport to and from work | 55% | 10% |
| Offer predictable full-time work | 55% | 10% |
| Prepare meals for staff | 51% | 11% |
| Offer part-time work, allowing for more flexibility | 50% | 11% |
| Covered the costs of childcare during work hours | 50% | 10% |
| Offer jobs concentrated in select mos. of the year, allowing for ext. time off | 50% | 12% |
| Provided fitness facilities on-site/paid for access to facilities nearby | 48% | 12% |
| Provide financial literacy training | 43% | 11% |
| Offer co-op credits for work | 43% | 12% |
| Have facilities near a school | 43% | 12% |
| **Some rows have been removed due to being asked only of a small subset of the group that overlapped with other pertinent groups to that category.* | | |

**TABLE 24: YOUTH RESPONDENT'S LIKELIHOOD TO APPLY TO JOBS IN THE SECTOR**

| Proximity to Job | Change to willingness to work | |
|---|---|---|
| | More (4-5 combined) | Less (1-2 combined) |
| If a meat and seafood manufacturing job was located near you, would you apply? | 20% | 47% |
| Now that you have learned more about it, if a meat and seafood manufacturing job was located near you, would you apply? | 29% (+9) | 38% |
| And if one was not located near you, would you move to work there? | 20% | 51% |

## 9.4.2 Indigenous Canadians' Perspectives on Considering Employment Opportunities

**Indigenous respondents are motivated by available bonuses.** Bonuses based on performance and retention are the most likely potential offers to be selected closely followed by predictable full-time work. The offer unique to this group, taking care of transport for employees living on reserve, was among the bottom three options, and notably nine percentage points lower than the top five (less specific) option of providing transport to and from work.

**Information works.** After reviewing the information found in the ChoiceBook™, Indigenous respondents are seven percentage points more likely to say they would apply to a nearby job in the meat and seafood sector. As with youth, one in five say they would move for such an opportunity.

**TABLE 25: INDIGENOUS RESPONDENTS' LIKELIHOOD TO CHANGE IN WILLINGNESS TO WORK IN THE SECTOR**

| Employer Offer | Change to willingness to work | |
|---|---|---|
| | More (4-5 combined) | Less (1-2 combined) |
| Offer bonuses based on performance | 57% | 9% |
| Offer bonuses based on retention (e.g. bonus if stay six months) | 55% | 9% |
| Offer predictable full-time work | 53% | 10% |
| Take care of transport to and from work | 50% | 13% |
| Prepare meals for staff | 49% | 11% |
| Offer part-time work, allowing for more flexibility | 47% | 11% |
| Offer jobs concentrated in select mos. of the year, allowing for ext. time off | 46% | 13% |
| Provided fitness facilities on-site/paid for access to facilities nearby | 46% | 12% |
| Covered the costs of childcare during work hours | 42% | 13% |
| Take care of transport for employees living on reserve | 41% | 10% |
| Provide financial literacy training | 40% | 14% |
| Have facilities near a school | 35% | 14% |

**Some rows have been removed due to being asked only of a small subset of the group that overlapped with other pertinent groups to that category.*

**TABLE 26: INDIGENOUS RESPONDENTS' LIKELIHOOD TO APPLY TO JOBS IN THE SECTOR**

| Proximity to Job | Change to willingness to work | |
|---|---|---|
| | More (4-5 combined) | Less (1-2 combined) |
| If a meat and seafood manufacturing job was located near you, would you apply? | 22% | 45% |
| Now that you have learned more about it, if a meat and seafood manufacturing job was located near you, would you apply? | 29% (+9) | 37% |
| And if one was not located near you, would you move to work there? | 22% | 50% |

## 9.4.3 New Canadians' Perspectives on Considering Employment Opportunities

**New Canadians are more likely than the other segments to be inspired to work.** With the exception of proximity to school facilities, all the offered perquisites attracted a majority of new Canadian respondents to say they would be influenced to be more likely to work in the sector. Bonuses based on performance is the most likely potential offer to be selected, closely followed by transportation and bonuses based on retention. A path to citizenship, immigration legal support and language training, are unique to this segment and are all part of the lower half of the list.

**Information works.** After reviewing the information found in the ChoiceBook™, New Canadian respondents are 13 percentage points more likely to say they would apply to a nearby job in the meat and seafood sector. The proportion of new Canadian respondents that say they would apply is the highest among the segments at 41%. As with the previous groups, one in five say they would move for such an opportunity.

**TABLE 27: NEW CANADIAN RESPONDENTS' LIKELIHOOD TO CHANGE IN WILLINGNESS TO WORK IN THE SECTOR**

| Employer Offer | Change to willingness to work | |
|---|---|---|
| | More (4-5 combined) | Less (1-2 combined) |
| Offer bonuses based on performance | 65% | 10% |
| Take care of transport to and from work | 64% | 10% |
| Offer bonuses based on retention (e.g. bonus if stay six months) | 64% | 9% |
| Offer predictable full-time work | 62% | 9% |
| Prepare meals for staff | 58% | 12% |
| Covered the costs of childcare during work hours | 57% | 11% |
| Offer part-time work, allowing for more flexibility | 56% | 11% |
| Provided fitness facilities on-site / paid for access to facilities nearby | 55% | 12% |
| Provide financial literacy training | 54% | 11% |
| Provide a path to citizenship | 53% | 12% |
| Provide immigration legal support | 53% | 12% |
| Offer jobs concentrated in select mos. of the year, allowing for ext. time off | 51% | 14% |
| Offer opportunities for language training | 51% | 14% |
| Have facilities near a school | 49% | 12% |

**Some rows have been removed due to being asked only of a small subset of the group that overlapped with other pertinent groups to that category.*

**TABLE 28: NEW CANADIAN RESPONDENTS' LIKELIHOOD TO APPLY TO JOBS IN THE SECTOR**

| Proximity to Job | Change to willingness to work | |
|---|---|---|
| | More (4-5 combined) | Less (1-2 combined) |
| If a meat  seafood manufacturing job was located near you, would you apply? | 28% | 39% |
| Now that you have learned more about it, if a meat and seafood manufacturing job was located near you, would you apply? | 41% (+13) | 27% |
| And if one was not located near you, would you move to work there? | 22% | 43% |

## 9.4.4 Unemployed Workers' Perspectives on Considering Employment Opportunities

**Unemployed respondents are motivated by bonuses**. The results point to three tiers of perquisites, with performance and retention bonuses, transportation and predictable work in the top tier. There is a middle tier that includes meals provided, extended time-off, flexible part-time work and fitness facilities. Finally, there is a bottom tier that includes financial literacy training, childcare costs and school proximity.

**Information works.** The information provided in the ChoiceBook™ sways seven per cent of unemployed respondents to say they would apply to a job in the meat and seafood manufacturing industry increasing the proportion of the group that would benefit from one in four to one in three. As with the previous groups, one in five say they would move for such an opportunity.

**TABLE 29: UNEMPLOYED RESPONDENTS' LIKELIHOOD TO CHANGE IN WILLINGNESS TO WORK IN THE SECTOR**

| Employer Offer | Change to willingness to work | |
|---|---|---|
| | More (4-5 combined) | Less (1-2 combined) |
| Offer bonuses based on performance | 59% | 9% |
| Offer bonuses based on retention (e.g. bonus if stay six months) | 58% | 7% |
| Take care of transport to and from work | 58% | 8% |
| Offer predictable full-time work | 57% | 8% |
| Prepare meals for staff | 52% | 11% |
| Offer jobs concentrated in select mos. of the year, allowing for ext. time off | 50% | 11% |
| Offer part-time work, allowing for more flexibility | 50% | 9% |
| Provided fitness facilities on-site / paid for access to facilities nearby | 47% | 10% |
| Provide financial literacy training | 43% | 10% |
| Covered the costs of childcare during work hours | 43% | 10% |
| Have facilities near a school | 37% | 12% |
| **Some rows have been removed due to being asked only of a small subset of the group that overlapped with other pertinent groups to that category.* | | |

**TABLE 30: UNEMPLOYED RESPONDENTS LIKELIHOOD TO APPLY TO JOBS IN THE SECTOR**

| Proximity to Job | Change to willingness to work | |
|---|---|---|
| | More (4-5 combined) | Less (1-2 combined) |
| If a meat  seafood manufacturing job was located near you, would you apply? | 25% | 40% |
| Now that you have learned more about it, if a meat and seafood manufacturing job was located near you, would you apply? | 32% (+7) | 34% |
| And if one was not located near you, would you move to work there? | 21% | 50% |

# 10 HUMAN RESOURCE ISSUES, PROMISING PRACTICES AND CONSIDERATIONS

Human resource issues in the industry are the manifestation of various factors outlined in the previous sections. The study examined the specific challenges that align with these issues, in addition to some areas of opportunities that could arise from the challenges being encountered. Through interviews, reviewing reports, site visits and examining some other sectors with similar challenges, some promising practices were identified for the sector to consider as it moves forward in attempting to address many of these issues.

While many of the ideas presented in this section have not been formally tested and evaluated to the extent that they could be considered "best practices," they have had some positive anecdotal results, which indicate that there may be "promising practices" that could be further investigated and adapted by employers and other stakeholders. This would be an advantage over the simple ongoing trial and error that can be expensive and time consuming for employers when attempting to address HR issues.

## 10.1 RECRUITMENT AND RETENTION


### SUMMARY

Challenges in recruitment and retention were viewed as the result of multiple, interconnected factors rather than having a single or primary cause. Some of the key interrelated factors identified included the decreasing supply of lower-level skilled labour near plants, aging workforces, increased post-secondary participation rates, movement to urban centres, industry seasonality, unpredictability of work, the sector's working conditions, more employment opportunities for local workforce, and challenges with perceptions/awareness of the fish and seafood processing industry.


### CONSIDERATIONS

Some of the considerations outlined by the study included improving the awareness and perceptions of the industry by putting on open houses and tours of the plants. Other options included managing workloads to have guaranteed days off for staff and, in some cases, limiting the number of hours per week or length of shifts. Another consideration was becoming more involved with partnerships and linkages with community agencies who were involved in assisting target audiences for the industry (e.g., youth, immigrants). Other suggestions from outside the industry included working with current employees to develop reward-based referral processes. Another idea was potentially working with other local employers with seasonal employment requirements to determine the possibility of "sharing" the local labour supply in a more coordinated manner, which could also include assistance with micro-business ventures among employees.

### ASSOCIATED RECOMMENDATIONS

- Regional solutions
- Sector employment opportunities awareness campaigns
- Attracting immigrants to settle in fish and seafood processing communities
- Flexible workplaces
- Shared HR services bureaus

## 10.1.1 Challenges with recruitment and retention

Through interviews and site visits, the challenges with recruitment and retention identified by employers were often indications of numerous connected factors and not one single cause. The connections identified included having a decreasing supply of lower-level skilled labour pools near plants resulting from an aging workforce, increased post-secondary education participation rates and urbanization trends. Combined these contributed to the situation of having many employers attempting to attract a shrinking number of workers to return to the sector or try the sector as a new entrant. Industry seasonality, unpredictability and working conditions were identified as contributing to retention issues as workers have more choice and opportunities for employment in other plants or sectors. Challenges with perceptions of the industry and lack of awareness were identified as contributing to issues recruiting new sources of labour into the sector.

While turnover rates tended to vary somewhat from region to region and between plants, the overall sector turnover rate imputed from the survey of establishments was within the 40% range. Turnover and issues of worker retention of this magnitude can be challenging to disentangle and attribute cause to a single few factors. Issues identified with employers and workers included:

- **Quality of current job candidates** – Given the labour shortages in many regions, many employers indicated that they are now hiring workers whom they would not have considered hiring a decade ago. While this offers opportunities for individuals who would previously have been unemployed, it can create challenges within processing teams and lines in which experienced, job-ready workers have to accommodate team members who are less focused, not putting in as much effort and overall not performing to the average team level. This can be particularly challenging in environments where everyone is paid a similar wage (e.g., no performance or piece bonus). The other challenge is that these individuals are much more likely to quit, which then puts additional pressures on the workforce and contributes significantly to higher turnover rates.

- **Working conditions** – In many plants, the physical working environment can be challenging with a high level of physicality (lifting, standing, bending) combined with a cold, wet environment. Given the current labour shortages, these conditions are often endured for long days (12-14 hour days often in peak seasons) with very few (or no) days off for multiple weeks in a row. While this level of activity is desirable among some workers to ensure good pay and high EI claims, for many others this presents too great a challenge resulting in high levels of absenteeism and departures. This situation was described as creating a downward spiral for retention given that as people leave because of the long hours and limited days off, this puts additional pressure on the remaining workforce who in turn are required to work even longer days contributing to more departures and absenteeism. This can be a major contribution to high turnover rates.

- **Pay levels** – The study found that average pay levels for the seafood processing plant workers and labourers are similar or slightly higher than many of the lower-skill level occupations in the same region and are higher than minimum wage. In some plants, workers are paid performance bonuses or according to production, which was reported as having two effects. The positive effect was that for the experienced, high performers this system was helping to attract and retain workers given the two- to three-fold increase in pay levels the very top performers were able to achieve. The negative effect was that those who were less experienced and not able to perform at high levels were often disappointed in their pay (boosted to minimum wage if needed) and would be more likely to depart, which again contributes to high turnover rates. From interviews with employers, many indicated that there had been some recent pay increases over the recent years. In some cases, employers were informally testing whether hourly pay increases also increased the number of applicants, retention, etc. While not systematically studied, there appeared to be some consensus that the industry was paying more for essentially the same people, and that the efforts to date had not been necessar-

ily productive in attracting significantly more new entrants, but perhaps had contributed to retaining experienced workers across multiple seasons.

- **Unpredictability** – Given the nature of seafood processing and all of the contingent factors involved including weather, fishing quotas, and landings, the industry can be unpredictable from a worker perspective. This can be particularly challenging when workers are relocating to work at plants or when the workforce is relying on a minimum set of weeks and hours to be eligible for EI at the end of the season. This unpredictability was identified as contributing to departures from the industry to other sectors that could provide a more predictable schedule and employment duration.
- **Increase in local job opportunities** – As demonstrated through the regional labour market tightness analyses, most regions studied have challenges meeting all industries' employment requirements, particularly during peak seasons. This situation has resulted in considerably more local job opportunities for lower-skilled workers, which would not have been available in previous time periods. Given lower-skill workers often have a highly transferable skill set and experience, they can be much more mobile across sectors compared to those workers with higher credentials or specific technical skill sets. Retaining workers within this type of labour market then becomes often more challenging as it becomes much easier for workers to "try on" a job and then move to another if not an optimal fit.

## 10.1.2 Promising practices and considerations with recruitment and retention

As recruitment and retention continue to be challenging, employers are attempting various approaches to address related issues. Some of the promising practices identified included:

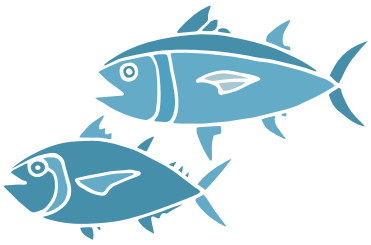
- **Open house and tours** – Employers noted where they had invested in open houses including plant tours, they felt it was not only good for community relations but also increased the number of applications to the plant thus assisting in recruitment. As well, the open house/tours gave potential applicants a chance to see the diversity of jobs as well as a realistic assessment of the working conditions before they applied, which employers believed assisted in decreasing the number of immediate departures that can happen within one week of being hired.

- **Guaranteed days off / limiting hours** – While the desire for days off and limited number of hours in a week was not desired by all workers, employers noticed that there is a subgroup of employees that appreciate having set days off that are established ahead of time and maintained so that they can organize family and social activities around these. Similarly, while the often long hours are appreciated by some, there are other workers who find that long shifts are not desirable and appreciate knowing that they will be able to start and finish at scheduled times rather than being required to consistently work extended shifts. These efforts were often viewed by employers as useful for not only attracting new entrants who had families or external commitments but also retaining workers within each season.

- **Connections with community agencies** – Employers who had made efforts to develop linkages with local community agencies who were associated with a specific target group (e.g., youth, immigrants) or were involved in assisting people with employment needs indicated positive results. It was noted that often these efforts would not necessarily result immediately in new entrants or improve recruitment, but after a period they would be a source of new employees if efforts were continued.

- **Rewarding referrals from current employees** – This did not appear to be as frequent in the seafood processing sector as in other sectors where current employees can receive referral bonuses for recommending friends or family members who are retained over certain periods of time. While there was mention of family/friends often being a good recruitment source, there was little indication that this is financially rewarded by the employer. This method has been cited as quite effective in other tight labour markets in other labour-intensive sectors.

- **Working with other seasonal employers** – A potential practice that was presented as a possibility in a few interviews but does not yet appear to have been put in place anywhere consistently is improved co-operation between regional employers from different sectors as opposed to competition for an increasingly scarce labour supply. It was suggested that it might be worth exploring if it would be possible to work at a community level with employees to determine if there could be optimal "employee sharing" (as opposed to "job sharing") across employers that is co-ordinated and allows workers living in seasonal employment areas to work with more than one employer in a scheduled manner to develop a longer term, multi-occupation job. For example, combining seafood processing with construction labour and agriculture work. Often workers are doing this on their own, with employers essentially competing with one another to retain an employee. An approach that consists of "work terms" across different community employers or is perhaps combined with support for micro-business ventures with employees might be appealing to some and assist with the challenges involved in "peak" seasons in a number of sectors.



# 10.2 AGING WORKFORCE


## SUMMARY

The aging workforce in the fish and seafood industry presents both opportunities and challenges. Opportunities include access to experienced workers often with good work ethic, awareness of job requirements and dependability. Challenges include adapting to physical requirements, more limited endurance for long shifts, attraction to other sectors heavily recruiting from this group, and the future sustainability of the workforce when this group currently makes up the "core" workforce for many employers.


## CONSIDERATIONS

Employers are currently making various considerations in developing approaches to both recruit and retain an aging workforce. Some of these include: increasing the flexibility in scheduling taking into account shorter shifts and additional days off, increased automation and use of technology that assist in alleviating some of the more physical aspects of processing jobs, designing tailored pay and benefits packages, and recognizing experience and seniority within the workforce.

## 10.2.1 Challenges with the aging workforce

While there were a number of benefits outlined with the currently aging workforce such as experienced workers, good work ethic, aware of the job requirements, and dependability, there were also some challenges identified. These included:

- **Physical requirements** – Many of the plant jobs have significant physical requirements of lifting, standing for long periods and manipulation of materials in a repetitive manner. This can be challenging for an aging workforce, particularly when there are age-related health issues that are exacerbated by the working conditions such as arthritis and other musculoskeletal conditions.

- **Endurance for long shifts** – As noted previously, in some plants workers may be required to work very long shifts with limited days off for extended periods. This was noted by employers and employees as challenging for older employees as their levels of endurance are not as substantial as when they were younger.

- **Attraction to other sectors** – Many other sectors (e.g., retail, food service, tourism) are actively and aggressively recruiting older workers given all the positives this group provides in a tight labour market with limited new entrants. As a result, some employers are experiencing shifts of workers from their "core workforce" who may have been with the company for many seasons not returning as they access other employment opportunities with perhaps greater predictability, flexibility and easier working conditions.

- **Future sustainability** – By relying on aging workers to make up their "core workforce," employers are keenly aware that they are vulnerable in the very near future and will have ongoing challenges with sustainability as this group continues to retire and need to be replaced.

## 10.2.1 Promising practices and considerations with recruitment and retention

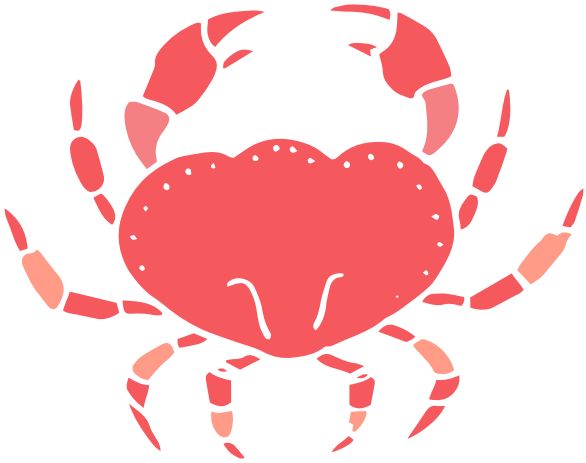
Given the advancing age of many in their workforce, employers are attempting various approaches to address related issues. Some of the promising practices identified from both within the sector and from other sectors included:

- **Flexibility in scheduling** – Similar to other target groups, increased flexibility in scheduling has been demonstrated to assist with retention issues. Older workers may need shorter shifts, more flexibility to schedule around appointments and prefer additional days off. The way many processing plants are currently organized, this type of flexibility is viewed as not possible. Innovative thinking of how processes can be adjusted may allow some organizations to view developing this type of flexibility as a necessary option if they are to retain a sufficient workforce – as is the case in some other sectors.

- **Increased automation and technology** – Some of the current challenges that confront older workers are due to processes that have not yet been automated, or there is not available technology (or it has not been yet adopted) to alleviate some of the more physical aspects of processing jobs. Employers and employees did note that there have been some changes put in place (e.g., cooking processes, meat extraction) that have lessened physical requirements of some jobs. Increased development and adoption of automation may not only improve productivity but also make it much more possible for older workers to work longer at plants before retiring.

- **Designing tailored pay and benefit packages** – While this was not highlighted by employers in the seafood processing sector, other sectors have begun exploring greater tailoring of pay and benefits packages according to individual workers' preferences. For example, the benefit of health insurance may be increasingly important for older workers (compared to many youth), while they may be less interested in contributions to retirement funds. While this may incur extra costs to employers, it may make a significant difference in how easily older workers can be retained as the competition for this labour source increases.

- **Recognizing experience and seniority** – Depending on the plant, there can sometimes be little or no difference between the starting wage compared with someone who has been working in the industry for 20 years. Employers and employees noted that this can be discouraging for workers who have considerable experience and seniority as plant workers but do not have it recognized in financial terms. This was noted among some as becoming increasingly an issue as the "hire anybody" approach to recruiting has brought in workers who are not job-ready but are standing in the processing line making the similar or identical wages to the worker who has returned to the same company consistently for ten years and performed well.



# 10.3 TRAINING AND EDUCATIONAL INSTITUTIONS


## SUMMARY

The current role of training and educational institutions with the processing sector is less clear than for other sectors. This appears to be in large part due to the sector's foundational, intermediate and higher-skill occupations being largely experience-based with training being primarily on-the-job. This presents challenges with respect to the sector missing out on the "validation" role that training institutions often play, and that career planning for youth, in particular, is often started by selecting a post-secondary training or education program.


## CONSIDERATIONS

Potential suggestions for the sector include developing closer connections to both secondary and post-secondary programming. This may result in changes such as highlighting sectors within existing programs, developing work placements and work terms within the sector for current programming, considering a path in seafood processing that could benefit from external training programs, and combining job-ready development with tailored sector experience.

## 10.3.1 Challenges with training and educational institutions

The current role of training and educational institutions with the processing sector is less clear than for other sectors. This appears to be in large part due to the sector's foundational, intermediate and higher skill occupations being largely experience-based with training being primarily on-the-job. Some of the challenges this presents include:

- **Sector misses the "validation" role from training institutions** – Given that many occupations require some sort of training or certification from an educational institution, there is a role that post-secondary educational institutions play for some sectors by legitimizing or validating many of their key occupations. This can be achieved by having educational institutions' "programs" directly associated or linked to an occupation or field (e.g., trades, nursing, security). The majority of jobs in the seafood processing sector do not have any educational requirements, which makes the link between the sector and educational institutions quite tenuous.
- **Career planning often conducted by choosing a training or educational program** – For most youth and those re-entering the labour force, the choice of an educational program is the first step in developing career interests or making career selection decisions. Given there are no specific "seafood processing" programs, the sector is likely often overlooked as an option for the many who choose this approach to career selection. This is confirmed to some extent by the relatively low level of awareness of the sector among many of the target audiences surveyed through the Choicebook™ approach.

## 10.3.2 Promising practices and considerations with training and educational institutions

- **Highlighting sector within existing programs** – One approach that could be considered that may help in developing awareness among those in career choice stages is to highlight the seafood processing sector within existing programs. For example, diploma or certificate programs in food technology may be encouraged to have substantial components focused on the seafood processing sector encouraging students to explore the industry as a viable career choice. This would require industry working with regional educational institutions to help develop their curriculum.

- **Work with educational institutions to position sector work placements and work terms within current programming** – Closely related to highlighting existing programs within the current curriculum is for the industry to consider working with educational institutions to offer and hopefully integrate work placements and work terms in the sector with the various applicable programming.

- **Consider a path in seafood processing that would benefit from external training programs** – Most of the foundational and intermediate occupations do not currently have educational requirements with all of the training occurring as on-the-job. One consideration may be to examine the different jobs to determine if there would be any benefit to having some external training as either a pre-requisite or to accompany the on-the-job training that occurs. While not wanting to establish a barrier to employment, this type of training could "validate" the job choice and potentially be rewarded with financial incentives (e.g., small raise in hourly wage) when the individual completes the external training or comes to the organization with the training completed.

- **Combine job-ready development with tailored sector experience** – With the sector offering many jobs that do not require extensive educational requirements or years of previous experience, it could be positioned as an interesting sector to be paired with programs that aim to develop job-readiness among participants. One example of this is Succeeding at Work, which is focused on preparing participants to work in the food processing industry. While this program has a specific focus on food processing, there may be other more general job-readiness programming that could also be more closely linked to the industry. Employers participating in these programs may need to adapt the timing and working conditions to integrate these participants into their workforce, but this can often be achieved through the development of work placements and shorter work terms as an introduction to full-time employment.

# 10.4 WAGES AND BENEFITS


**SUMMARY**

While wage levels are similar to those of many other lower-skill level positions, there may be challenges as to whether the current levels compensate sufficiently given the working conditions and unpredictability of the sector. In many plants, there is often limited reward for experience or returning for multiple seasons. Benefit packages are offered by two-thirds of employers.


**CONSIDERATIONS**

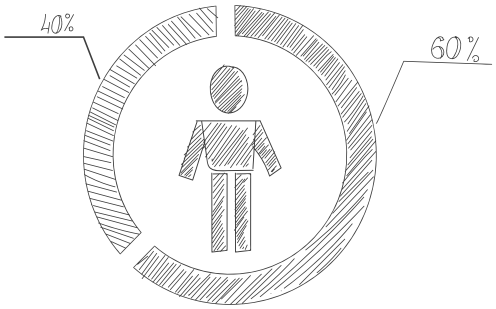
Some suggestions or considerations for possible improvements include: working at more flexibility with benefit packages avoiding a "one-size-fits-all" approach, implementing pay structures that reflect rewards for experience and performance and developing positioning of the industry that elevates seafood processors as an employer of choice.

## 10.4.1 Challenges with wages and benefits

- **Compensation equating to working conditions and unpredictability** – While wage levels are similar or even slightly higher than many of the other lower-skill level positions available in many communities where seafood processors are located, they still may not be fully able to compensate for the challenging working conditions and the unpredictability of the sector, particularly when the regional labour market is tight, and the labour force has multiple job opportunities from which to choose.

- **Often limited reward for experience** – As previously mentioned, there is often little distinction in wages between new employees with limited or no experience and those workers who have been returning to the same plant for ten years.

- **Benefit packages** – Approximately one-third of employers do not offer any benefit packages to employees, according to the survey of establishments. One half of employers reported that they offer extended health benefit packages to their workers. Benefits such as extended health coverage would likely only be available when employees are working, which means that for a significant portion of the year, workers are not covered.

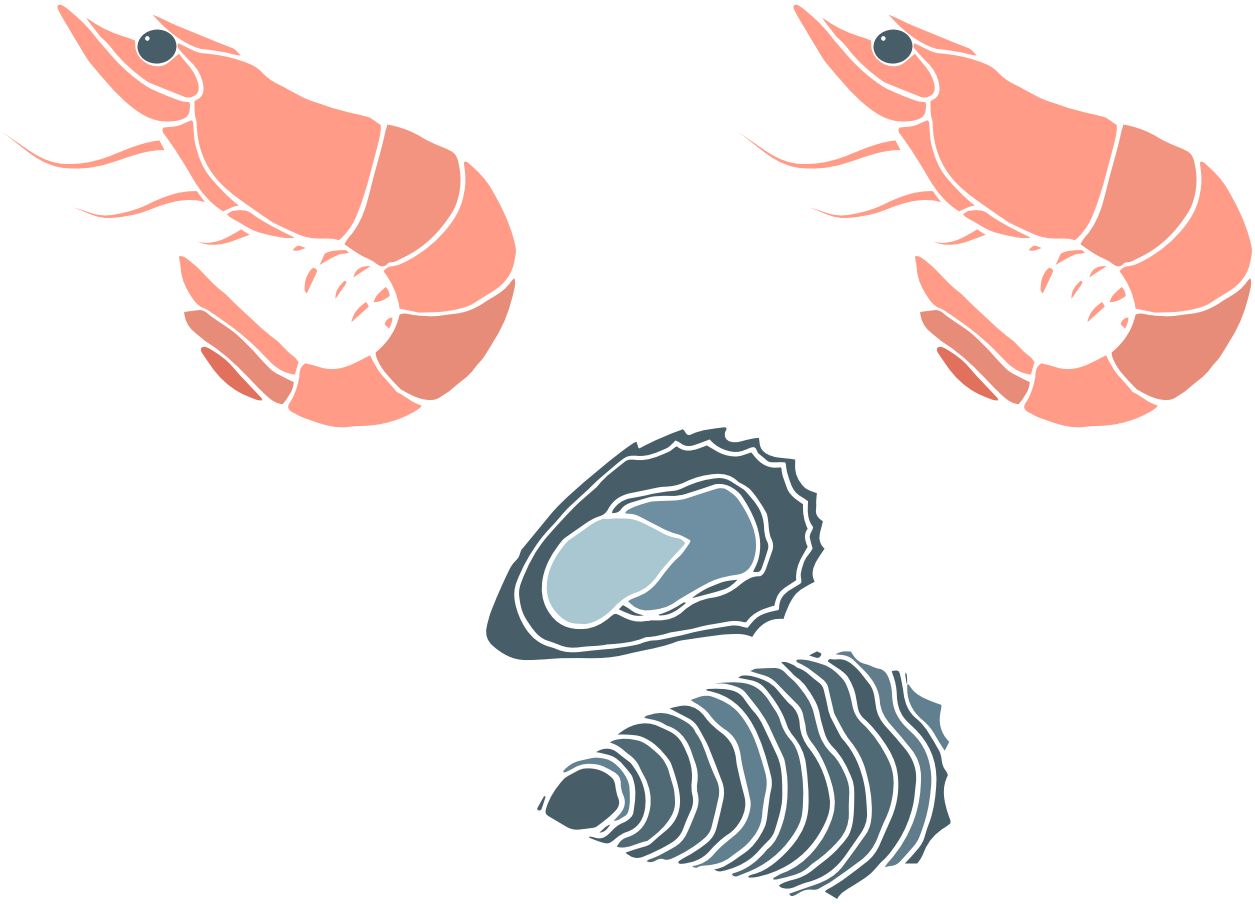


## 10.4.2 Promising practices and considerations with wages and benefits

- **Flexibility with benefits** – As the workforce in processing plants become more diverse, there may be a need to tailor benefit packages to make them more attractive for the different types of employees. For example, youth may be less interested in extended health benefits and more interested in tuition support, while older workers may view health benefits as very desirable. A "one-size-fits-all" approach may become increasingly less effective in attracting and retaining employees as their needs become more diverse.

- **Pay structure that reflects reward for experience and performance** – As identified above, in some plants there is very little if any difference between the wage level of new employees with no experience and experienced, high performing workers. In some plants, this is compensated to some extent by piece work or performance bonuses (which in turn can have challenges for retaining new employees). The sector may want to consider examining pay structures among the foundational, intermediate and higher-skill level occupations to determine if there are alternative structures that would better serve their employees and assist with both attracting new employees and yet retaining those who often make up the core workforce of experienced, returning employees.

- **Positioning required to be an employer of choice vs employer of last resort** – Given the tight regional labour markets resulting in competition for local workers and needing to recruit workers from other regions, the seafood processing sector will need to continue to work at positioning itself as an employer of choice rather than an employer of last resort. There is a multitude of factors that can contribute to this positioning, but wages and benefits will always likely remain key in combination with the many other factors described in this report.



# 10.5 SEASONALITY


## SUMMARY

The context within which seafood processing exists necessitates it to be largely a seasonal industry. Challenges that this seasonality presents includes have peak seasons that coincide with other industries' peak seasons creating considerable competition for a limited local labour force, relying on and accommodating a largely EI-based workforce that has specific needs and preference, and retaining a returning workforce.


## CONSIDERATIONS

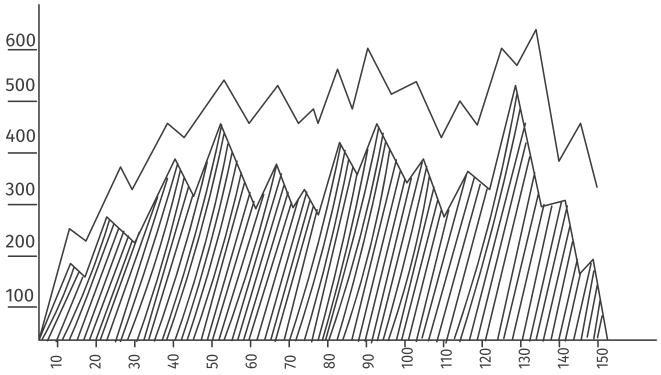
Suggestions for considerations that may improve the challenges associated with seasonality for the sector include: using technology and infrastructure adjustments to lengthen season and minimize peaks, implementing a system of return bonuses that reward employees with more experience and return to the same employer each new season, and adapt schedules and workloads to meet the needs and preferences of various groups (e.g., youth, older workers, EI-recipients).

## 10.5.1 Challenges with seasonality

- **Competition during peak periods** – As noted previously, the context within which seafood processing exists necessitates it to be largely a seasonal industry given the timing constraints landings of much of the raw product. For many regions, the peak season for seafood processing also tends to coincide with the peak seasons of many other regional industries such as agriculture and tourism. Many of the competing industries have similar workforce requirements (e.g., limited experience required; no specific educational requirements) resulting in high competition for a limited number of local workers.

- **EI-based workforce** – Given the seasonality of the seafood processing industry, the sector attracts a workforce that largely relies on employment insurance (EI) as an ongoing key component of their annual income. As a result, meeting the "EI-related" needs of workers is essential for the industry in order to attract and retain this core group. This can present challenges for employers as the EI-based workforce can operate within a relatively narrow band of minimum and maximum work amounts. Employers attempt to ensure that all workers receive the minimum number of hours and weeks to qualify for EI in the off-season period. Often during this period, there is a push on to get many hours and higher paycheques, which help with providing higher levels of EI payments in the off-season. Another challenge then comes when EI requirements have been met, or when workers have open claims that have restrictions on the number of hours they can work with no impact on their EI payments. Employers note that this is particularly challenging as this may be occurring during peak season and workers are absent or calling in sick to avoid working extra hours, which puts additional pressures on the remaining workforce. Working with an EI-based workforce can also be a deterrent to employers to try and lengthen their processing season as finding a sufficient number of local workers willing to work can be challenging in the off-seasons. This was confirmed by aquaculture producers who tend to work all year-round who indicated that finding workers in the off-seasons is particularly challenging given that many potential workers prefer to have EI as a key portion of their annual incomes.

- **Retaining a returning workforce** – Another challenge posed by seasonality is that there is the desire by employers to retain their previous season's workforce, but with gaps in employment and the increasing number of other opportunities for employment in many of the regions this can be challenging. Compared to an employer that has a full-time, permanent staff working standard hours, seafood processors have to start and stop, re-engage, slow down and then speed up. This can put pressures on HR to have staff ready then pause, then go full speed and then disengage for multiple months. Many of the HR best practices in workforce retention are difficult to implement within this type of stop-and-go environment combined with long periods of no contact with employees during off-season.



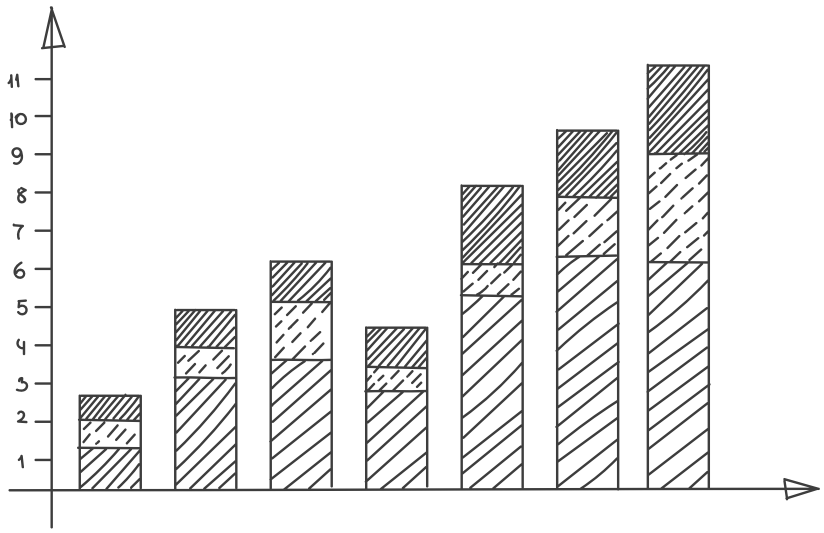
## 10.5.2 Promising practices and considerations with seasonality

- **Use of technology and infrastructure to lengthen season and minimize peaks** – Interviews with employers indicated that they are making ongoing changes to their infrastructure and technology to attempt to lengthen their seasons and flatten out the peaks and lows in processing. This includes investments in storage/holding facilities.

- **Return bonuses** – Tied in with previous considerations on recognizing the experienced workers would be a structure of return bonuses for those who return to the same employer each year.

- **Adapt schedules to meet EI requirements** – Given the heavy reliance on an EI-based workforce, the processing sector will likely continue to try to adapt schedules and work weeks according to the needs of this group. There may be some considerations needed in how the EI system in its current form is actually contributing to a shrinking of the labour resources available in some regions through policies on restrictions of hours with open claims, etc.

- **Tailoring schedules** – This is already being done to some extent by workers themselves through absenteeism. There may be room in some organizations to consider how schedules could be more flexible and reflect more readily workers' preferences within a system that does have production lines and specific performance requirements. In some cases, workers will prefer long hours and few days off, while another portion of the workforce will prefer shorter shifts and scheduled days off. Recognizing the different worker scheduling preferences and not requiring a one-size fits all solution will be particularly challenging in a fast-paced production working environment but is currently a challenge outside of the seafood processing industry as well with companies trying different approaches to accommodate within the processing environment.



# 10.6 USE OF TEMPORARY FOREIGN WORKERS


**SUMMARY**

The main challenges outlined for use of temporary foreign workers included application challenges such as costs, length of time for approvals and the lack of opportunities to follow a path toward permanency for many TFWs.


**CONSIDERATIONS**

Suggestions and considerations included adjusting the current immigration pathways so that TFWs could be accommodated (consider total hours; partnerships with two or more employers), recruiting from the same communities and networks, and providing assistance with housing and transportation.

## 10.6.1 Challenges with temporary foreign workers

- **TFWP application challenges** – Employers noted that while the Temporary Foreign Workers Program (TFWP) was useful in most cases in assisting with filling labour gaps during their peak seasons, there were some challenges, particularly associated with the application process. The main concerns highlighted in interviews included the costs associated with the program application, the length of time for processing applications and the costs and time involved in producing adequate labour market impact assessments.
- **Following a path to permanency** – Among employers and temporary foreign workers there is often the preference to have a pathway to permanent residence status. This can be challenging given many of the immigration pathways (including the Atlantic Immigration Pilot) requires full-time employment. Some noted that while seasons are extending and lengthening this is getting closer to 12-month employment situations for a few employers, this is generally still not the case among many of the seafood processor

## 10.6.2 Promising practices and considerations with temporary foreign workers

- **Adjustments to immigration pathways** – While some employers are attempting to lengthen employment opportunities to offer more permanent immigration options for temporary foreign workers, there were suggestions as to what adjustments could be made to the immigration pathways so that temporary foreign workers could be accommodated. Some of these included considering the total number of hours that seafood processors offer employees and prorating them across 12 months (with suggestions that this would for many equate for nearly a full-time, 30+ hour week) to recognize the realities of the seasonality and peaks in the industry. Another suggestion included allowing seafood employers to work with other industries to "compile" a full-time job across two or more employers (e.g., seafood processing in summer months, food service in winter, agriculture in spring).
- **Returning workers with family/friends** – Employers noted that recruiting from the same communities and networks often helps TFWs to feel more integrated and less lonely during their time in Canada. Workers are encouraged to identify other family members or acquaintances from their communities who would be interested in working at the plant and accompanying the current worker on their return the following season.
- **Assistance with housing and transportation supports** – Employers working with TFWs noted that of key importance in ensuring that TFWs are integrated and comfortable in their work is to make certain that their housing is adequate and that there is transportation supports available within the community.

# 10.7 INDUSTRY IMAGE


## SUMMARY

Challenges outlined with respect to industry image included the sector not generally being considered during key career decision-making stages, overall low levels of awareness of the industry and current job opportunities and perceptions that jobs in the seafood processing industry are of a lower status.


## CONSIDERATIONS

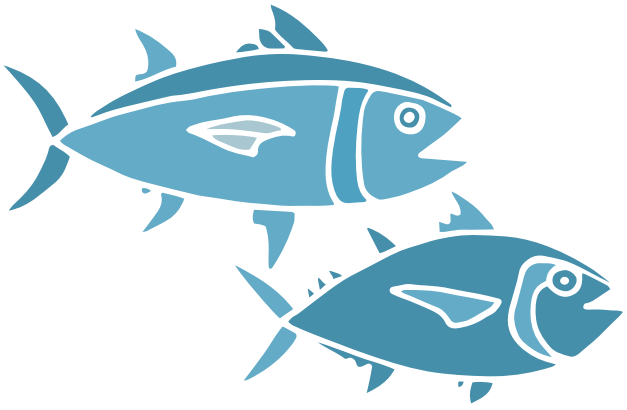
There were various suggestions of how the sector may be able to address some of these challenges by undertaking work to position jobs and employment opportunities with the quality of products that the sector produces that have global reach. Other considerations included positioning the processing sector within the overall food chain as there appears to be often a gap between the sea harvest and the chef's table. Combined with this is the approach of having groups (particularly youth) work on something that makes it "more than a job."

## 10.7.1 Challenges with the industry image

- **Sector not considered during career decision-making** – As noted previously, the seafood processing sector is not generally considered during more structured career decision-making processes in part due to its lack of connection and representation within educational institutions and specific training programs (e.g., there are limited specific "seafood processor" training courses compared to other countries).

- **Low levels of awareness of industry** - As noted in the results from Choicebook™, there are low levels of awareness of the seafood processing sector in general, and particularly with respect to the occupations available.

- **Perceptions of jobs as lower status** – Employers and employees noted that working in seafood processing is often perceived as a low-status job within communities associated with plants. This in part is due to the history of working in the plants and many parents preferring that their children find other sources of employment.



## 10.7.2 Promising practices and considerations with industry image

- **Positioning jobs with quality of products** – Recently there has been some work undertaken in positioning jobs within the seafood processing industry as making contributions to quality Canadian products that have global reach. These types of campaigns may impact the public perceptions of the jobs in the industry.

- **Positioning the sector within the food chain** – There may be some benefit in continuing to attempt to position the sector and specific processing jobs within the overall chain from ocean to table. Given the emphasis on sustainability on the harvesting segment and the popularity of celebrity chefs on the culinary segment, there is seemingly a gap in the public's knowledge of how fish and seafood make it from the wharf to the kitchen and all the processing steps in between.

- **Working as a "team" on something bigger** – This aspect has been emphasized recently in "Team Seafood" on PEI that is focusing on getting students working in the seafood processing industry. This emphasis on the sector overall as it addresses global markets and provides quality Canadian product may assist workers to see themselves as part of something a little larger than a person standing on a production line. While fish harvesters often have a strong identity and history with strong cultural ties, this appears to be less the case with those working in the processing industry (with some exceptions).

# 10.8 TECHNOLOGY AND AUTOMATION


**SUMMARY**

There are various challenges that have been outlined with respect to developing and implementing technology and automation in the industry that include: species-specific needs related to technology, lack of interest in the industry from Canada's technology sector, industry uncertainty and seasonality and industry structure (e.g., small, multiple species plants).


**CONSIDERATIONS**

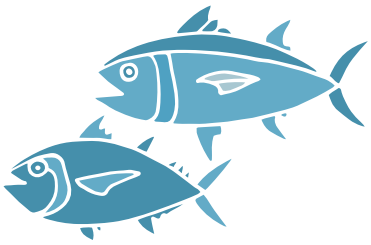
The main areas of promising practices or suggestions for improvement for the sector include using technology to reduce labour requirements, which to date have tended to focus on grading, butchering and cooking, and improvements to working gear to improve the comfort and safety of workers.

## 10.8.1 Challenges with technology and automation

***Many of the specific challenges with industry adaptation of technology and automation were outlined in Section 5.***

## 10.8.2 Promising Practices and Considerations with Technology and Automation

- **Using technology to reduce labour requirements** – There have been recent examples of investments in technology and automation that have had direct impacts on the labour requirements for some processes. These include areas such as grading, butchering and cooking. These areas of progress do have to be considered within the constraints of the industry as noted in Section 5.
- **Improvements to working gear** – Some employers and employees noted that there had been improvements in individual working gear (smocks, gloves) that have improved their comfort and protection from extended exposure to water.



# 10.9 GEOGRAPHY AND PLANT LOCATIONS

**SUMMARY**

Many of the plants are located in rural or small-town settings with a relatively small local population. As a result, if the local population is not sufficient to meet plant employment requirements workers need to commute or temporarily relocate in order to work at the plants.

**CONSIDERATIONS**

Areas of promising practices or suggestions to address these challenges include innovative ways to provide or support transportation for employees, and to temporarily relocate workers from other regions particularly where this has been an ongoing tradition.

## 10.9.1 Challenges with the geography and plant locations

Many of the plants are located within rural or small-town settings with a relatively small local population. This is based on history along with proximity to landing sites (although plants are increasingly having raw product trucked from outside regions to their plants depending on availability and season). As a result, if the local population is not sufficient to meet plant employment requirements, workers need to commute or temporarily relocate in order to work at the plants. Unless transportation, relocation and housing are subsidized, workers can encounter significantly higher work costs compared to if they remained closer to their homes and worked at jobs with similar wages.

## 10.9.2 Promising practices and considerations with geography and plant locations

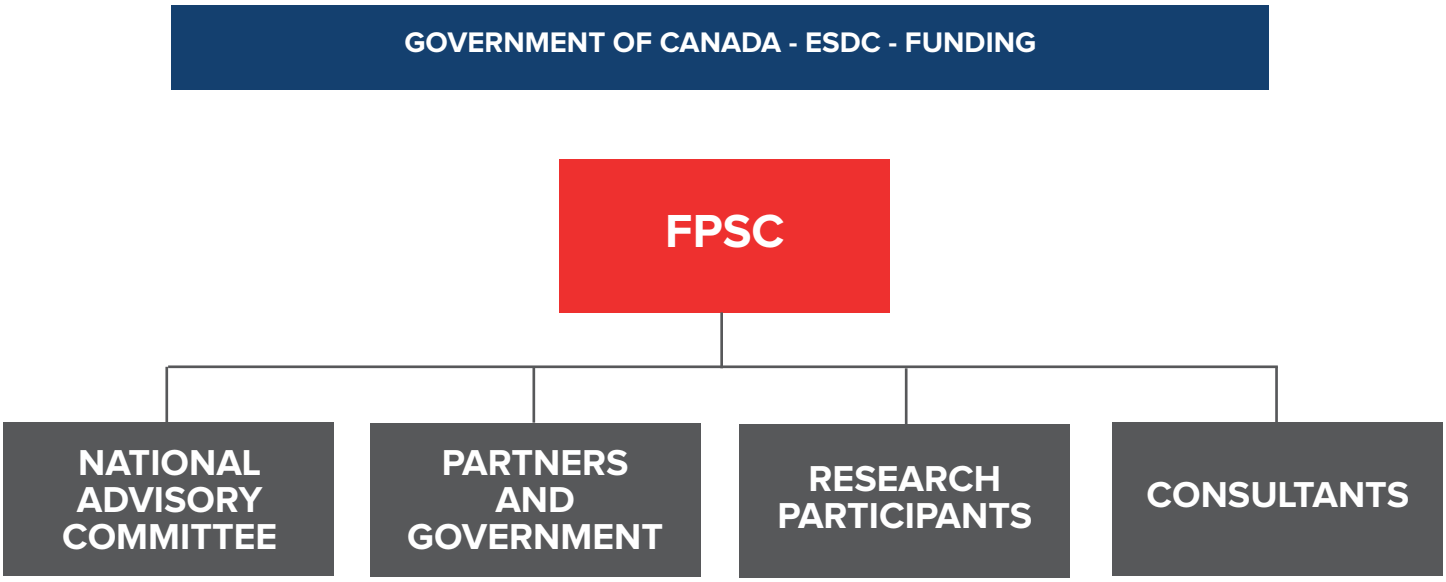
- **Transportation** – Some employers are assisting with transportation needs by providing buses or vans that run from larger population centres out to the plant location. Some employers have had success with this approach, while others reported having tried it and abandoned the service given lack of uptake among employees.

- **Relocation of workers as a tradition** – In some regions, there has been a longstanding tradition of workers relocating to plant communities during the peak season. The source of these workers was often Newfoundland. Within Newfoundland, movement across regions is still common; however, the relocation to other provinces (mostly NB) is happening far less frequently largely due to the employment opportunities available either within Newfoundland or higher paying opportunities in the western provinces.

# APPENDICES

# APPENDIX A: STUDY STRUCTURE

The overall study structure consists of the Food Processing Skills Canada (FPSC – formerly the Food Processing Human Resources Council or FPHRC) having received funding from the Government of Canada via the Sectoral Initiatives under Employment and Social Development Canada. The FPSC (FPHRC) is working with a National Advisory Committee along with Partners and Government to conduct the study with research participants with the assistance of a group of consulting firms.




The National Advisory Committee is made up of both industry and partners including processors from each of the Atlantic provinces along with a research institute, and processing associations and sector council.

## FISH AND SEAFOOD MEMBERS

| INDUSTRY | PARTNERS |
|---|---|
| Acadian Supreme Inc. (PE)<br>Beach Point Processing Company (PE)<br>Cape Bald Packers (NB)<br>Clearwater Seafoods LP (NS)<br>Conner Bros. Clover Leaf Seafoods Company (NB)<br>Ocean Choice International (NL)<br>Quin-Sea Fisheries - Royal Greenland (NL)<br>Victoria Co-operative Fisheries (NS) | Fisheries and Marine Institute of Memorial University<br><br>Lobster Processors Association of New Brunswick and Nova Scotia<br><br>Nova Scotia Fisheries Sector Council |

# APPENDIX B: DETAILED METHODS AND DATA SOURCES BY COMPONENT

**Survey of Fish and Seafood Processing Establishments**

The survey of fish and seafood processing establishments was conducted to provide key information for the description of the current labour force along with contributing to the estimates for current and future demand requirements from the industry. Characteristics of the survey included:

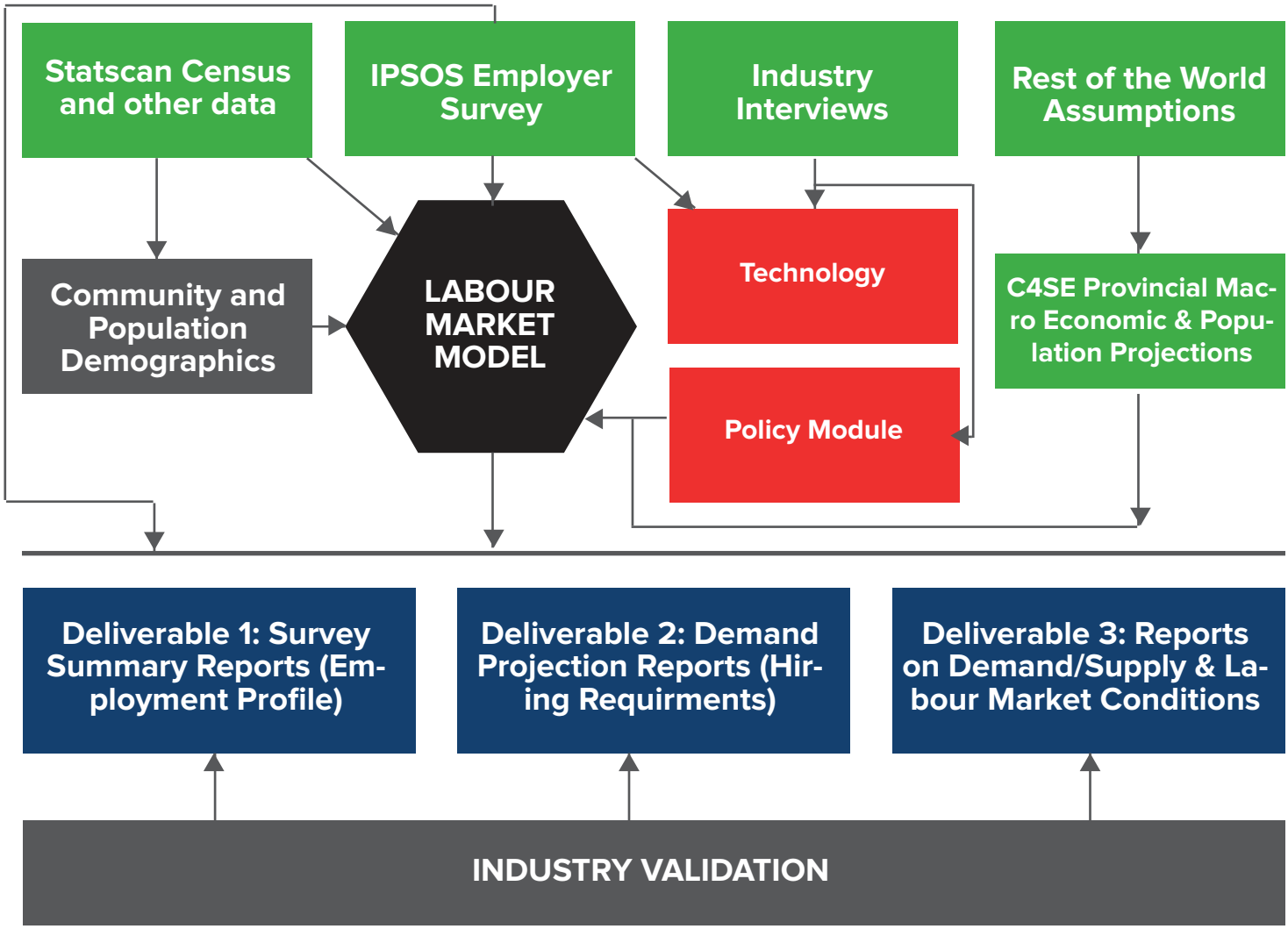
- In total, n=100 Seafood processing employers participated in the survey administered by Ipsos.
- Data collection was conducted via a telephone (n=64) and online (n=36) surveys.
- The survey was fielded between December 30th, 2017 and April 23rd, 2018.
- The margin of error for a sample of n=100 is +/- 4.7%, nineteen times out of twenty. The margin of error will be greater for sub-groups depending on sample sizes.
- The average length of the survey was 21 minutes via telephone and 33 minutes online.
- Respondents were screened to ensure that only those individuals who had detailed information about the people employed within the organization and the types of skills and qualifications required by the organization participated in the survey.
- The survey was conducted in both English and French, depending upon the preference of the respondent.
- Respondent contact information for the survey was provided by FPSC.

**Supply and Demand Projections**

The objective of this component of the study was to undertake a comprehensive labour market information study of the seafood processing sector to collect information on the following topics and areas:

- Top occupations and practice areas in the seafood sector
- Knowledge, skills and experience required by employers
- Current and future workforce demands and how they are likely to change?
    - Expansion Demand (change in employment)
    - Replacement Demands (deaths and retirements)
- Compensation and benefits for key occupations
- Supply of workers
- Measures of current and future labour market conditions to identify the specific sectors, regions or key practice areas likely to experience hiring difficulties.

The overall approach for the labour market model development included multiple quantitative data sources such as the survey of establishments (IPSOS Employer Survey), Statscan Census and other industry and labour force data, and provincial macroeconomic and population projections (C4SE Projections).




**Qualitative Methods for Site Visits and Interviews**

The two primary objectives of the Site Visits and Interview component of the study was to collect qualitative information that would:

- describe the Atlantic fish and seafood processing sectors, their labour force, demand and supply conditions, and HR challenges for recruiting, retention, and skills training; and
- provide additional in-depth information on the sources of workers available to meat and Atlantic seafood employers.

| DESCRIBE | INDENTIFY |
|---|---|
| Employers and Workers<br>Communities and Stakeholders<br>Working Conditions<br>Local Labour Market (supply, demand) | Sources of Potential Workers<br>Local/International<br>Challenges and Opportunities |
| **UNDERSTAND** | **COLLECT** |
| Recruiting Practices<br>Skill Requirements and gaps<br>Training Opportunities<br>Economic Impacts of Labour Shortages | Success Stories and promising practices in attracting and retaining workers |

The main methods used included site visits and interviews with plant managers and employees focused in 12 regions, along with interviews with government representatives, associations, training institutions, researchers, union representatives, and community groups. Overall, interviews were conducted with 127 individuals for this component of the study.

**Review of Technology Utilization in Atlantic Canada's Seafood Processing Industry**

The methodology used in this component of the study consisted of the following strategies for data and information collection.

- Country Selection: Countries were selected for this comparative analysis based on the following criteria: level of adoption of advanced processing technologies; investment in innovation, research and development; labour market practices; specialization of species processed (i.e. Salmonids, groundfish, and pelagic).
- Literature Review: The literature review and document analysis were derived from government and/or industry information (websites and other publications), conferences, peer industry reports and other publications.
- Industry Consultations: consultations with industry took place through email exchanges, telephone calls and personal communication.
- Site Visits: a series of site visits were conducted as part of direct technology transfer missions or through conference meetings in Norway, Iceland and the Faroe Islands. During these missions, researchers visited several fish and seafood processing facilities and met with individuals in these countries working with key research organizations involved in the seafood sector.

**Review of Career Paths in Fish and Seafood Processing**

The methods utilized in this component of the study included:

- Collecting and analyzing job descriptions, job advertisements, organizational charts and other occupational information from a variety of fish and seafood processing facilities,
- Conducting telephone interviews with fish and seafood processors, and
- Reviewing and validating the career ladder with an industry-led advisory group.

**Choicebook™ Survey**

To complement Food Processing Skills Canada's (FPSC) ongoing Labour Market Information study, an online Choicebook™ survey conducted to gain a better understanding of perceptions of the industry among key target audiences and the general public more broadly:

- The views of the general public, including four target audiences, were obtained by having respondents consider a range of information before answering questions, including: background, sector employment facts, scenarios and data.
- Overall, 1,248 participated from the general public and an additional 2,089 from the four target audiences: 972 from the youth audience, 506 from the Indigenous Canadian audience, 500 new Canadians and 1,205 of the unemployed audience. Due to the nature of these audiences, there was some overlap between them.
- This Choicebook™ survey data was collected between August 10 and September 24, 2018.

# APPENDIX C: OVERVIEW OF FISHERIES MANAGEMENT PLANS IN ATLANTIC CANADA

**What are the integrated fisheries management plans?**

The integrated fisheries management plans are a list of guidelines set in place to ensure that a balance is maintained between the economic results of the fishing industry and its own sustainability. These plans designate limits and conditions to allow fish populations to remain stable, preventing overfishing and making sure the ecosystem doesn't get damaged while also considering the economic importance of said fisheries. They also consider fishing done by aboriginal populations for culture and sustenance when making these plans.

**What methods are used?**

The most common limitation described in the IMFPs (integrated fisheries management plans) is a TAC or total allowable catch. This number, usually represented in tons, represents the amount of fish that can be fished in a certain region. Most regions are divided into different fishing areas, which each have their own rules and restrictions. These are generally presented with the acronym -FA, for example, lobster fishing areas are referred to as LFAs, herring fishing areas as HFAs and so forth. There are also NAFO (North Atlantic Fisheries Organizations) divisions, which are designated by a number and letter, such as 4x or 3k. These divisions aren't necessarily the same ones used for different fishing areas.

There are also other restrictions that tend to be applied, such as fishing seasons, limitation of fishing licenses and quota distribution among them, regulations for the equipment used, such as what kind of fishing is allowed, enforcement of biodegradable traps to avoid having uncaught animals stay stuck, size limitations, protection of females to increase populations, and many other methods.

**SPECIES: LOBSTER**

**Regions:** The Maritimes Region inshore lobster fishery is comprised of twelve individual Lobster Fishing Areas (LFA), number 27 to 41, stretching from the northern tip of Cape Breton, Nova Scotia, along the Atlantic coastal waters into the Bay of Fundy to the border with the United States. The offshore lobster and Jonah crab fishery operate in Lobster Fishing Area (LFA) 41 in the Maritimes region (Figure 1).

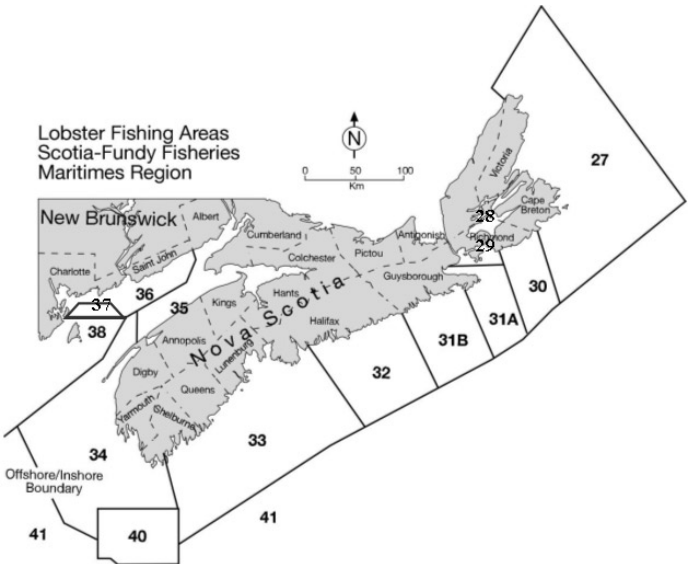
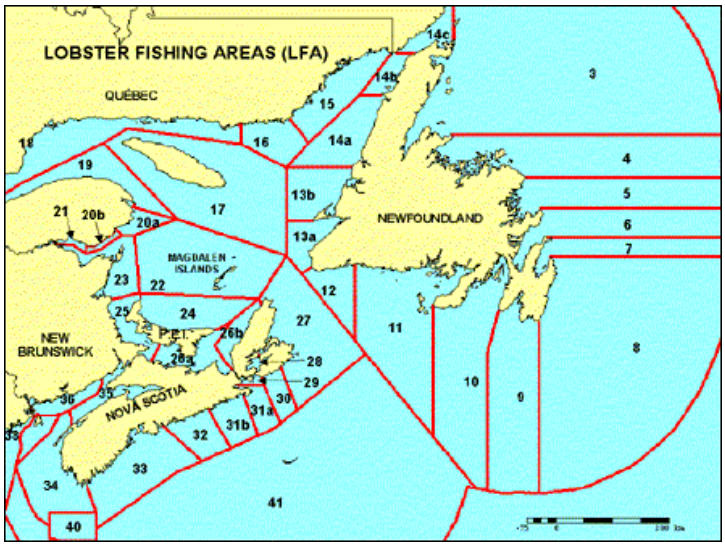



**FIGURE 1: LFAS IN THE MARITIMES**




The southern Gulf of St. Lawrence lobster fishery covers LFAs 23-25 and 26a/26b (Figure 2).

**FIGURE 2: LFAS IN THE GULF REGION**

**Management Plan:** General management characteristics of the inshore lobster fishery are identified per LFA according to the season, limits in the number of traps, the legal size of the lobster (in mm) and other measures such as the size of entrance hoop in trap or v notching processes[9] .

The most recent Integrated Fisheries Management Plan (IFMP) was published in 2011[10]. There have been few changes to the 2011 guidelines. Changes as per the 2018 fisheries decisions[11] are highlighted in red in Table 1 below. When checking the history of changes from 2014-2018, there were no changes until 2017. These changes are the same as those seen in 2018, the most recent report. Both the 2017 and 2018 updates were only meant to apply for the corresponding season.

As for the offshore lobster fishery, in 1976, a restriction was implemented that limits the number of available licenses to 8, and each license would be allocated an equal share. Currently, Clearwater Seafood Limited Partnership holds all 8 licenses. This fishery is also controlled with a Total Allowable Catch (TAC) that can change as needed, and with measurement limitations. Those limitations are that caught lobsters need to have a minimum carapace length of 82.5mm and that v-notched females are rejected. The offshore lobster TAC is currently 720t, and it has been stable at that amount since 1985[12]. There are also rules about the traps. The traps used need to be constructed as to have an escape mechanism for undersized lobsters, as well as having a biodegradable portion in case the traps become lost, to avoid any unnecessary trapping.

In the Southern Gulf of St. Lawrence, management measures related to removals from the fishery include minimum carapace size limits, the immediate return of female lobsters within a size window and of all egg-bearing lobsters to the water. There are also measures that prohibit possession of body parts separated from the thorax as well as the removal of eggs from lobsters. In some LFAs, there is a minimum number of traps per line as well as limits on the maximum sizes of entry hoops authorized for use in the traps. Management measures also limit numbers of licenses, authorize the use of baited traps (only) and include restrictions on the size and numbers of traps, the use of rectangular escape vents and the use of biodegradable panels.

For LFAs 23-26b, fishing times can vary for aboriginal organizations. The opening dates can also vary depending on ice or weather conditions.

To guide management, there are rules established about bait usage. These guidelines were set in the Maritimes American Lobster IFMP, so they might not apply to HFAs outside those mentioned in that plan. License holders are required to record the amount of crab used as bait on reporting documents, and all crab landings must be reported via completion of the crab monitoring document. The rules about crabs are that male Jonah Crab may be used as bait or landed and sold in LFAs 34-38, male Rock Crab by-catch may be landed and sold in all areas, and Green Crab, male Rock Crab or Sculpin by-catch may be used as bait.

9. V-notching means there is an active program to V-notch female lobsters. There is a possession restriction of V-notched lobsters in all LFAs except in LFA 27 and LFA 31A. V-notching is the process of marking the tail flippers of egg-bearing female lobsters to protect known breeders from being harvested.
10. http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/maritimes/insholob-2011-eng.htm
11. http://www.dfo-mpo.gc.ca/decisions/fm-2018-gp/atl-05-eng.htm
12. http://www.dfo-mpo.gc.ca/decisions/fm-2018-gp/atl-03-eng.htm

**TABLE 1: FISHERIES MANAGEMENT PLAN – GUIDELINES FOR LOBSTER**

| PROVINCE | LFA | SEASON | TRAP LIMIT 13 | LEGAL SIZE (MM) | OTHER MEASURES |
|---|---|---|---|---|---|
| NFL | 2 | MAY 20-JULY 22 | | 82.5 | |
| NFL | 4A | MAY 27-JULY 22 | | 82.5 | |
| NFL | 4B | MAY 13-JULY 8 | | 82.5 | |
| NFL | 5 | MAY 8 - JULY 12 | | 82.5 | |
| NFL | 6 | APRIL 27 - JULY 6 | | 82.5 | |
| NFL | 7 | MAY 2-JULY 5 | | 82.5 | |
| NFL | 8 | MAY 9-JULY 12 | | 82.5 | |
| NFL | 9A | MAY 2-JUNE 28 | | 82.5 | |
| NFL | 9B | APRIL 28-JULY 8 | | 82.5 | |
| NFL | 10 | MAY 1-JULY 10 | | 82.5 | |
| NFL | 11E | APRIL 15-JUNE 17 | | 82.5 | |
| NFL | 11W | APRIL 29-JULY 1 | | 82.5 | |
| NFL | 12 | APRIL 18-JUNE 27 | | 82.5 | |
| NFL | 13A | APRIL 18-JUNE 29 | | 82.5 | |
| NFL | 13B | APRIL 22-JULY 4 | | 82.5 | |
| NFL | 14A | MAY 6-JULY 3 | | 82.5 | |
| NFL | 14B | TBD | | 82.5 | |
| NFL | 14C | TBD | | 82.5 | |
| PEI | 23 | APRIL 30-JULY 1 | | | |
| PEI | 24 | APRIL 30-JULY 1 | | | |
| PEI | 26A | APRIL 30-JULY 1, MAY 7-JULY 8 BETWEEN POINT PRIM AND VICTORIA (PEI) | | | |
| PEI | 26B | APRIL 30-JULY 1 | | | |
| NS | 27 | MAY 15 - JULY 15 | 275 | 81 [82.5] | |
| NS | 28 | APRIL 30 - JUNE 30 | 250 | 84 | Max entrance hoop 153mm |
| NS | 29 | APRIL 30 - JUNE 30 | 250 | 84 | Max entrance hoop 153mm |
| NS | 30 | MAY 20 - JULY 20 | 250 | 82.5 | Max. CL-135mm (female); |
| NS | 31A | APRIL 29-JUNE 30 | 250 | 82.5 | Reject all female lobsters measured between 114-124 mm |
| NS | 31B | APRIL 29-JUNE 30 | 250 | 82.5 | [Mandatory] V-notching |
| NS | 32 | APRIL 29-JUNE 30 | 250 | 82.5 | [Mandatory] V-notching |
| NS | 33 | LAST MON. NOV - MAY 31 | 250 | 82.5 | |
| NS | 34 | LAST MON. NOV - MAY 31 | 250 | 82.5 | |
| NS | 35 | OCT 15 - DEC 31; MARCH 1-JULY 31 | 375/400 | 82.5 | |
| NB | 36 | 2ND TUES NOV - JAN 14; MARCH 31-JUNE 30 | 300 | 82.5 | |
| NB | 37 | SHARED BETWEEN LFA 36 AND 38 | 300 | 82.5 | |
| NB | 38 | 2ND TUES NOV - JUN 30 | 375 | 82.5 | |
| BAY OF FUNDY | 38B | JUNE 30 - NOV 6 | 375 | 82.5 | |
| OFF SHORE | 41 | OCTOBER 16TH-OCTOBER 15TH | TAC OF 720T | 82.5 | Reject v-notched lobsters |

## SPECIES: HERRING

Regions: Herring Fishing Areas (HFAs) are present among New Brunswick as well as Prince Edward Island and Nova Scotia. The Maritimes Atlantic herring IFMP only refers to Herring Fishing Areas (HFAs) 18-22.[14] The 4R region covers fishing areas 14 and 13. The 3PN area is fishing area 12. These fishing areas are found in the Newfoundland and Labrador region (Figure 3).

The 2+3 Newfoundland and Labrador region covers the herring fisheries in NAFO divisions 2J, 3K and 3L, and subdivision 3Ps. These areas are commonly combined and represented as 2+3. The five herring stock complexes have been divided into 7 quota areas or HFAs, these being Southern Labrador (HFA 2), White Bay-Notre Dame Bay (HFAs 3 and 4), Bonavista Bay-Trinity Bay (HFAs 5 and 6), Conception Bay-Southern Shore (HFAS 7 and 8), St. Mary's Bay-Placentia Bay (HFAs 9 and 10) and Fortune Bay and Pass Island to Cinq Cerf Bay (HFA 11) .[15]

**FIGURE 3: MAP INDICATING 4R3PN REGION**

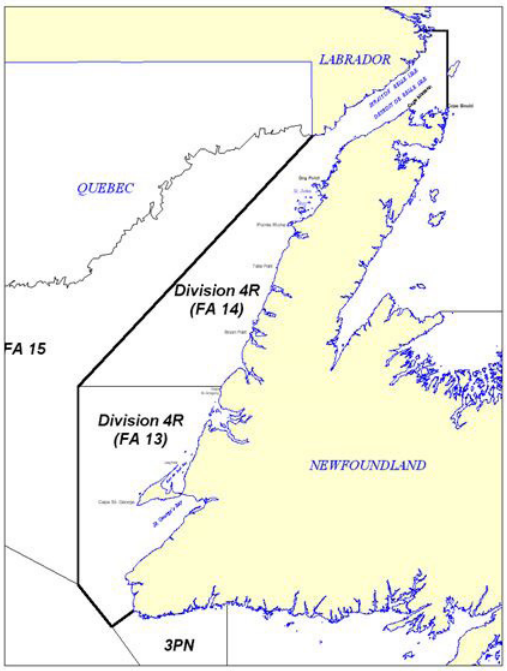
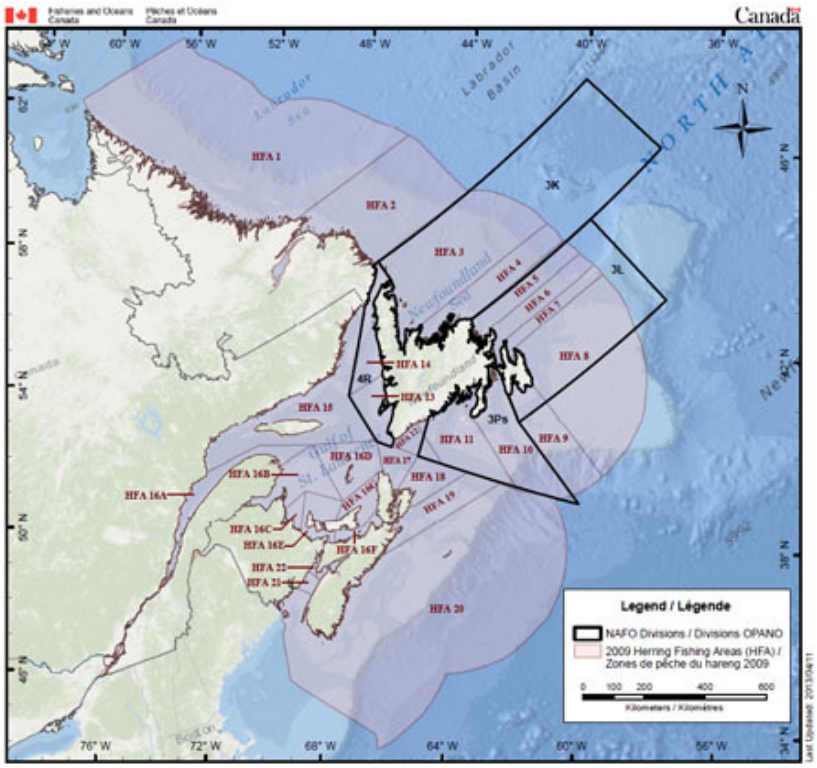



**FIGURE 4: HERRING FISHING AREAS**




14. http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/herring-hareng/herring-hareng-2013-eng.htm
15. http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/herring-hareng/herring-areas-1-11-zones-2-3-hareng-eng.htm

**Management plan:** The Atlantic herring fishery uses a TAC system to prevent overfishing. According to the IFMP, the TAC has been varying from 50,000-55,000 mt since 2005, but the updated 2016/2017 decisions lowered it to 42,500t as part of precautionary measures to rebuild the stock in the area [16]. The TAC is also split among methods of fishing. Mobile gear mid-water trawl fishing[17] is allowed 1% of the total TAC. The remaining 99% is split 80% for purse seine fishing [18] and 20% for fixed gear fishing[19] . The most recent quotas from the 2017 document were 340t for mid-water trawl fishing, 33,728 for purse seine fishing and 8432 for fixed gear fishing. Mid-water trawl fishing is done in HFAs 20-21 from January 1 to April 15. Fixed gear can be placed adjacent to Nova Scotia and West of Baccaro Point in HFA 20. Purse seining can be done in HFAs 20-21 from January 1 to February 28, and in HFAs 18-19 it's from November 1 to December 31 outside the Green Island line, and January 1 to March 1 inside the Green Island line. Food, social and ceremonial licenses must be given out as needed to respect aboriginal rights to culture and sustenance fishing.

In the 4R3PN region, the total allowable catch has stayed constant at 20,000t from 2005 to 2017. The Newfoundland and Labrador 4R herring fishery has been considered the most stable herring fishery in Atlantic Canada for the past 50 years, which explains this consistency[20] . In 2017, 597 Newfoundland and Labrador-based fish harvesters were licensed to fish in 4R. Specifically: 578 fixed gear enterprises (of which 558 were from 4R and 20 from 3Pn), 5 >65' purse seiners and 14 <65' purse seiners. Six >65' seiners registered in DFO Gulf region also have access to 4R herring, in addition to New-Brunswick based >65' seiners including a vessel stationed in western Newfoundland.

Included in the number of commercial licenses above are communal commercial herring licenses issued to Indigenous organizations in Newfoundland and Labrador, specifically the Qalipu Mi'kmaq First Nation Band and the AAROM body Mi'kmaq Alsumk Mowimsikik Koqoey Association (MAMKA). Something important to note is that the IMFP specifies that the TAC and advice in the plan only apply to the 4R portion of the region.

The TAC in the 2+3 region fluctuates by fishing area, but the total TAC has been steadily increasing over the years from 11,550t in 2005 to 13,240t in 2017 (see Figure 5). Indigenous groups are encouraged to get involved in this fishery as an economic opportunity. The total allowable catch (TAC) for this region is set at 14,842 tons for 2017-18. This represents a 20% increase from 2016 in four areas, status quo in three areas and a 25% reduction in one area [21].

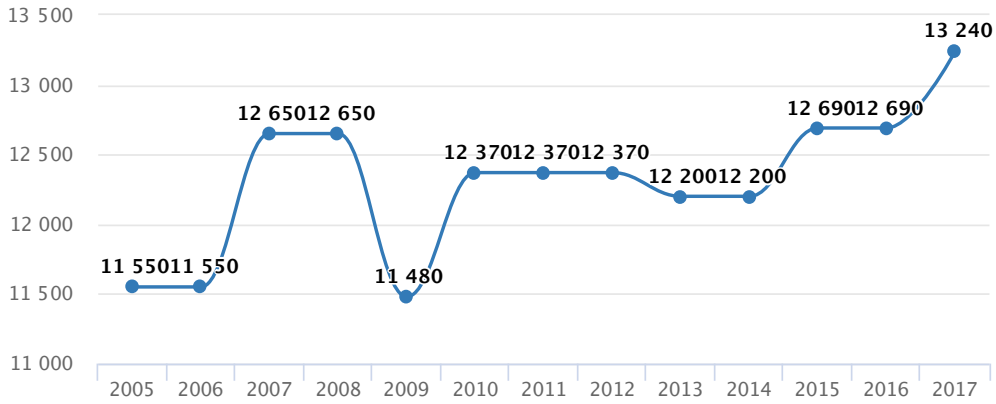



**FIGURE 5: TREND IN THE 2+3 REGION HERRING TAC**

16. http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-35-eng.htm
17. Midwater trawling is trawling, or net fishing, at a depth that is higher in the water column than the bottom of the ocean. In midwater trawling, a cone-shaped net can be towed behind a single boat and spread by trawl doors, or it can be towed behind two boats (pair trawling) which act as the spreading device.
18. Seine fishing (or seine-haul fishing) is a method of fishing that employs a fishing net called a seine, that hangs vertically in the water with its bottom edge held down by weights and its top edge buoyed by floats. A common type of seine is a purse seine, named such because along the bottom are several rings. A line (referred to as a purse-line) passes through all the rings, and when pulled, draws the rings close to one another, preventing the fish from "sounding", or swimming down to escape the net. This operation is like a traditional style purse, which has a drawstring.
19. Fishing gear that is stationary after it is deployed (unlike trawl or troll gear which is moving when it is actively fishing). Fixed gear includes gillnets, long lines, pots, traps, and any other gear that is anchored at least at one end.
20. http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/herring-hareng/herring-4r3pn-hareng-eng.htm
21. http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-07-eng.htm

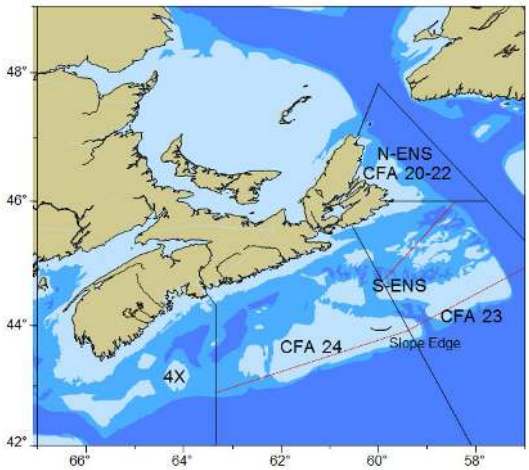
**TABLE 2: FISHERIES MANAGEMENT PLAN – GUIDELINES FOR HERRING**

| REGION | HFA | SEASON | TYPE OF FISHING[22] | LIMITATIONS | TAC |
|---|---|---|---|---|---|
| | 20-21 | January 1-April 15 | Mid water trawl | | 340t |
| | 18-21 | Jan1-Feb28 (HFAs 20-21), Nov1-Dec31 (18-19 outside green island line)<br>Jan1-Mar1 (18-19 inside green island line) | Purse seining | | 33728t |
| | 20 | | Fixed gear | | 8432t |
| Labrador | 2 | | | Minimum size of 9.75 inches | 500t (status quo) |
| White bay/notre dame | 3-4 | | | Minimum size of 9.75 inches | 2568t (20% increase) |
| Bonavista bay/ trinity bay | 5-6 | | | Minimum size of 9.75 inches | 5590t (20% increase) |
| Conception bay/ Southern shore | 7-8 | | | Minimum size of 9.75 inches | 895t (20% increase plus 100t correction) |
| St. Mary's bay/ Placentia bay | 9-10 | | | Minimum size of 9.75 inches | 2100t (status quo) |
| Fortune bay | 11 | | | Minimum size of 9.75 inches | 789t (25% reduction) |
| Pass island to cinq cerf bay | 11 | | | Minimum size of 9.75 inches | 400t (status quo) |
| 4R | 13-14 | | Large seiners | | 11000t |
| 4R | 13-14 | | Small seiners | | 4400t |
| 4R | 13 | | Fixed gear | | 1610t |
| 4R | 14 | | Fixed gear | | 2990t |

## SPECIES: SNOW AND JONAH CRAB

**Regions:** The Maritimes region snow crab fishery is divided into multiple sections. North Eastern Nova Scotia (N-ENS) is composed of Crab Fishing Areas (CFAs) 20-22. South Eastern Nova Scotia (S-ENS) is composed of CFAs 23 and 24. The 3rd region is the 4X region[23] (See figure 5).

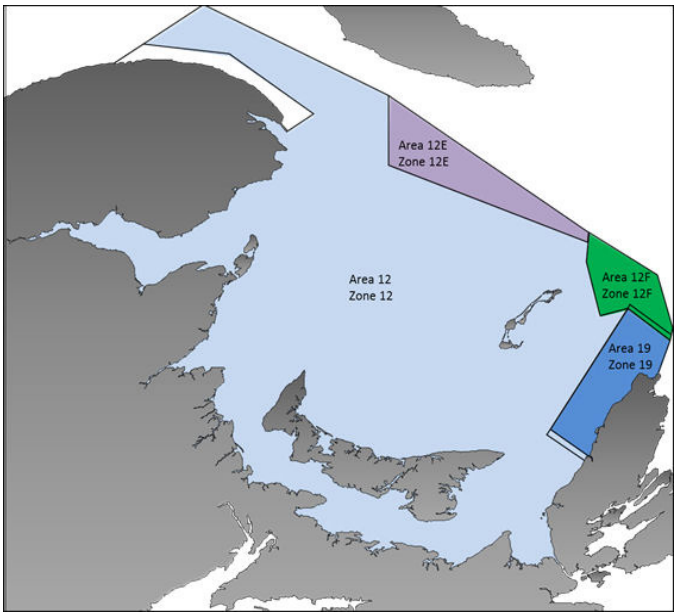
**FIGURE 5: CRAB FISHING AREAS**




The Maritimes Jonah crab fishery operates in Lobster Fishing Area (LFA) 41, in the Maritimes region (see Figure 1). Snow Crab fishing areas in the Southern Gulf of St. Lawrence are illustrated in Figures 6 and 7.

22. 3Pn (Area 12) fixed gear herring is managed under the same management plan as 4R herring, applying the same management measures. Due to the little-known status of the stock dynamics of herring in this area and historical low levels of landings, no TAC has been set. Fixed gear in Area 13 and 14 are managed on a seasonal cap system. Caps may be revised as the fishery progresses.
23. http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/snow-crab-neige/snow-crab-neiges2013-eng.htm

**FIGURE 6: SNOW CRAB FISHING AREAS IN THE SOUTHERN GULF OF ST. LAWRENCE**

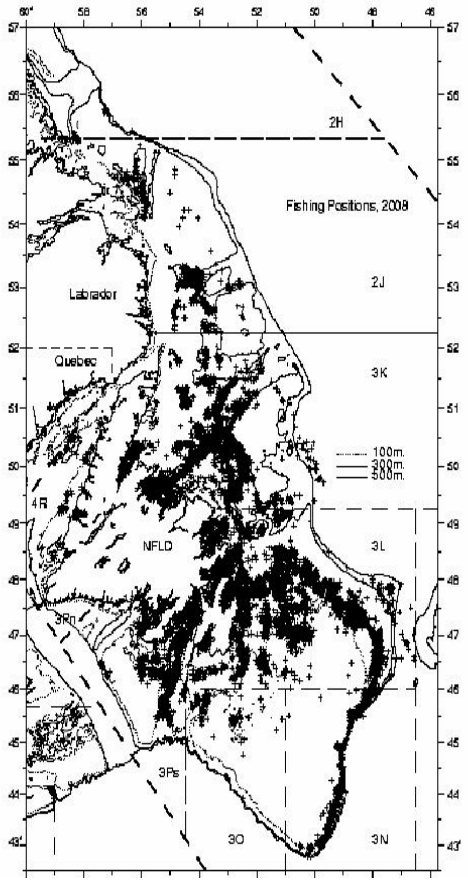



**Management plan:** The Maritimes snow crab fishery has no base TAC. It's reviewed and changed every season. The most recent TACs are from 2017. In Northeast Nova Scotia (NENS), the TAC is set to 825t[24], which is higher than it was in 2016[25]. Southeast Nova Scotia (SENS) has two different TACs for its subdivisions. In CFA 23 the TAC is 3,640t, down from 4,868.2t in 2016[26] In CFA 24E the TAC is 3,090t, down from 3,894.9t in 2016 . There's also information on the TACs from 2014 being 783t for NENS[27], 6,120t for CFA 23 and 5,191t for CFA 24[28].

Each license gets a share of the TAC as their quota. These numbers can vary but most are equal and around 1-2% with a bit of variance occasionally (except for 4X). Millbrook First Nations have a set TAC of 250t and don't get a share expressed in %. The Eastern Nova Scotia (ENS) Snow Crab fishing season varies by fishing area with most of the total weight landed between April and September.

In NENS there are two separate seasons, the spring fishery and the summer season. The spring fishery is open from early April until mid to late May while the summer fishery opens in mid-July until mid-August. In SENS there is a continuous season with the fishery open from early April until the end of September. In contrast, the CFA 4X season spans two calendar years. The season opens November 1 and closes March 31 the following year. In this fishery, trap limits are in place as a secondary effort control following Total Allowable Catch (TAC). Trap limits help ensure that harvesters can maximize fishing effort, avoid over-exploitation and conduct harvesting operations in an efficient manner. This is achieved by allowing more traps for those who fish farther from shore and limiting traps in areas that are over-harvested.

**FIGURE 7: COMMERCIAL FISHING AREA DESIGNATIONS IN THE SNOW CRAB FISHERY**




24. The 825t for 2017 also includes the 19.28t allocation to be used to contribute funds for the annual Snow Crab survey, under Section 10 of the Fisheries Act.
25. http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-34-eng.htm
26. http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-29-eng.htm
27. http://www.dfo-mpo.gc.ca/decisions/fm-2014-gp/atl-010-eng.htm
28. http://www.dfo-mpo.gc.ca/decisions/fm-2014-gp/atl-011-eng.htm

**TABLE 3: FISHERIES MANAGEMENT GUIDE SNOW AND JONAH CRAB GUIDELINES**

| CRAB | REGION | CFA | SEASON | TYPE OF FISHING | LIMITATIONS [29] | TAC |
|---|---|---|---|---|---|---|
| SNOW | NOVA SCOTIA | 20-22 | Early April-Mid May/ Mid July-Mid August | | Trap limit:30 [30] | 825t |
| SNOW | NOVA SCOTIA | 23 | Early April-End of September | | Trap limit: 55 [31] in inner scatarie to kempt point, 75 in outer | 3640t |
| SNOW | NOVA SCOTIA | 24 | Early April-End of September | | Trap limit: 60 [32] | 3090t |
| SNOW | NOVA SCOTIA | 4X | November 1- March 31 | | Trap limit: 60 | |
| SNOW | GULF | 12 | April 25- July 28 | | | 39531.64t |
| SNOW | GULF | 12E | April 20- July 14 | | | 199.3t |
| SNOW | GULF | 12F | April 19- July 14 | | | 680.24t |
| SNOW | GULF | 19 | July 13- Sep 13 | | | 2915t |
| SNOW | NFLD AND LABRADOR | 2HJ | TBD | | | 1865t |
| SNOW | NFLD AND LABRADOR | 3K | 3A: Apr 14- Jul 15<br>3BC,4: Apr 14- Jun 30<br>3D: Apr 16- Jun 30<br>3B: Apr 22- Jun 30<br>3C: Apr 30- Jun 30 | | | 5932t |
| SNOW | NFLD AND LABRADOR | 3LNO | April 9-July 31(July 15 in 8Bx south) | | | 18840t |
| SNOW | NFLD AND LABRADOR | 3Ps | April 9- June 15(10A,10B,11S)/May 31(11E,11W) | | | 1792t |
| SNOW | NFLD AND LABRADOR | 4R3Pn | April 9-June 15 | | | 501t |
| JONAH | MARITIMES | 41 | | | Only male Jonah crab with a carapace width larger than 130 mm | 270t |

29. Aboriginal communal commercial licenses may partner with other non-aboriginal license holders. The requirements for both the Aboriginal Communal Fishing Licenses Regulations and the Atlantic Fisheries Regulations must be met for a partnership to be formed.
30. In N-ENS, partnerships may be formed between two licenses held by individuals, at which time 1 ½ traps may be requested (45 traps). 3 allocations can be fished allowing another 15 traps for the third allocation for a limit of 60 traps.
31. In CFA 23, partnerships may be formed between two license holders. Partnerships of licenses with 55 traps can request 80 traps. Partnerships of licenses with 75 traps can request 105 traps.
32. In CFA 24, partnerships may be formed between two license holders at which time 1 ½ traps may be requested (90 traps).

**REFERENCES**


Maritimes American Lobster 2011 (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/maritimes/in-sholob-2011-eng.htm )

2018 Maritimes Inshore Lobster (http://www.dfo-mpo.gc.ca/decisions/fm-2018-gp/atl-05-eng.htm )

2018 Maritimes Offshore Lobster (http://www.dfo-mpo.gc.ca/decisions/fm-2018-gp/atl-03-eng.htm )

Lobster in the Southern Gulf of St. Lawrence (http://www.glf.dfo-mpo.gc.ca/Gulf/FAM/IMFP/2014-Lobster-Management-Measures#Areas )

LFAs 3-14C (http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-04-eng.htm )

Offshore Lobster and Jonah Crab 2016 (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/lobster-crab-homard/index-eng.htm )

Maritimes Canadian Atlantic Herring 2013 (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/herring-hareng/herring-hareng-2013-eng.htm )

Southwest Nova Scotia Herring Decisions 2017 (http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-35-eng.htm)
4R3Pn Herring 2017 (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/herring-hareng/herring-4r3pn-hareng-eng.htm)

2+3 Region Herring 2017 (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/herring-hareng/herring-areas-1-11-zones-2-3-hareng-eng.htm)

2J3KLPs Herring Management Plan 2017-2018 (http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-07-eng.htm)
Eastern Nova Scotia/4X Snow Crab IMFP 2013 (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/snow-crab-neige/snow-crab-neiges2013-eng.htm)

Eastern Nova Scotia Snow Crab 2017 CFAs 20-22 (http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-34-eng.htm )

Eastern Nova Scotia Snow Crab 2017 CFAs 23-24 (http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-29-eng.htm )

Eastern Nova Scotia Snow Crab 2014 CFAs 20-22 (http://www.dfo-mpo.gc.ca/decisions/fm-2014-gp/atl-010-eng.htm )

Eastern Nova Scotia Snow Crab 2014 CFAs 23-24 (http://www.dfo-mpo.gc.ca/decisions/fm-2014-gp/atl-011-eng.htm )

2018 Offshore Jonah crab (http://www.dfo-mpo.gc.ca/decisions/fm-2018-gp/atl-04-eng.htm )

Gulf Region Snow Crab IFMP 2014 (http://www.glf.dfo-mpo.gc.ca/Gulf/FAM/IMFP/2014-Snow-Crab-Gulf-Region )
Snow Crab in the Gulf of St. Lawrence 2017 CFAs 12, 12E, 12F, 19 (http://www.dfo-mpo.gc.ca/decisions/fm-2017-gp/atl-03-eng.htm )

Newfoundland and Labrador Snow Crab 2009-2011 (http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/snow-crab-neige/snow-crab-neiges2009-eng.htm )

Newfoundland and Labrador Snow Crab 2018 (http://www.dfo-mpo.gc.ca/decisions/fm-2018-gp/atl-07-eng.htm )

# APPENDIX D: FISH AND SEAFOOD LANDINGS

| TABLE 1: SEAFOOD LANDINGS: NEWFOUNDLAND (AVERAGE ANNUAL PER CENT CHANGE) | | | | |
|---|---|---|---|---|
| **Groundfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Cod | 14.1 | 0.0 | 0.0 | 0.0 |
| Haddock | 5.7 | 0.0 | 0.0 | 0.0 |
| Redfish spp. | -5.0 | 0.0 | 0.0 | 0.0 |
| Halibut | 7.3 | 0.0 | 0.0 | 0.0 |
| Flatfishes | 9.9 | 0.0 | 0.0 | 0.0 |
| Greenland Turbot | -0.7 | 0.0 | 0.0 | 0.0 |
| Pollock | 0.1 | 0.0 | 0.0 | 0.0 |
| Hake | 1.9 | 0.0 | 0.0 | 0.0 |
| Cusk | -3.0 | 0.0 | 0.0 | 0.0 |
| Catfish | -100.0 | - | - | - |
| Skate | -7.0 | 0.0 | 0.0 | 0.0 |
| Dogfish | -0.9 | 0.0 | 0.0 | 0.0 |
| Other | -8.1 | 0.0 | 0.0 | 0.0 |
| Total Groundfish | 2.1 | 0.0 | 0.0 | 0.0 |
| | | | | |
| **Pelagic & Other Finfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Herring | 2.3 | 1.1 | 1.1 | 1.1 |
| Mackerel | 0.9 | -7.0 | -7.0 | -7.0 |
| Swordfish | -3.3 | -100.00 | - | - |
| Tuna | -7.5 | -0.9 | -0.9 | -0.9 |
| Eel | -4.7 | -5.1 | -5.1 | -5.1 |
| Salmon | -100.00 | - | - | - |
| Smelt | -100.00 | - | - | - |
| Capelin | 0.7 | 2.0 | 2.0 | 2.0 |
| Other Finfish | -0.2 | -10.0 | -10.0 | -10.0 |
| Total Other Finfish | 1.3 | 1.1 | 1.3 | 1.4 |
| | | | | |
| **Shellfish/Seafish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Clams/quahang | -0.5 | -0.9 | -0.9 | -0.9 |
| Scallop | -10.1 | -9.6 | -9.6 | -9.6 |
| Squid | -18.6 | -100.00 | - | - |
| Lobster | 1.0 | 0.4 | 0.4 | 0.4 |
| Shrimp | 3.9 | 2.9 | 2.9 | 2.9 |
| Crab, Queen | 0.5 | 1.9 | 1.9 | 1.9 |
| Crab, Other | 4.4 | 3.2 | 3.2 | 3.2 |
| Sea Urchin | -1.6 | 3.0 | 3.0 | 3.0 |
| Other Shellfish | -100.0 | - | - | - |
| Total Shellfish | 0.9 | 1.2 | 2.1 | 2.1 |

| TABLE 2: SEAFOOD LANDINGS: PEI (AVERAGE ANNUAL PER CENT CHANGE) | | | | |
|---|---|---|---|---|
| **Groundfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Cod | -11.7 | -16.0 | -16.0 | -16.0 |
| Haddock | - | - | - | - |
| Redfish spp. | - | - | - | - |
| Halibut | 35.7 | .0. | 0.0 | 0.0 |
| Flatfishes | -14.0 | -15.4 | -15.4 | -15.4 |
| Greenland Turbot | - | - | - | - |
| Pollock | - | - | - | - |
| Hake | -21.2 | -19.6 | -19.6 | -19.6 |
| Cusk | - | - | - | - |
| Catfish | -100.0 | - | - | - |
| Skate | -100.0 | - | - | - |
| Dogfish | -100.0 | - | - | - |
| Other | -100.0 | - | - | - |
| Total Groundfish | -10.8 | -12.8 | -10.3 | -7.5 |
| | | | | |
| **Pelagic & Other Finfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Herring | -6.8 | -5.4 | -5.4 | -5.4 |
| Mackerel | -8.2 | -9.8 | -9.8 | -9.8 |
| Swordfish | - | - | - | - |
| Tuna | 6.7 | 10.3 | 10.3 | 10.3 |
| Alewife | -2.0 | -2.5 | -2.5 | -2.5 |
| Eel | 4.6 | 5.0 | 5.0 | 5.0 |
| Salmon | - | - | - | - |
| Smelt | -18.1 | -20.7 | -20.7 | -20.7 |
| Capelin | - | - | - | - |
| Other Finfish | -0.5 | 1.0 | 1.0 | 1.0 |
| Total Other Finfish | -6.8 | -5.0 | -4.0 | -2.7 |
| | | | | |
| **Shellfish/Seafish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Clams/quahang | -11.9 | -4.3 | -4.3 | -4.3 |
| Oyster | -5.2 | -1.5 | -1.5 | -1.5 |
| Scallop | -5.1 | -7.7 | -7.7 | -7.7 |
| Squid | - | - | - | - |
| Lobster | 2.5 | 2.7 | 2.7 | 2.7 |
| Shrimp | - | - | - | - |
| Crab, Queen | 2.4 | 1.6 | 1.6 | 1.6 |
| Crab, Other | 0.2 | -1.4 | -1.4 | -1.4 |
| Sea Urchin | - | - | - | - |
| Other Shellfish | - | - | - | - |
| Total Shellfish | 0.8 | 1.7 | 2.0 | 2.1 |

| TABLE 3: SEAFOOD LANDINGS: NOVA SCOTIA (AVERAGE ANNUAL PER CENT CHANGE) | | | | |
|---|---|---|---|---|
| **Groundfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Cod | -10.1 | 0.2 | 0.0 | 0.0 |
| Haddock | 2.2 | 0.0 | 0.0 | 0.0 |
| Redfish spp. | -3.0 | -1.6 | 0.0 | 0.0 |
| Halibut | 6.3 | 0.0 | 0.0 | 0.0 |
| Flatfishes | -7.8 | -0.5 | 0.0 | 0.0 |
| Greenland Turbot | -15.8 | 0.0 | 0.0 | 0.0 |
| Pollock | -4.9 | 0.0 | 0.0 | 0.0 |
| Hake | -6.0 | 0.1 | 0.0 | 0.0 |
| Cusk | -9.9 | 0.0 | 0.0 | 0.0 |
| Catfish | -100.0 | - | - | - |
| Skate | -17.5 | 0.0 | 0.0 | 0.0 |
| Dogfish | -5.8 | -24.9 | -24.9 | -24.9 |
| Other | -1.7 | 0.3 | 0.3 | 0.3 |
| Total Groundfish | -3.7 | -0.4 | 0.0 | 0.0 |
| | | | | |
| **Pelagic & Other Finfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Herring | -2.5 | -1.6 | -1.6 | -1.6 |
| Mackerel | -7.1 | -1.3 | -1.3 | -1.3 |
| Swordfish | 4.2 | 0.6 | 0.6 | 0.6 |
| Tuna | -2.4 | 0.0 | 0.0 | 0.0 |
| Alewife | -4.3 | -1.7 | -1.7 | -1.7 |
| Eel | -6.3 | -8.9 | -8.9 | -8.9 |
| Salmon | - | - | - | - |
| Smelt | -14.7 | -21.0 | -21.0 | -21.0 |
| Capelin | - | - | - | - |
| Other Finfish | -10.6 | -13.2 | -13.2 | -13.2 |
| Total Other Finfish | -2.7 | -1.5 | -1.5 | -1.5 |
| | | | | |
| **Shellfish/Seafish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Clams/quahang | 4.6 | 1.8 | 1.8 | 1.8 |
| Oyster | -1.1 | -1.6 | -1.6 | -1.6 |
| Scallop | 0.8 | -0.9 | -0.9 | -0.9 |
| Squid | -15.4 | -15.9 | -15.9 | -15.9 |
| Mussel | - | - | - | - |
| Lobster | 5.1 | 3.2 | 3.2 | 3.2 |
| Shrimp | 3.2 | 1.6 | 1.6 | 1.6 |
| Crab, Queen | 6.6 | 4.1 | 4.1 | 4.1 |
| Crab, Other | -2.5 | 0.2 | 0.2 | 0.2 |
| Sea Urchin | -8.5 | 0.0 | 0.0 | 0.0 |
| Other Shellfish | -100.0 | - | - | - |
| Total Shellfish | 3.1 | 1.3 | 1.8 | 1.9 |

| TABLE 4: SEAFOOD LANDINGS: NEW BRUNSWICK (AVERAGE ANNUAL PER CENT CHANGE) | | | | |
|---|---|---|---|---|
| **Groundfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Cod | -23.0 | -27.0 | -27.0 | -27.0 |
| Haddock | -100.0 | - | - | - |
| Redfish spp. | 20.2 | 2.3 | 2.3 | 2.3 |
| Halibut | 11.7 | 0.0 | 0.0 | 0.0 |
| Flatfishes | -25.7 | -27.5 | -27.5 | -27.5 |
| Greenland Turbot | -13.8 | -9.5 | -9.5 | -9.5 |
| Pollock | -100.0 | - | - | - |
| Hake | -10.9 | -23.6 | -23.6 | -23.6 |
| Cusk | -100.0 | - | - | - |
| Catfish | -100.0 | - | - | - |
| Skate | -100.0 | - | - | - |
| Dogfish | -100.0 | - | - | - |
| Other | -31.6 | -35.2 | -35.2 | -35.2 |
| Total Groundfish | 14.1 | -2.3 | 0..7 | 1.5 |
| | | | | |
| **Pelagic & Other Finfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Herring | -3.6 | -2.7 | -2.7 | -2.7 |
| Mackerel | -12.2 | -4.5 | -4.5 | -4.5 |
| Tuna | - | -100.0 | - | - |
| Alewife | -7.5 | -2.4 | -2.4 | -2.4 |
| Eel | 1.1 | -1.1 | -1.1 | -1.1 |
| Smelt | -5.3 | -7.1 | -7.1 | -7.1 |
| Capelin | - | -100.0 | - | - |
| Other Finfish | -11.0 | -5.5 | -5.5 | -5.5 |
| Total Other Finfish | -3.8 | -3.0 | -2.7 | -2.7 |
| | | | | |
| **Shellfish/Seafish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Clams/quahang | -1.2 | -3.8 | -3.8 | -3.8 |
| Oyster | -0.3 | -6.8 | -6.8 | -6.8 |
| Scallop | 1.6 | 0.5 | 0.5 | 0.5 |
| Mussel | -100.0 | - | - | - |
| Lobster | 4.8 | 2.9 | 2.9 | 2.9 |
| Shrimp | 2.6 | 2.3 | 2.3 | 2.3 |
| Crab, Queen | 0.1 | 0.8 | 0.8 | 0.8 |
| Crab, Other | 0.7 | -0.5 | -0.5 | -0.5 |
| Sea Urchin | -3.5 | -2.4 | -2.4 | -2.4 |
| Other Shellfish | -100.0 | - | - | - |
| Total Shellfish | 2.1 | 1.5 | 1.8 | 1.9 |

| TABLE 5: SEAFOOD LANDINGS: QUEBEC (AVERAGE ANNUAL PER CENT CHANGE) | | | | |
|---|---|---|---|---|
| **Groundfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Cod | -0.3 | -2.3 | -2.3 | -2.3 |
| Haddock | - | 0.0 | 0.0 | 0.0 |
| Redfish spp. | 5.9 | 10.4 | 10.4 | 10.4 |
| Halibut | 7.4 | 0.0 | 0.0 | 0.0 |
| Flatfishes | -1.5 | -3.4 | -3.4 | -3.4 |
| Greenland Turbot | 2.0 | 2.0 | 2.0 | 2.0 |
| Pollock | - | - | - | - |
| Hake | -6.8 | -7.0 | -2.0 | -2.0 |
| Cusk | -100.0 | - | - | - |
| Catfish | -100.0 | - | - | - |
| Skate | -19.8 | 0.0 | 0.0 | 0.0 |
| Dogfish | -18.4 | -100.0 | - | - |
| Other | -0.1 | -1.6 | -1.6 | -1.6 |
| Total Groundfish | 1.4 | 1.3 | 2.1 | 2.8 |
| | | | | |
| **Pelagic & Other Finfish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Herring | -0.7 | 0.8 | 0.8 | 0.8 |
| Mackerel | -8.0 | -5.7 | -5.7 | -5.7 |
| Swordfish | - | - | - | - |
| Tuna | - | -100.0 | - | - |
| Alewife | - | - | - | - |
| Eel | -33.6 | -100.0 | - | - |
| Smelt | -100.0 | - | - | - |
| Capelin | -33.9 | 2.0 | 2.0 | 2.0 |
| Other Finfish | -23.2 | -20.7 | -20.7 | -20.7 |
| Total Other Finfish | -2.7 | 0.1 | 0.3 | 0.4 |
| | | | | |
| **Shellfish/Seafish** | **1997-2016** | **2017-2021** | **2022-2026** | **2027-2030** |
| Clams/quahang | 0.9 | -1.3 | -1.3 | -1.3 |
| Oyster | - | - | - | - |
| Scallop | -13.7 | -7.0 | -7.0 | -7.0 |
| Squid | - | - | - | - |
| Mussel | -26.2 | -100.0 | - | - |
| Lobster | 2.0 | 2.8 | 2.8 | 2.8 |
| Shrimp | 1.6 | 3.1 | 3.1 | 3.1 |
| Crab, Queen | 0.5 | 0.0 | 0.0 | 0.0 |
| Crab, Other | 2.8 | 1.4 | 1.4 | 1.4 |
| Sea Urchin | - | - | - | - |
| Other Shellfish | -28.8 | -100.0 | - | - |
| Total Shellfish | 1.1 | 0.4 | 2.0 | 2.1 |

# APPENDIX E: SUPPLY AND DEMAND – NEWFOUNDLAND AND LABRADOR

## NEWFOUNDLAND AND LABRADOR

### Seafood Product Outlooks

Seafood processing real GDP in Newfoundland and Labrador is forecast to expand by 1.3% on average over the 2018-21 period, then the pace of growth is expected to quicken to 2.4% on average over 2022-26 and 2027-30. The overall growth in output for seafood (finfish and shellfish) and prepared seafood products is expected to accelerate over the forecast period after declining on average over the 2013 to 2017 period. The decline in overall consumption is expected to slow increasing the importance of fresh fish consumption as the population decline moderates. International exports are expected to rise at a strong clip throughout the forecast period as trading partner market growth is reasonably robust and trade agreements encourage market penetration in the European Union and in the members of the CPTPP (Comprehensive and Progressive Agreement for Trans-Pacific Partnership) trade pact. Interprovincial exports are expected to improve as consumer demand in other provinces gains from the trend toward fresh fish consumption. Interindustry demand also improves as the demand for fish inputs rises, primarily as a result of increased provincial food production.

### Consumption

Seafood consumption is expected to fall for most categories as falling per capita consumption is exacerbated by the decline in Newfoundland's population. The one exception is the rising demand for freshwater fish, which is projected to rise on average by more than 5% over the forecast period. Overall seafood products consumption is forecast to decline on average by 0.8% in 2018-2021, then by 0.3% in 2022-2026 before posting zero growth during 2027-2030.

### International Exports

In general, the projected growth for groundfish is modest as supply constraints inhibit a strong increase in exports. Given the constraints of quotas, the outlook implicitly assumes that there will be a shift toward higher value-added products over time. Stronger growth is anticipated for many of the other finfish export categories, with particularly strong growth for Herring, Capelin and Salmon. The strong gains in Salmon export over the 2018-21, 2022-26 and 2027-30 sub-periods reflect strong production gains in fish farming. Several shellfish categories are forecast to experience strong growth, particularly shrimp and crab over all the sub-periods. Lobster is expected to experience moderately strong growth over the forecast period. Prepared seafood products are also expected to enjoy moderately strong growth over the forecast period, particularly Crustaceans, Molluscs and Other Aquatic Invertebrates.

| END MARKETS | 2013-17 | 2018-21 | 2022-26 | 2027-30 |
|---|---|---|---|---|
| Consumption | -0.8 | -0.8 | -0.8 | -0.8 |
| international Exports | -0.8 | -0.8 | -0.8 | -0.8 |
| Interprovincial Exports | -0.8 | -0.8 | -0.8 | -0.8 |
| Interindustry Demand | -0.8 | -0.8 | -0.8 | -0.8 |
| Imports | -0.8 | -0.8 | -0.8 | -0.8 |
| Total End Market Demand | -0.8 | -0.8 | -0.8 | -0.8 |

**NEWFOUNDLAND AND LABRADOR PREPARED SEAFOOD END MARKET GROWTH (ANNUAL AVERAGE PER CENT CHANGE)**

### Seafood Processing Employment Outlook

Seafood processing employment is expected to remain near current levels of 1,500 workers assuming the industry can sustain significant productivity gains.

Industry real GDP is expected to expand by 1.3% on average over the 2018-21 period, then the pace of growth is expected to quicken to 2.4% on average over 2022-26 and 2027-30. Labour productivity (GDP per hour worked) is forecast to expand at 1.7% on average over the forecast period. In order to produce the forecasted output total hours of work is forecast to fall by -0.4% on average over 2018-21, and then increase by 0.6% and 0.7% on average over 2022-26 and 2027-30 respectively in order to produce the forecasted output. Average hours worked per employee is forecast to rise over the projection period by 0.4% on average, which leads to the total number of jobs falling by -0.8% over 2018-21, and then rising by 0.3% over 2022-26 and 0.3% over 2027-30.

The table on the next page illustrates employment growth by occupation. Production labour (processing and plant workers) constitute nearly 8-in-10 (77%) jobs.

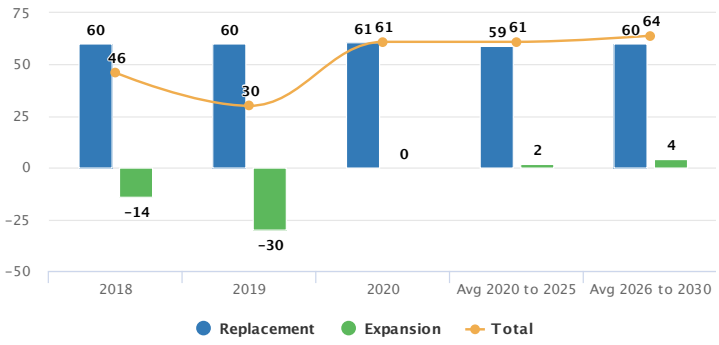
**SEAFOOD PROCESSING EMPLOYMENT, BY KEY OCCUPATION, NEWFOUNDLAND AND LABRADOR**

| NEWFOUNDLAND AND LABRADOR | | | | | | ANNUAL AVERAGE | | CHANGE 2018 TO 2030 | |
|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2020 TO 2025 | 2026 TO 2030 | # | % |
| **Total Employment** | **2,245** | **1,1=510** | **1,494** | **1,463** | **1,464** | **1,470** | **1,490** | **(10)** | **-0.7%** |
| Shellfish Processing Labourer | 426 | 286 | 283 | 277 | 278 | 279 | 283 | (2) | -0.7% |
| Fish Processing Labourer | 252 | 170 | 168 | 164 | 165 | 165 | 167 | (1) | -0.7% |
| Shellfish Plant Worker | 335 | 225 | 223 | 219 | 219 | 220 | 223 | (2) | -0.7% |
| Fish Plant Worker | 202 | 136 | 135 | 132 | 132 | 132 | 134 | (1) | -0.7% |
| Supervisors | 74 | 50 | 49 | 48 | 48 | 48 | 49 | (0) | -0.9% |
| Maintenance | 70 | 47 | 47 | 46 | 46 | 46 | 47 | (0) | -0.7% |
| Skilled Trades | 151 | 102 | 100 | 98 | 98 | 99 | 100 | (1) | -0.7% |
| Quality Control Technician | 40 | 27 | 27 | 26 | 26 | 27 | 27 | (0) | -0.7% |
| Management | 65 | 44 | 43 | 42 | 42 | 42 | 43 | (0) | -0.6% |
| Office Staff | 109 | 73 | 73 | 71 | 71 | 71 | 72 | (1) | -0.7% |
| Other Occupations | 520 | 350 | 346 | 340 | 339 | 341 | 346 | (3) | 0% |

## Hiring requirement

Despite modest declines in employment, it is projected the industry will need to hire a net of nearly 140 additional new workers over the next 3 years due to rising retirements. Replacement demands (deaths and retirements) are expected to total 775 between 2017 and 2030. This represents the need to replace half (51%) of the current workforce over the next 13 years. these hiring requirements are net numbers of new workers and do not include annual hiring requirements due to turnover, which can double or triple the actual number of annual new hires needed to sustain employment requirements.

**ANNUAL SEAFOOD PROCESSING HIRING REQUIREMENTS (EXCLUDING TURNOVER), NEWFOUNDLAND AND LABRADOR**




| Hiring Requirements | 2018 to 2020 | 2020 to 2025 | 2026 to 2030 | Total 2018 to 2030 |
|---|---|---|---|---|
| Replacement (deaths and Retirements) | 183 | 294 | 299 | **775** |
| Expansion (Change in Employment) | (46) | 14 | 22 | **(10)** |
| Total Hiring requirement (job openings) | 137 | 307 | 321 | **765** |

**SUMMARY OF ANNUAL AVERAGE HIRING REQUIREMENTS, NEWFOUNDLAND AND LABRADOR**

**Available supply**

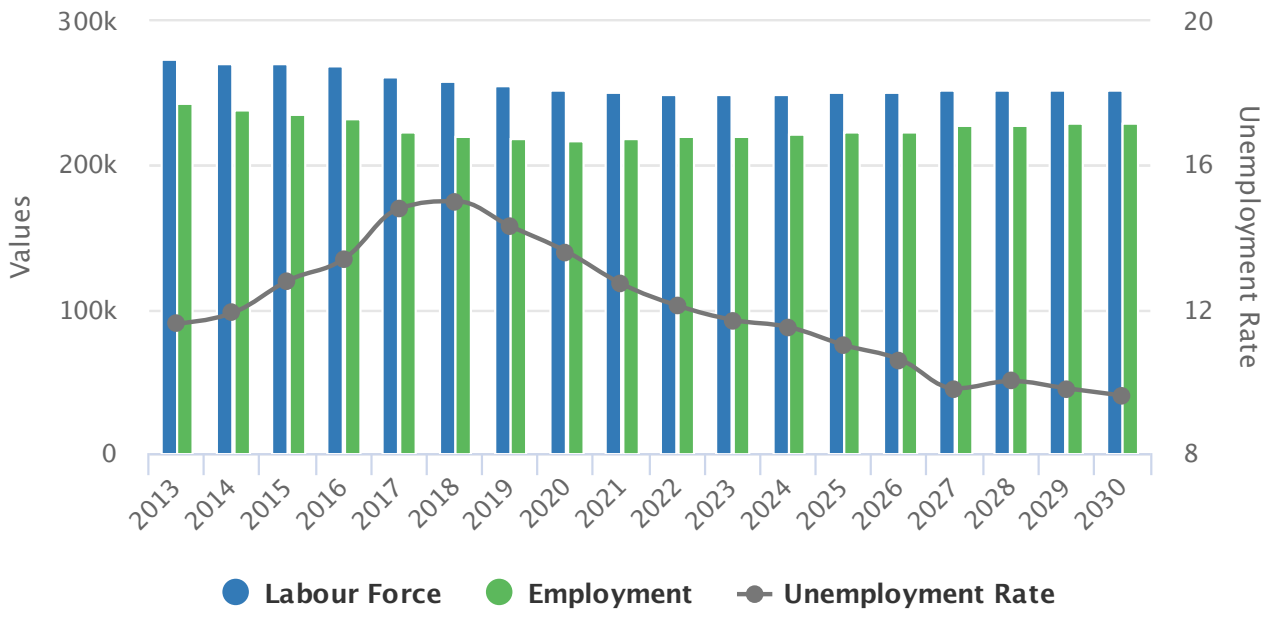
Newfoundland and Labrador has the oldest population age profile in Canada, and both population and labour force are expected to contract over the coming decade. This results in declining average rates of unemployment. This means employers will need to meet demands with fewer workers, requiring increase in productivity.

The province lost around 8,500 jobs in 2017. Losses continue into the medium term. In the long term, total employment growth averages 0.4% per year over 2021-26 and 0.2% over 2027-30, with overall gains in service-based industries being moderated by losses in goods-producing industries. As the population ages and employment declines more workers are discouraged and drop out of the labour force and the participation rate falls sharply over the first half of the forecast. This results in the labour force declining at an annual average of 1.2% over the 2017-21 period. In the long term, declines in the labour force slow, averaging 0.2% over both the 2022-26 and the 2027-30 periods.

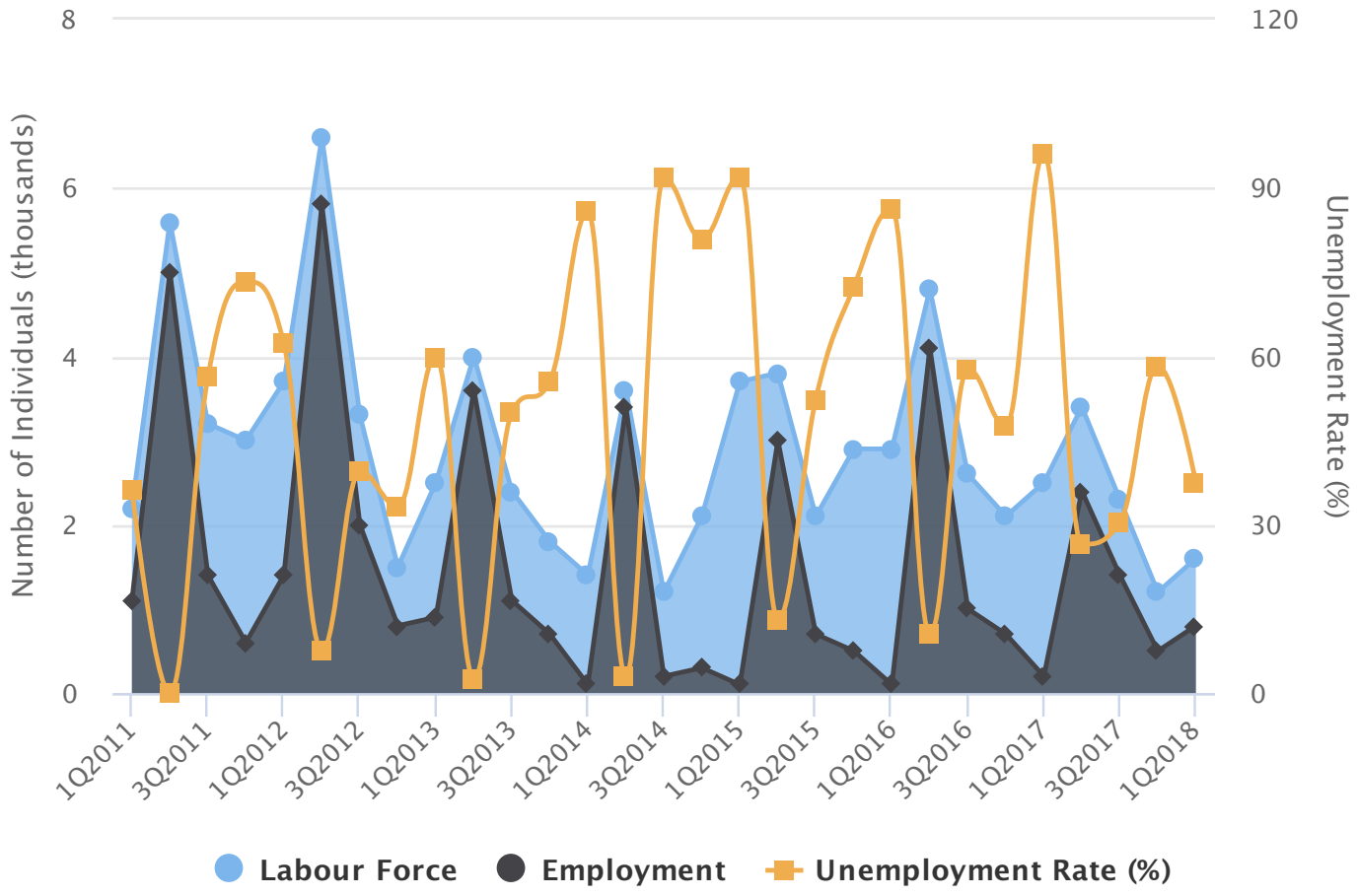
The unemployment rate in Newfoundland and Labrador remains the highest in Atlantic Canada, due in part to the higher degree of seasonal employment across many industries. Aging demographics and a contraction of the population and labour force are expected to lead the average unemployment rate steadily lower across the coming decade from an average rate of 15% in 2017 to below 10% by 2026. The projected level of employment, labour force and unemployment rate are shown in the table below.

The seasonal fluctuations in employment and labour force for Fish and seafood plant workers and Labourers in fish and seafood processing suggest annual average rates of unemployment of 50% are required to meet peak workforce demands.

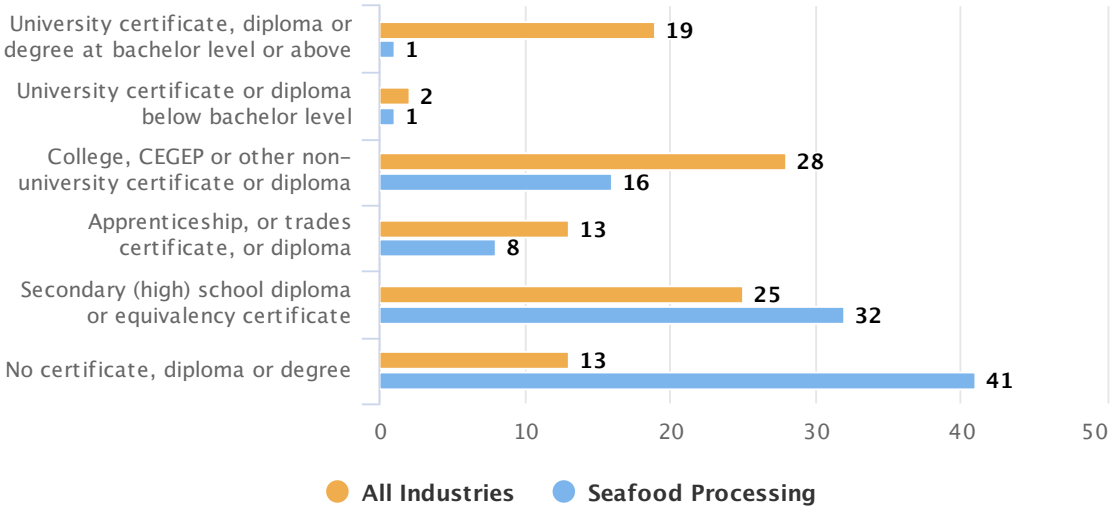
**PROJECTED OVERALL LABOUR FORCE, EMPLOYMENT AND UNEMPLOYMENT RATE (%), NEWFOUNDLAND AND LABRADOR**



**EMPLOYMENT AND LABOUR FORCE, FISH AND SEAFOOD PLANT WORKERS AND LABOURERS IN FISH AND SEAFOOD PROCESSING, QUARTERLY, Q1 2011 TO Q1 2018, NEWFOUNDLAND AND LABRADOR**




**EDUCATION ATTAINMENT BY INDUSTRY, NEWFOUNDLAND AND LABRADOR**




Seafood processors compete with other industries to meet their demands within local, or regional, labour markets. As the overall availability of workers declines with falling rates of unemployment, seafood processors will experience increase hiring Labour market conditions are assessed at the sub-provincial (regional) level.

# APPENDIX F: SUPPLY AND DEMAND – NEW BRUNSWICK

## NEW BRUNSWICK

### Seafood Product Outlooks

Seafood processing output in New Brunswick is expected to grow at a moderate pace over the forecast period averaging between 1.5% and 2.4% in each sub-period. Overall consumption growth is expected to see a reversal from an outright decline over 2013-17 to increasingly positive albeit slow growth as the importance of fresh fish consumption increases and population expands slightly. Moreover, international exports are expected to rise relatively quickly throughout the forecast period, particularly over the 2022-26 period. The growth in output for prepared fish products is expected to accelerate over the forecast period from 0.2% on average over 2018-21, to 1.1% over 2022-30.

| END MARKETS | 2013-17 | 2018-21 | 2022-26 | 2027-30 |
|---|---|---|---|---|
| Consumption | -1.5 | 0.2 | 0.6 | 0.9 |
| International Exports | 4.2 | 2.7 | 4.1 | 2.9 |
| Interprovincial Exports | -0.7 | 0.9 | 1.1 | 1.5 |
| Interindustry Demand | 2.8 | 0.9 | 0.7 | 0.5 |
| Imports | -1.5 | 0.2 | 0.6 | 0.9 |
| Total End Market Demand | 5.6 | 2.2 | 2.4 | 1.5 |

**NEW BRUNSWICK PREPARED SEAFOOD END MARKET GROWTH (ANNUAL AVERAGE PER CENT CHANGE)**

### Consumption

Seafood consumption is expected to decline for most categories as falling per capita consumption combined with small gains in population lead to stagnant or declining demand for most fish categories. Freshwater fish consumption is expected to be strong, averaging over 5.5% growth in each sub-period. Overall seafood products consumption is forecast to rise on average by 0.1% in 2018-2021, then by 0.4% in 2022-2026 before posting 0.6% growth during 2027-2030.

### International Exports

In general, most finfish categories are expected to experience growth ranging from outright decline to modest growth as supply constraints inhibit exports. However, the modest growth is anticipated for Salmon and trout reflects production gains in fish farming. Several shellfish categories are forecast to experience strong growth, particularly Oyster, Scallops, Shrimp and Lobster. Prepared seafood products are expected to experience modest growth over the forecast period.

### Seafood Processing Employment Outlook

Seafood processing employment is expected to remain near current levels of 5,200 workers assuming the industry can sustain assumed productivity gains. Seafood processing real GDP is forecast to expand by 0.2% on average over the 2018-21 period, then the pace of growth is expected to quicken to 1.1% on average over 2022-26 and 2027-30. Labour productivity (GDP per hour worked) is forecast to average 0.2% over the projection period. This means that total hours of work is forecast to rise by 0.0% on average over 2018-21, and then increase by 0.8% over 2022-26 and 2027-30. Average hours worked per employee is forecast to rise by 0.3% on average over the projection period, which leads to the total number of jobs falling by 0.3% over 2018-21, and then rising by 0.5% over 2022-26 and 2027-30.

Below shows projected employment growth by occupation rising from 5,200 to 5,400 by 2030. Production labour (processing and plant workers) constitute nearly 6-in-10 (62%) jobs.

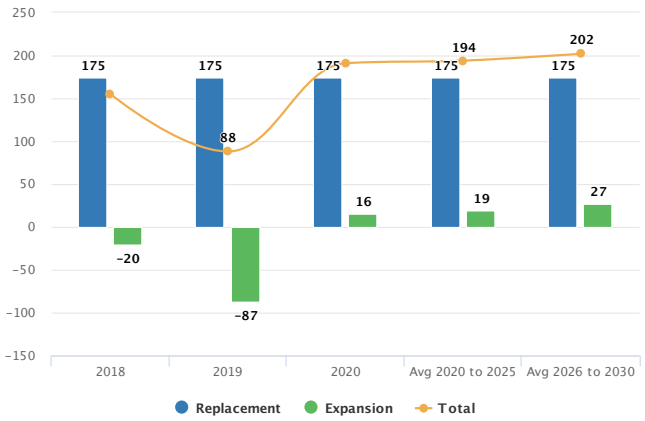
**SEAFOOD PROCESSING EMPLOYMENT, BY KEY OCCUPATION, NEW BRUNSWICK**

| NEW BRUNSWICK | | | | | | ANNUAL AVERAGE | | CHANGE 2018 TO 2030 | |
|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2020 TO 2025 | 2026 TO 2030 | # | % |
| **Total Employment** | **5,560** | **5,227** | **5,208** | **5,126** | **5,145** | **5,211** | **5,340** | **168** | **3.2%** |
| Shellfish Processing Labourer | 1,491 | 1,402 | 1,397 | 1,375 | 1,380 | 1,397 | 1,432 | 44 | 3.2% |
| Fish Processing Labourer | 884 | 831 | 828 | 815 | 818 | 828 | 849 | 26 | 3.2% |
| Shellfish Plant Worker | 685 | 644 | 642 | 632 | 634 | 642 | 658 | 21 | 3.2% |
| Fish Plant Worker | 413 | 388 | 387 | 381 | 382 | 387 | 397 | 13 | 3.2% |
| Supervisors | 261 | 245 | 244 | 241 | 241 | 244 | 251 | 8 | 3.4% |
| Maintenance | 198 | 186 | 185 | 183 | 183 | 186 | 190 | 6 | 3.2% |
| Skilled Trades | 263 | 247 | 246 | 242 | 243 | 246 | 252 | 8 | 3.2% |
| Quality Control Technician | 39 | 36 | 36 | 36 | 36 | 36 | 37 | 1 | 3.2% |
| Management | 139 | 130 | 130 | 128 | 129 | 130 | 133 | 4 | 3.1% |
| Office Staff | 237 | 223 | 222 | 218 | 219 | 222 | 227 | 7 | 3.2% |
| Other Occupations | 951 | 894 | 891 | 876 | 881 | 891 | 914 | 29 | 4% |

## Hiring requirement

Despite modest declines in employment, it is projected the industry will need to hire a net of nearly 100 additional new workers over the next 3 years due to rising retirements. Replacement demands (deaths and retirements) are expected to total 2,245 between 2017 and 2030. Taking account of both replacement and expansion demands, the industry will likely need to need to hire just over 2,550 new workers, or (46%) of the current workforce over the next 13 years. These hiring requirements are net numbers of new workers and do not include annual hiring requirements due to turnover.

**ANNUAL SEAFOOD PROCESSING HIRING REQUIREMENTS (EXCLUDING TURNOVER), NEW BRUNSWICK**




| Hiring Requirements | 2018 to 2020 | 2020 to 2025 | 2026 to 2030 | Total 2018 to 2030 |
|---|---|---|---|---|
| Replacement (Deaths and Retirements) | 172 | 171 | 175 | **2,417** |
| Expansion (Change in Employment) | (27) | 23 | 27 | **140** |
| Total Hiring Requirement (Job Openings) | 145 | 194 | 202 | **2,557** |

**SUMMARY OF ANNUAL AVERAGE HIRING REQUIREMENTS, NEW BRUNSWICK**

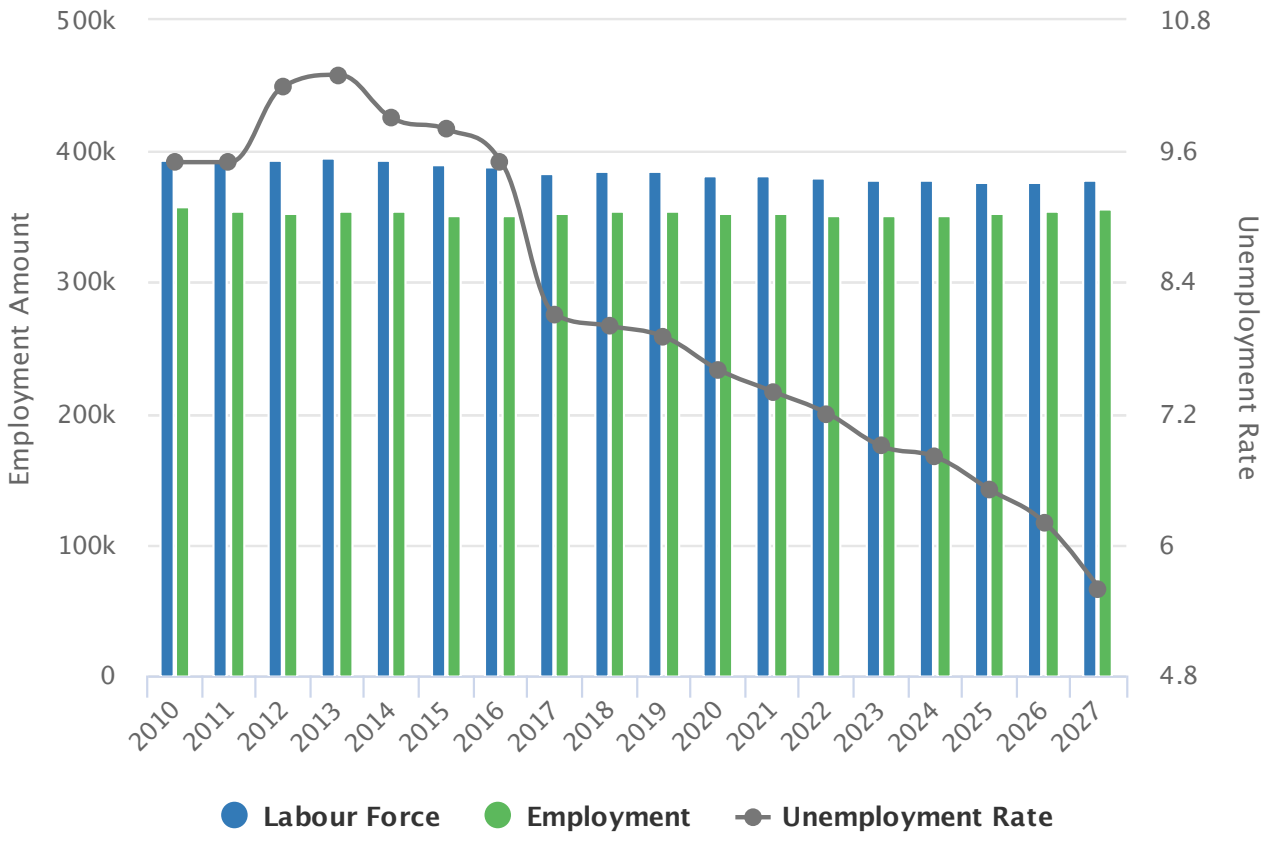
**Available supply**

To meet these demands employers will need to compete with other seafood processors and employment demands in other industries. Steady levels of employment alongside declining labour force is expected to result in declining average rates of unemployment, from about 8% in 2017 to below 6 % by 2030. This means employers across all industries will need to meet demands with fewer workers. The table below shows projections for labour force, employment and unemployment rate (%) for New Brunswick.

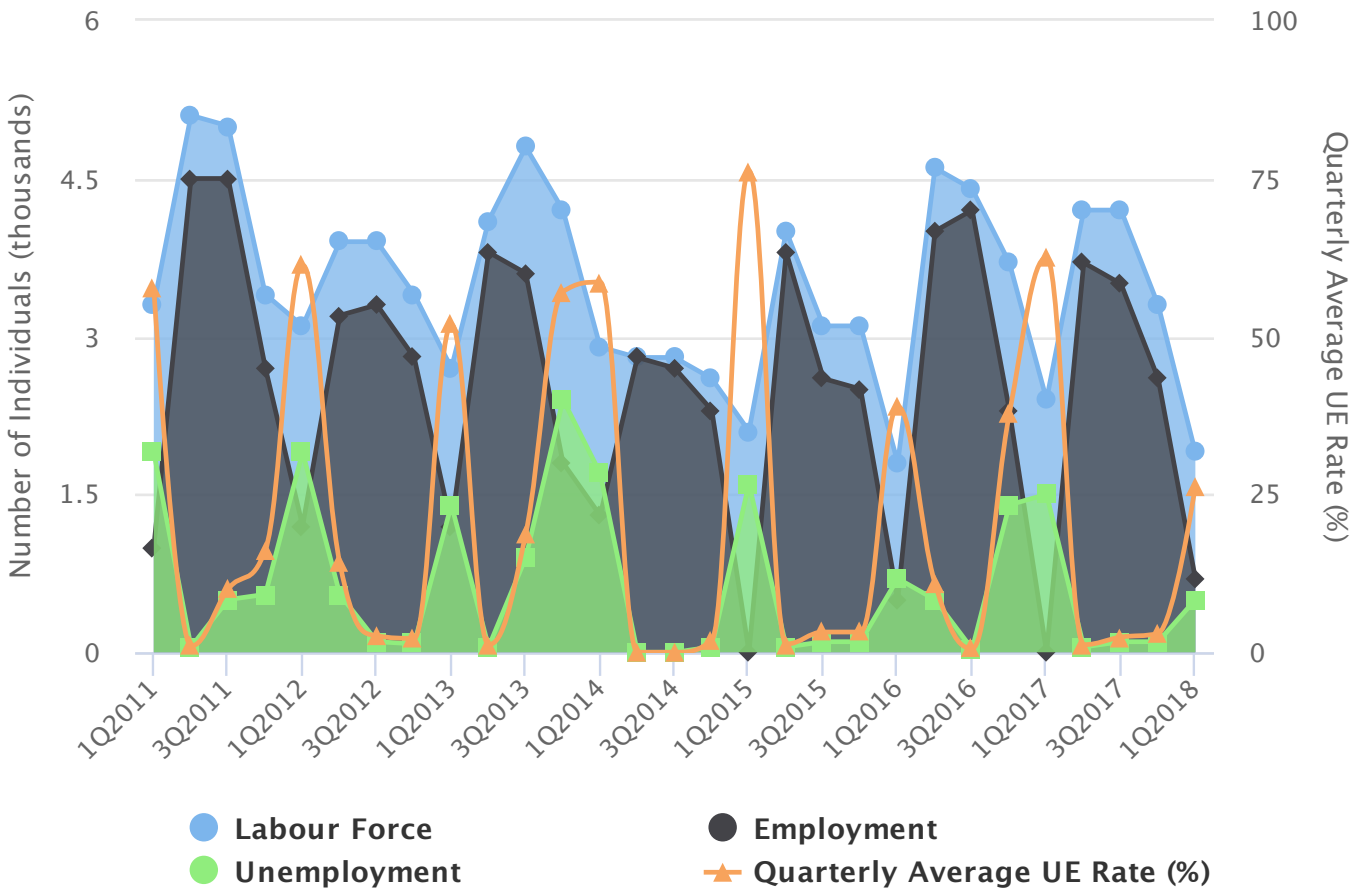
After several years of decline, employment edged higher by 0.4% in 2017. This can be attributed to a pickup in government current spending, particularly in the health and welfare services industry. Private investment is expected to help to offset declining government investment over the remainder the period through 2021, resulting in slightly positive employment growth of 0.3% over the period. Over the long term, the ramping-up of construction on the Mactaquac hydro dam replacement project will help to sustain modest employment growth of 0.3% over 2022-27 and then no growth over the 2027-30 period.

The province's declining participation rate – a result of an aging population – combined with slight population growth, results in a contracting labour force over the forecast. Even with modest growth in employment over the 2022-27 period, there will be downward pressure on the unemployment rate. These levels are significantly lower than the historical norm in the province.

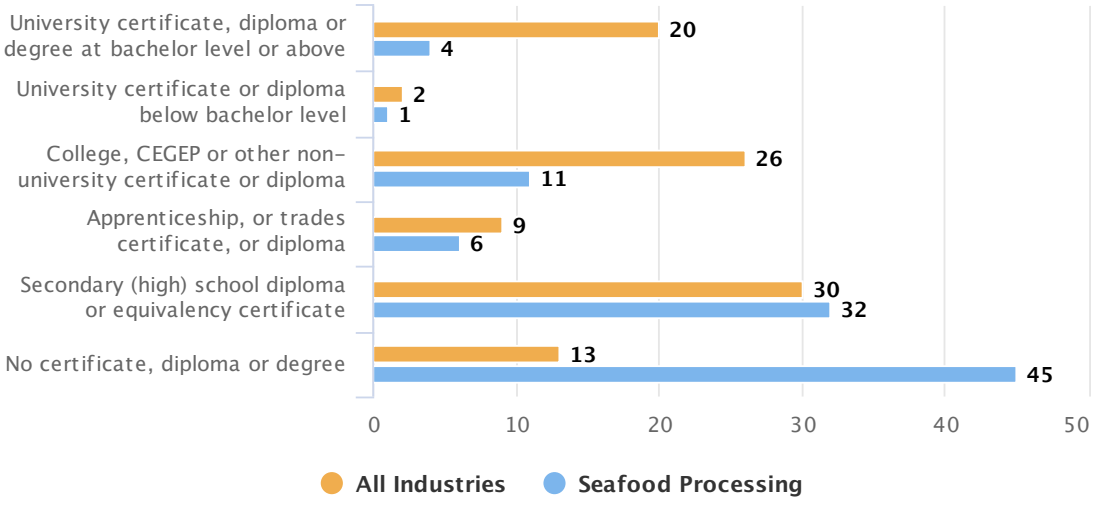
**PROJECTED OVERALL LABOUR FORCE, EMPLOYMENT AND UNEMPLOYMENT RATE (%), NEW BRUNSWICK**



**EMPLOYMENT AND LABOUR FORCE, FISH AND SEAFOOD PLANT WORKERS AND LABOURERS IN FISH AND SEAFOOD PROCESSING, QUARTERLY, Q1 2011 TO Q1 2018, NEW BRUNSWICK**




**EDUCATION ATTAINMENT BY INDUSTRY, NEW BRUNSWICK**




Seafood processors compete with other industries to meet their demands within local, or regional, labour markets. As the overall availability of workers declines with falling rates of unemployment, seafood processors will experience increase hiring challenges. Labour market conditions for the seafood sector are assessed at the sub-provincial (or regional) level.

# APPENDIX G: SUPPLY AND DEMAND – NOVA SCOTIA

## NOVA SCOTIA

### Seafood Product Outlooks

Seafood processing real GDP is expected to see moderate growth over the forecast period averaging between 2.0% and 2.7%. For overall consumption growth, there is expected to be a reversal from an outright decline over 2013-17 to increasingly positive albeit slow growth as the importance of fresh fish consumption increases and population expands. In addition, international exports are expected to rise relatively quickly throughout the forecast period, particularly over the 2022-26 period. The growth of real gross output for prepared fish products is expected to accelerate over the forecast period from 1.4% on average over 2018-21, to 2.1% over 2022-26 and 2.2% over 2027-30.

### Consumption

Seafood consumption is expected to decline for most categories as falling per capita consumption combined with small gains in population lead to tepid or declining demand for several fish categories. Freshwater fish consumption is expected to be strong, averaging over 5.5% growth in each sub-period. Overall seafood products consumption is forecast to rise on average by 0.1% in 2018-2021, then by 0.3% in 2022-2026 before posting 0.5% growth during 2027-2030.

### International Exports

In general, most finfish categories are expected to experience growth ranging from outright decline to modest growth as supply constraints inhibit exports. However, strong growth is anticipated for Salmon and trout which reflects strong production gains in fish farming. Several shellfish categories are forecast to experience strong growth, particularly Clams, Scallops, Shrimp and Lobster. Prepared seafood products are expected to experience moderate growth over the forecast period.

### Seafood Processing Employment Outlook

Average annual seafood processing employment is expected rise steadily from 6,400 in 2017 to 6,700 by 2030.

| END MARKETS | 2013-17 | 2018-21 | 2022-26 | 2027-30 |
|---|---|---|---|---|
| Consumption | -1.4 | 0.2 | 0.5 | 0.8 |
| International Exports | 6.2 | 2.5 | 5.2 | 4.1 |
| Interprovincial Exports | -0.8 | 0.8 | 1.0 | 1.4 |
| Interindustry Demand | 0.5 | 2.7 | 1.6 | 1.7 |
| Imports | -1.4 | 0.2 | 0.5 | 0.8 |
| Total End Market Demand | 2.2 | 2.0 | 2.7 | 2.5 |

**NOVA SCOTIA FISH & SHELLFISH END MARKET GROWTH (ANNUAL AVERAGE PER CENT CHANGE)**

Seafood processing real GDP is forecast to expand by 0.2% on average over the 2018-21 period, then the pace of growth is expected to quicken to 1.1% on average over 2022-26 and 2027-30. Labour productivity (GDP per hour worked) is forecast to average 0.2% over the projection period. This means that total hours of work are forecast to rise by 0.0% on average over 2018-21, and then increase by 0.8% over 2022-26 and 2027-30. Average hours worked per employee is forecast to rise by 0.3% on average over the projection period, which leads to the total number of jobs falling by 0.3% over 2018-21, and then rising by 0.5% over 2022-26 and 2027-30.

Below shows projected employment growth by occupation rising from 6,400 to 7,700 by 2030. Production labour (processing and plant workers) constitute nearly 5-in-10 (46%) jobs.

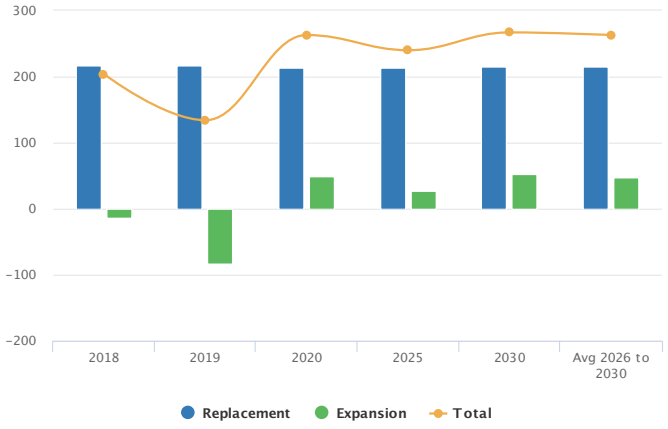
**SEAFOOD PROCESSING EMPLOYMENT, BY KEY OCCUPATION, NOVA SCOTIA**

| NOVA SCOTIA | | | | | | ANNUAL AVERAGE | | CHANGE 2018 TO 2030 | |
|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2020 TO 2025 | 2026 TO 2030 | # | % |
| **Total Employment** | **6,135** | **6.383** | **6,369** | **6,288** | **6,334** | **6,445** | **6,688** | **402** | **6.3%** |
| Shellfish Processing Labourer | 1,106 | 1,152 | 1,149 | 1,135 | 1,142 | 1,165 | 1,207 | 73 | 6.3% |
| Fish Processing Labourer | 656 | 683 | 681 | 673 | 677 | 690 | 715 | 43 | 6.3% |
| Shellfish Plant Worker | 683 | 710 | 710 | 700 | 706 | 719 | 744 | 45 | 6.3% |
| Fish Plant Worker | 412 | 429 | 428 | 422 | 426 | 434 | 449 | 27 | 6.3% |
| Supervisors | 211 | 219 | 219 | 216 | 218 | 222 | 230 | 14 | 6.2% |
| Maintenance | 194 | 201 | 201 | 198 | 200 | 204 | 211 | 13 | 6.3% |
| Skilled Trades | 452 | 470 | 469 | 463 | 466 | 475 | 492 | 30 | 6.3% |
| Quality Control Technician | 106 | 110 | 110 | 108 | 109 | 111 | 115 | 7 | 6.3% |
| Management | 246 | 256 | 255 | 252 | 254 | 259 | 269 | 17 | 6.7% |
| Office Staff | 452 | 470 | 469 | 463 | 466 | 475 | 492 | 30 | 6.3% |
| Other Occupations | 1,618 | 1,684 | 1,680 | 1,658 | 1,670 | 1,702 | 1,763 | 105 | 6% |

## Hiring requirement

Despite modest declines in employment, it is projected the industry will need to hire a net of nearly 600 additional new workers over the next 3 years due to rising retirements. Replacement demands (deaths and retirements) are expected to total 3000 between 2017 and 2030. Taking account of both replacement and expansion demands, the industry will likely need to need to hire just over 3,400 new workers, or (53%) of the current workforce over the next 13 years. These hiring requirements are net numbers of new workers and do not include annual hiring requirements due to turnover.

**ANNUAL SEAFOOD PROCESSING HIRING REQUIREMENTS (EXCLUDING TURNOVER), NOVA SCOTIA**




| Hiring Requirements | 2018 to 2020 | 2020 to 2025 | 2026 to 2030 | Total 2018 to 2030 |
|---|---|---|---|---|
| Replacement (Deaths and Retirements) | 217 | 213 | 215 | **3,007** |
| Expansion (Change in Employment) | (16) | 42 | 48 | **386** |
| Total Hiring Requirement (Job Openings) | 200 | 255 | 263 | **3,393** |

**SUMMARY OF ANNUAL AVERAGE HIRING REQUIREMENTS, NOVA SCOTIA**

**Available supply**

Steady levels of employment alongside declining labour force is expected to result in declining average rates of unemployment, from about 8.3 % in 2017 to below 6 % by 2030. This means employers across all industries will need to meet demands with fewer workers. The table below shows projections for labour force, employment and unemployment rate (%) for Nova Scotia.

Employment bounced back in 2017, growing by 0.6% after falling in three of the previous four years. Employment growth will slow through the medium term to an annual average of 0.2%. Weakness in the goods-producing industries is offset by employment growth in private services. Average employment growth is 0.1% over the 2022-26 period, and zero growth over the 2027-30 period.

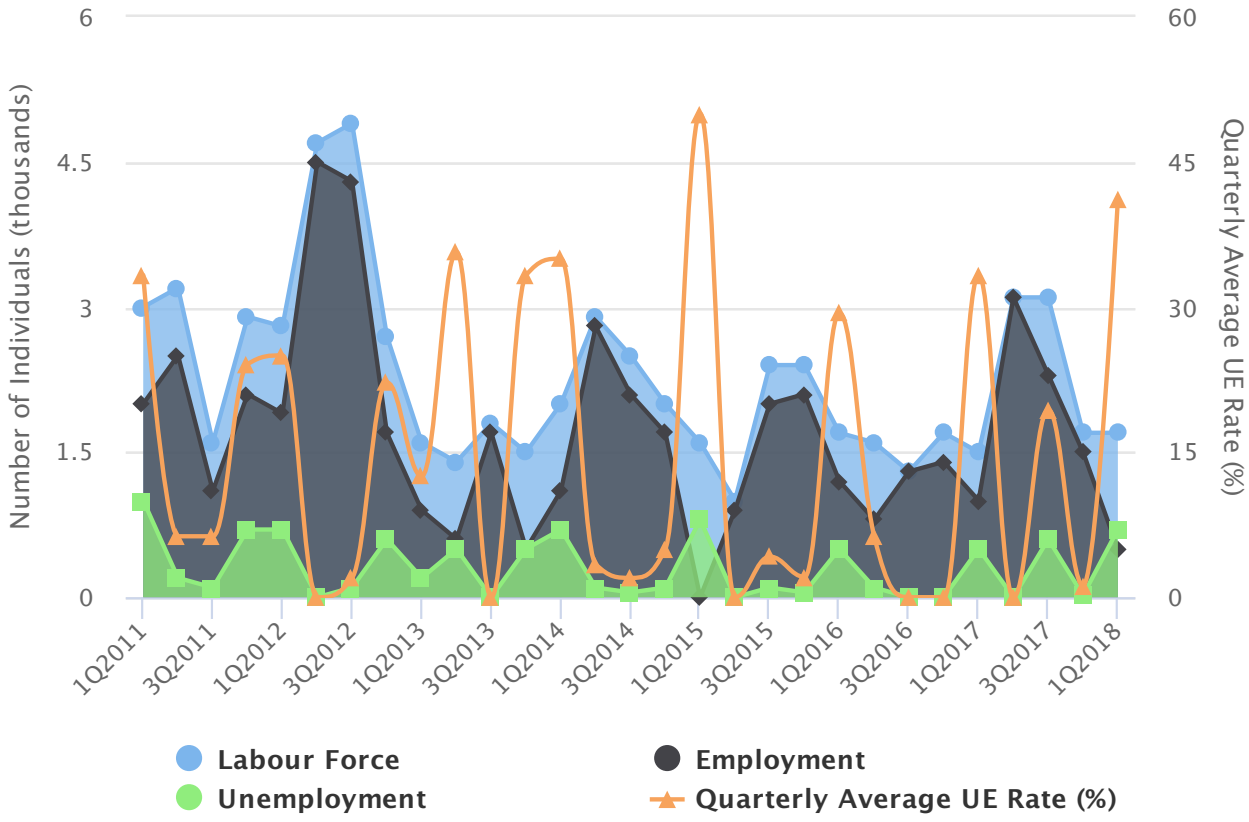
The labour force grew by 0.7% in 2017, after falling in each of the previous four years. There will be continued downward pressure on the labour force over most of the forecast period due to the participation rate falling as Nova Scotia's population continues to age quickly. The proportion of the population aged 65 and older is expected to grow to over 25% by 2026 compared with 20% in 2017, a significant change over 10 years. Falling labour force growth will place downward pressure on the unemployment rate.

The unemployment rate was 8.4% in 2017 compared with 9.1% four years before. The downward trend is expected to continue over most of the forecast period. This is largely due to a declining labour force, as the participation rate falls and the population begins to shrink. As the labour market tightens in the long term, the unemployment rate is expected to average 6.5% over 2022-26 and 5.6% over 2027-30.

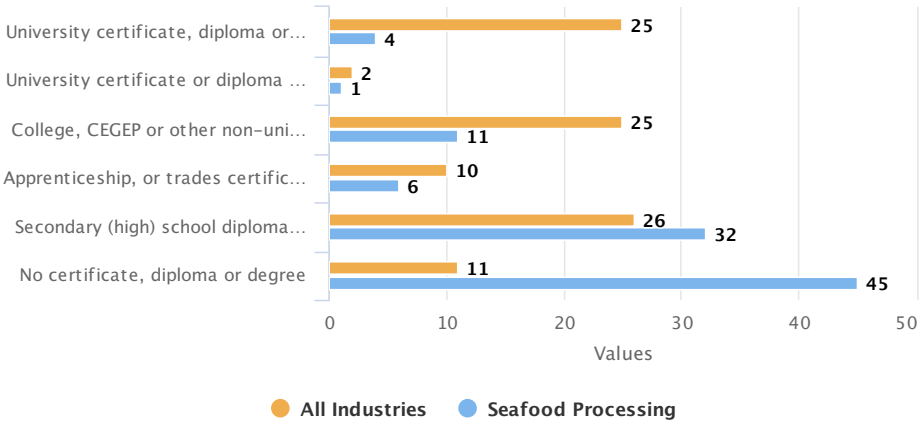
The seasonal fluctuations in employment and labour force for Fish and seafood plant workers and Labourers in fish and seafood processing suggest annual average rates of unemployment of 15% are required to meet peak workforce demands.

**PROJECTED OVERALL LABOUR FORCE, EMPLOYMENT AND UNEMPLOYMENT RATE (%), NOVA SCOTIA**

**EMPLOYMENT AND LABOUR FORCE, FISH AND SEAFOOD PLANT WORKERS AND LABOURERS IN FISH AND SEAFOOD PROCESSING, QUARTERLY, Q1 2011 TO Q1 2018, NOVA SCOTIA**




**EDUCATION ATTAINMENT BY INDUSTRY, NOVA SCOTIA**




Seafood processors compete with other industries to meet their demands within local, or regional, labour markets. As the overall availability of workers declines with falling rates of unemployment, seafood processors will experience increase hiring Labour market conditions are assessed at the sub-provincial (regional) level.

# APPENDIX H: SUPPLY AND DEMAND – PRINCE EDWARD ISLAND

## PRINCE EDWARD ISLAND

### Seafood Product Outlooks

Seafood processing real GDP is expected to see little growth over the forecast period averaging between 0% and 1% in each sub-period. Output for prepared fish products is expected to accelerate over the forecast period after declining on average over the 2013 to 2017 period to average 0.2% over 2018-21, 0.9% over 2022-26 and 1.0% over 2027-30.

### Consumption

Seafood consumption is expected to increase for most categories as falling per capita consumption is more than offset by gains in PEI's population. Freshwater fish consumption is expected to be strong, averaging around 7.0% growth in each sub-period. The one exception is the falling demand for fresh and frozen sea fish, which is projected to fall on average by around 0.5% or slightly lower over the forecast period. Overall seafood products consumption is forecast to rise on average by 1.4% in 2018-2021, then by 1.5% in 2022-2026 before posting 1.8% growth during 2027-2030.

### International Exports

In general, most finfish categories are expected to experience growth ranging from outright decline to modest growth as supply constraints inhibit exports. However, strong growth is anticipated for Salmon which reflects strong production gains in fish farming. Several shellfish categories are forecast to experience strong growth, particularly Oysters, Shrimp and Lobster. Prepared seafood products are expecting to experience moderate growth over the forecast period, particularly Crustaceans, Molluscs and Other Aquatic Invertebrates.

### Seafood Processing Employment Outlook

Average annual seafood processing employment is expected rise modestly from just under an annual average of 1,000 workers in 2017 to 1,100 by 2030.

Seafood processing real GDP is forecast to expand by 0.2% on average over the 2018-21 period, then the pace of growth is expected to quicken to 0.9% on average over 2022-26 and 1.0% over 2027-30. Labour productivity (GDP per hour worked) is forecast to average -0.1% over the projection period. This means that the total hours of work is forecast to rise by 0.3% on average over 2018-21, and then increase by 1.0% and 1.1% on average over 2022-26 and 2027-30 respectively. Average hours worked per employee is forecast to fall slightly over the projection period, which leads to the total number of jobs rising by 0.3% over 2018-21, and then rising by 1.1% over 2022-26 and 1.2% over 2027-30.

| END MARKETS | 2013-17 | 2018-21 | 2022-26 | 2027-30 |
|---|---|---|---|---|
| Consumption | -0.9 | 1.4 | 1.5 | 1.8 |
| International Exports | -0.2 | 0.1 | 1.0 | 1.1 |
| Interprovincial Exports | -0.8 | 0.3 | 0.5 | 0.8 |
| Interindustry Demand | 3.4 | 2.0 | 2.0 | 2.0 |
| Imports | -0.9 | 1.4 | 1.5 | 1.8 |
| Total End Market Demand | 2.3 | 0.2 | 0.9 | 1.0 |

**PRINCE EDWARD ISLAND PREPARED SEAFOOD END MARKET GROWTH (ANNUAL AVERAGE PER CENT CHANGE)**

Below shows projected employment growth by occupation rising from 980 to 1,100 by 2030. Production labour (processing and plant workers) constitute nearly 5-in-10 (53%) jobs.

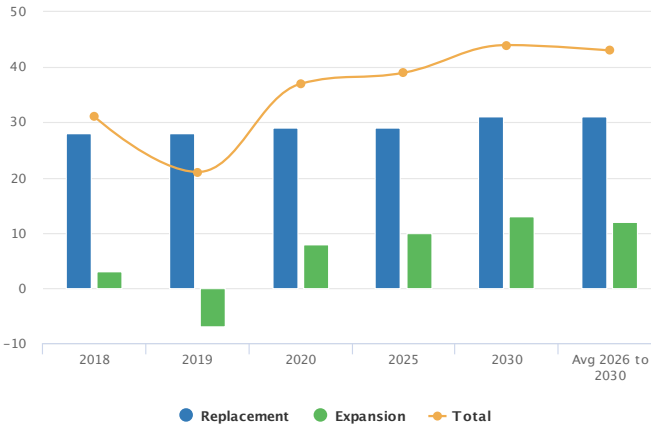
**SEAFOOD PROCESSING EMPLOYMENT, BY KEY OCCUPATION, PRINCE EDWARD ISLAND**

| PRINCE EDWARD ISLAND | | | | | | ANNUAL AVERAGE | | CHANGE 2018 TO 2030 | |
|---|---|---|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2020 TO 2025 | 2026 TO 2030 | # | % |
| **Total Employment** | **1,100** | **988** | **990** | **983** | **992** | **1,021** | **1,079** | **117** | **11.8%** |
| Shellfish Processing Labourer | 252 | 226 | 227 | 225 | 226 | 233 | 247 | 26 | 11.6% |
| Fish Processing Labourer | 149 | 134 | 134 | 134 | 134 | 138 | 146 | 16 | 11.6% |
| Shellfish Plant Worker | 115 | 104 | 104 | 103 | 104 | 107 | 113 | 12 | 11.4% |
| Fish Plant Worker | 70 | 62 | 63 | 62 | 63 | 65 | 68 | 8 | 12.7% |
| Supervisors | 54 | 49 | 49 | 48 | 49 | 50 | 53 | 5 | 10.8% |
| Maintenance | 51 | 45 | 45 | 45 | 46 | 47 | 50 | 6 | 12.8% |
| Skilled Trades | 58 | 52 | 52 | 52 | 53 | 54 | 57 | 7 | 12.6% |
| Quality Control Technician | 8 | 7 | 7 | 7 | 7 | 7 | 8 | 1 | 11.5% |
| Management | 23 | 20 | 20 | 20 | 20 | 21 | 22 | 3 | 13.5% |
| Office Staff | 66 | 59 | 59 | 59 | 60 | 61 | 65 | 7 | 12.5% |
| Other Occupations | 255 | 229 | 229 | 227 | 231 | 237 | 251 | 28 | 12% |

## Hiring requirement

Despite modest employment growth it is projected the industry will need to hire a net of nearly 100 additional new workers over the next 3 years to meet expansion and workforce retirements. Replacement demands (deaths and retirements) are expected to total 410 between 2017 and 2030. Taking account of both replacement and expansion demands, the industry will likely need to need to hire just over 530 new workers, or (54%) of the current workforce over the next 13 years. These hiring requirements are net numbers of new workers and do not include annual hiring requirements due to turnover..

**ANNUAL SEAFOOD PROCESSING HIRING REQUIREMENTS (EXCLUDING TURNOVER), PRINCE EDWARD ISLAND**




| Hiring Requirements | 2018 to 2020 | 2020 to 2025 | 2026 to 2030 | Total 2018 to 2030 |
|---|---|---|---|---|
| Replacement (Deaths and Retirements) | 28 | 29 | 31 | **412** |
| Expansion (Change in Employment) | 1 | 10 | 12 | **118** |
| Total Hiring Requirement (Job Openings) | 30 | 39 | 43 | **531** |

**SUMMARY OF ANNUAL AVERAGE HIRING REQUIREMENTS, PRINCE EDWARD ISLAND**

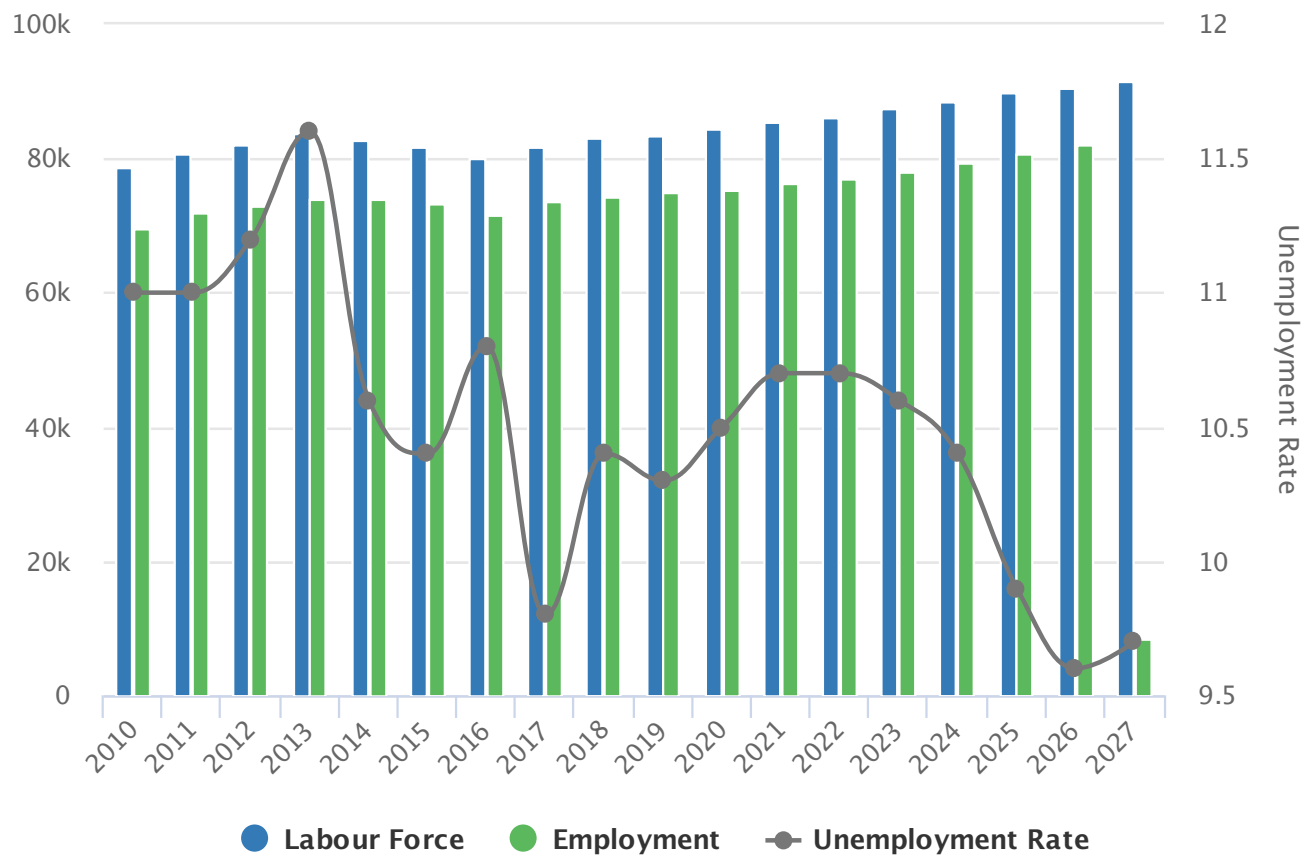
**Available supply**

To meet these demands employers will need to compete with other seafood processers and employment demands in other industries. Following a decline in 2016, employment rebounded by 3.2% in 2017. Over the medium term, growth in employment averages 1.6% per year, boosted mostly by construction, which averages 5% annual growth. In the 2022-26 period, employment growth averages 1.5%, as a rebound in professional, scientific and managerial services employment to 1.9% growth helps to offset the slowdown in construction employment, which only averages 0.7%. Over 2027-30 total employment growth averages 1.4%. ¸

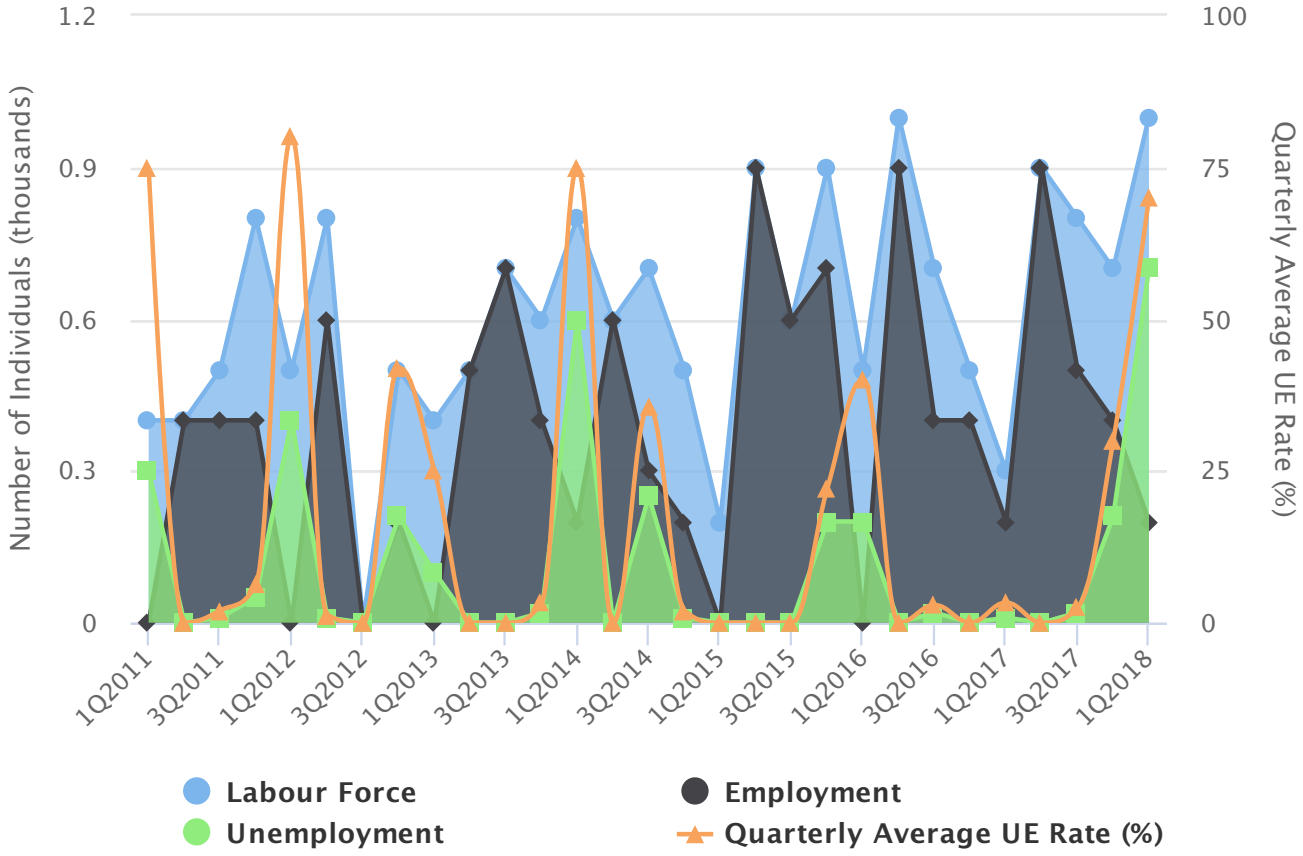
The unemployment rate fell from 10.7% in 2016 to 9.8% in 2017. Over the medium term, employment and labour force growth track close to one another, leading the un employment rate to average close to 10% during both the 2017-21 and 2022-26 periods. Then the unemployment rate is forecast to slide to 8.5% on average during the 2027-30 period as the gains in employment exceed the gains in the labour force. The table below shows projections for labour force, employment and unemployment rate (%) for Prince Edward Island.

The seasonal fluctuations in employment and labour force for fish and seafood plant workers and Labourers in fish and seafood processing suggest annual average rates of unemployment of 15% are required to meet peak workforce demands.

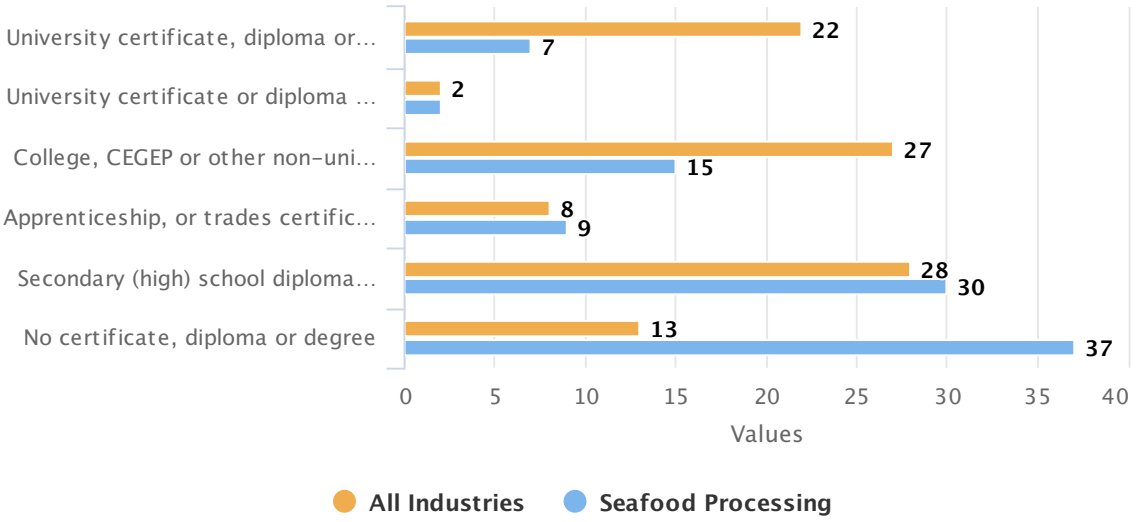
**PROJECTED OVERALL LABOUR FORCE, EMPLOYMENT AND UNEMPLOYMENT RATE (%), PRINCE EDWARD ISLAND**



**EMPLOYMENT AND LABOUR FORCE, FISH AND SEAFOOD PLANT WORKERS AND LABOURERS IN FISH AND SEAFOOD PROCESSING, QUARTERLY, Q1 2011 TO Q1 2018, PRINCE EDWARD ISLAND**




**EDUCATION ATTAINMENT BY INDUSTRY, PRINCE EDWARD ISLAND**



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