

RESEARCH REPORT

Opportunities for Atlantic Manufacturers in the EU

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Opportunities for Atlantic Manufacturers in the EU

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Abbreviations

AIPCE-CEP: The European fish processors and traders association

BASA: Bilateral Aviation Safety Agreement

CE: CE marking indicates a product's compliance with EU legislation

CETA: Canada-EU Comprehensive Economic and Trade Agreement

CIF: Cost, insurance and freight

C&P: Cooked and peeled

DG: Dry graded

EASA: European Aviation Safety Agency

EEZ: Exclusive economic zone

EU: European Union

EUMOFA: European Market Observatory for Fisheries and Aquaculture

FOB: Free on board

FAS: Frozen at sea

GDP: Gross domestic product

IMF: International Monetary Fund

ITB: Industrial and Technological Benefits

IVD: In vitro diagnostics

KD: Kiln dried

KD-HT: Kiln dried and heat treated

LNG: Liquefied natural gas

MRO: Maintenance, repair and overhaul

MSC: Marine Stewardship Council

NOAA: National Oceanic and Atmospheric Administration

OEM: Original equipment manufacturer

OSB: Oriented strand board

UK: United Kingdom

UNECE: United Nations Economic Commission for Europe

Country Classifications & Currency Conversions

EU-12: The 12 EU member states that joined prior to 1995: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, and the UK.

EU-15: The 15 EU member states that joined prior to 2004: the EU-12 along with Austria, Finland and Sweden.

EU-27: The current EU member states excluding Croatia.

Central and eastern European countries: The EU member states which are included in the OECD definition of Central and Eastern Europe: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

Currency Conversions: Unless noted, all monetary values are in Canadian dollars (\$). Conversion of data from euros (€) to Canadian dollars are done using annual average exchange rates for the appropriate year.

Average annual exchange rate, noon.	
2012	€1=CAN\$1.2850
2013	€1=CAN\$1.3681
2014	€1=CAN\$1.4671

Source: Bank of Canada

Executive Summary

This report examines the potential for increased exports from Atlantic Canada to the European Union (EU), focusing on opportunities for Atlantic manufacturers, in light of the expected implementation of the Canada-EU Comprehensive Economic and Trade Agreement (CETA). The EU is the largest economy in the world and has traditionally been Atlantic Canada's second largest export market although the region has struggled to recover from the 2008/2009 global recession. CETA will eliminate tariffs on a number of key products, reduce non-tariff barriers, and help flows of labour and investment.

This report is intended to help business leaders, industry associations and trade and business development officials better understand the opportunities for Atlantic manufacturers in the EU and support the identification and creation of detailed market entry and business development strategies for specific firms, industries and market segments. It is not intended to provide a complete and detailed analysis of the implications of CETA for any particular product or industry.

The analysis in this report focuses on nine key industries, which include a mix of resource, non-resource and energy industries: seafood, frozen wild blueberries, wood products, aerospace, pharmaceutical and diagnostic products, refined petroleum, liquefied natural gas, crude oil and iron ore. The industries and products selected for detailed analysis were chosen based upon three main criteria: the size of existing exports from Atlantic Canada (to focus on the region's current export capacity); recent export trends (to focus on industries that are growing); and existing sales to the EU (to ensure inclusion of industries that have already established a presence in the EU market). Crude oil and iron ore were included as they are inputs into manufacturing value chains.

EU Opportunities by Industry

This summary also includes preliminary comments on several industries that were not subject to in-depth research including tires, paper and pulp, machinery and equipment, metal products and plastics. More detailed assessments are required for these industries.

Refined Petroleum

There are currently two refineries in Atlantic Canada with a capacity of 415,000 barrels per day. Atlantic exports of refined petroleum products to the EU vary widely by year and country and are dependent on short-term needs in Europe. Demand for refined petroleum products is declining in the EU but refinery capacity is expected to fall over the next decade due to the age and inefficiency of refineries. Competition from other low cost producers in the US, India and the Middle East will make it challenging for Atlantic refineries to play a large role in the EU.

Summary of Opportunities in the EU for Atlantic Manufacturers

Exports, Atlantic Canada, 2013 (\$ millions)

Industry	Exports	EU exports	Assessment of Atlantic opportunities in the EU
Large Exporters¹			
Refined petroleum	13,323	633	Declining EU refinery capacity may provide opportunities to meet short-term needs.
Seafood	2,236	270	Tariff elimination will provide potential revenues gains of \$30-40 million for lobster, shrimp and scallops with product diverted from non-EU markets.
Tires	1,003	15	Exports to the EU are not anticipated to grow as the market is served by Michelin's plants in the EU.
Paper	779	4	n.a.
Pulp	707	10	n.a.
Wood products	608	35	Potential for speciality suppliers. Limited prospects for lumber as the EU is largely self-sufficient and customization is not economic for small producers.
Fruit & vegetables	532	46	Despite the elimination of a 14-17% tariff, opportunities for frozen french fries are limited due to existing EU production, including McCain-owned plants in the EU. Rising incomes in central and eastern Europe and growing product awareness likely to support growth in frozen blueberries.
Mid-Size Export Industries¹			
Machinery & equipment	521	74	Opportunities for specialized, niche players but detailed assessments needed for each market segment. Improved labour mobility under CETA will help with installation and after sales service.
Metal products	317	18	Lead will not be exported as Glencore has a smelter in the EU. Exports such as wire & rope were not examined but structural steel products are not likely to be cost competitive.
Chemicals & pharmaceuticals	226	25	Modest EU demand growth for pharmaceutical and diagnostic products but Atlantic firms must navigate national regulatory and reimbursement schemes.
Plastics	203	2	n.a.
Aerospace	134	27	EU aerospace demand projected to grow but local partners or own local presence may be needed to compete against other EU firms, especially for defence contracts.
Other Exporters¹			
Miscellaneous manufacturing	138	43	Main export is gaming machines but are likely to decline as manufacturing capacity is being moved to the US.
Other food	133	2	n.a.
Textiles	94	1	n.a.
Beverages	67	4	Shipping costs limit beer exports but vodka exports to the EU have grown rapidly since 2010.
Gypsum	30	-	n.a.
Other transportation	76	1	n.a.
Furniture	24	-	n.a.

Notes: 1. For detailed definitions see Table 2.3 in Chaundy, David (2015) *The Changing Global Market for Atlantic Manufacturing*.
Halifax: APEC.

Source: Trade Data Online, APEC

Seafood

The seafood industry is the largest component of the food industry in Atlantic Canada. The EU currently represents a large share of the global sales of frozen and processed shrimp and frozen scallops from Atlantic Canada. Fresh and frozen lobster are the other key export to the EU. The EU is the largest seafood market by value in the world with an increased dependence on imports due to declining EU fish stocks. Per capita seafood consumption is projected to increase over time with large supermarkets being a key driver of product requirements.

The elimination of EU tariffs provides potential revenue gains of \$30-40 million for Atlantic exporters of lobster, shrimp and scallops. Increases in after-tariff seafood prices in the EU market will induce increased export volumes but this will be at the expense of existing sales to the US or other markets due to supply constraints (e.g., quota). Given the current structure and competitive nature of the seafood industry in Atlantic Canada, there is a strong possibility that any potential price gains in the EU will be bargained away in attempts to increase market share, benefitting EU importers rather than Atlantic exporters. Greater collaboration in marketing, for example, could help mitigate this risk.

For some seafood species there is also the possibility of expanding value-added production, for example, with the development of new retail products. This will depend on the expected margins relative to now higher EU prices for existing products and the cost of product and market development. However, farmed salmon is not likely to be competitive in the EU due to transportation cost for fresh product while frozen crab is unlikely to benefit from tariff reductions without a major marketing effort.

Tires

Tires are Nova Scotia's largest export and are manufactured at Michelin's three facilities in Granton, Bridgewater and Waterville. Of the tires manufactured in Nova Scotia, about 25% are sold in the Canadian market, while most of the remainder are exported to the US. Michelin has facilities in Europe and manufactures tires in the market in which it intends to sell them because they are costly to ship. Further, due to differences in regulations, climate and road conditions, the tires that are sold on the EU market differ from those manufactured in Nova Scotia for the North American market. These considerations limit any EU export opportunities even under CETA.

Paper and Pulp

In the face of declining newsprint demand and competitive pressures, there has been a substantial reduction in Atlantic Canada's productive capacity in pulp and paper. Exports of Atlantic Canada's pulp and paper products to the EU have declined more than 90% over the last decade, compared to a 27% decline in all international pulp and paper exports. While paper exports are down across the board, pulp exports are up, with big gains in shipments to Asia, partly due to the A.V. Group's own supply chain for the rayon industry. Pulp and paper products currently enter the EU market duty free, so CETA is not expected to increase Canadian exports of these products.

Wood Products

The manufacture of wood products, primarily lumber, continues to be an important industry in New Brunswick and Nova Scotia. Though employment has declined in the past decade, the sector still supports over 8,000 jobs. Although the EU market for wood products is sizeable, the EU is largely self-sufficient with low import shares and rising exports. Demand is not expected to grow much in the near term.

The EU accounts for a very small share of Atlantic lumber exports and this is not expected to increase. Atlantic Canadian mills are configured to produce commodity products, predominantly for North American markets that have different product dimension standards than Europe. Thus, responding to the needs of export customers can frequently require adjustments to mill set up and therefore, unless orders are of sufficient volume and inclusive of a sufficiently wide spectrum of grades to generate reasonable returns, the incremental cost and effort of changing mill and output specifications is often not warranted. However, opportunities will continue to exist in the EU for specialty wood producers. In addition, wood pellets are currently exported to the EU, particularly the UK. While demand has been increasing, it is dependent upon the continuation of existing renewable energy policies in the EU.

Fruit and Vegetables

The EU currently accounts for almost 40% of Atlantic Canada's frozen blueberry exports. Most exports of frozen blueberries from Atlantic Canada are sold as an ingredient to other food manufacturers. Demand for blueberries in Europe is expected to grow due to rising incomes, especially in central and eastern Europe, along with increased product awareness including knowledge of potential health benefits. A major expansion by Oxford Frozen Foods in New Brunswick will expand the current wild blueberry acreage but beyond this, increased supply will largely have to rely on improving yields. The current 14% EU tariff on frozen blueberries from Canada has been suspended for a number of years, but CETA would permanently eliminate this tariff. Producers need to

maintain their responsiveness to changing European tastes and regulations and remain cost competitive.

Atlantic Canada is home to 40% of Canada's potato production, primarily in Prince Edward Island (26%), but also with significant production in New Brunswick (14%). Three quarters of Atlantic Canada's international potato exports are frozen potato products such as french fries. Frozen potatoes are exported from Atlantic Canada primarily to the US, but also to Asia and Latin America. Over the past decade, exports to the EU have made up no more than 1% of frozen potato exports, with McCain having its own manufacturing facilities in the EU. Canadian frozen potatoes entering the EU market currently face tariffs of 14-17%, which will be eliminated by CETA. However, market opportunities remain limited. Belgium, Germany and the Netherlands are major potato producers and the EU is a net exporter of frozen potato products. The growth markets for Atlantic frozen potatoes are seen to be Asia and South America, where a growing middle class is driving demand.

Machinery and Equipment

Atlantic Canada's machinery and equipment industry produces a very diverse group of products that feed into many industries and this makes it difficult to provide any broad assessment of market opportunities. Detailed assessments are needed for each market segment. Atlantic exports in this industry include engines for aircraft (which are discussed in Chapter 5). It also includes many products within the ocean technology sector, including navigational products. Some Atlantic firms view the EU as a mature market with limited potential, but market opportunities in the EU likely exist for other innovative firms that provide specialized and unique solutions. These firms will likely receive limited benefits from tariff reductions under CETA as their success is driven by innovation and product positioning, rather than by cost competition. However, the increased labour mobility under CETA is a potential benefit for firms that are installing equipment and providing after sales service.

Metal Products

Exports of metal products include both primary and fabricated metal products. The largest share of this is refined lead produced at the Brunswick Smelter but this facility does not export to the EU as its parent company, Glencore, has a smelter in the EU. Other products such as wire and steel rope were not examined although exports of structural steel products are not expected to be competitive in the EU.

Chemicals and Pharmaceuticals

The chemical manufacturing industry in Atlantic Canada includes firms working in human and animal health as well as industrial chemicals. In human health, a large share of the pharmaceutical and diagnostic products produced in the region are exported to the EU. While health care is a growing field, government spending restraint and other factors will moderate growth potential in the EU. Atlantic firms have been successful in the EU by working with agents and distributors to navigate the complex and fragmented health care market.

Plastics

Atlantic Canada exported \$203 million worth of plastic and articles of plastic in 2013, the bulk of which originated from Nova Scotia, where large plastics firms such as Copol International, Farnell Packaging, Intertape Polymer Group and PolyCello are located. The primary destination for these exports was the US (95%), while just 1% was destined for the EU. Most of the plastic exported into the EU from Atlantic Canada faces tariffs of 3-7% depending on the specific product. These tariffs will be eliminated upon implementation of CETA. However, Atlantic plastics manufacturers are not expected to be cost competitive in the EU due to the lower cost of resin in Europe while US producers are benefiting lower energy costs due to increased shale gas production.

Aerospace

All four Atlantic provinces are active in the aerospace industry. The maintenance, repair and overhaul (MRO) segment is important in Prince Edward Island and Newfoundland and Labrador, while parts manufacturing occurs in Nova Scotia and New Brunswick. Exports to the EU make up over 20% of Atlantic Canada's aerospace exports. The European passenger fleet is expected to grow 71% by 2033 creating increased demand for parts and MRO. Atlantic firms face strong competition in Europe. Many firms have found that an on-the-ground presence or a local partner is key to winning EU contracts, although CETA may increase the willingness of European firms to do business with Canadian companies.

Other

In the beverages industry, breweries account for about three quarters of the region's exports, though distilleries have a growing share. Breweries in the region have tended to focus on the US market, in part due to the shipping costs, which make up a significant share of the value for a relatively bulky product like beer. Further, the methods of distribution in the EU market (including tied houses in some countries such as the UK and Germany) differ from those in North America, making established strategies less

effective. While less than 1% of Atlantic Canada's exports of beer are destined for the EU, a much larger share of distillery exports, especially vodka, are being sold in the EU (20% in 2013). These exports have increased rapidly since 2010.

In the miscellaneous manufacturing category, by far the largest export is of gaming machines produced by IGT in New Brunswick. They have been active in the EU for many years and already have extensive market coverage. The EU is a mature market with limited growth opportunities, other than in some of the emerging central and eastern European countries. More importantly, in April 2015, IGT announced it was moving its manufacturing capacity from Moncton to Nevada which will eliminate Atlantic Canada's exports in this category.

Expected Impacts of CETA

The EU is a huge market with potential for relatively small Atlantic firms to capture some market share. Although the EU economy has struggled since the 2008/2009 global recession, reflecting sovereign debt concerns and fiscal austerity, modest growth is projected going forward. In addition, rising per capita incomes in central and eastern Europe offers potential for growth in consumer products such as seafood and blueberries. Similarly, the aging population in many European nations will increase health care demands providing growth opportunities for Atlantic firms in pharmaceuticals and diagnostics, for example.

Atlantic seafood exporters will be the prime beneficiaries of reductions in EU tariffs, with current EU tariffs estimated to cost the region \$30-40 million, although the nature of these benefits will depend upon the competitive response of the industry (see Chapter 2 for a detailed discussion). Outside of seafood, EU tariffs are generally low and not perceived to be a major barrier to competitive success, or tariff removal is not expected to have much impact on Atlantic exports. For example, the elimination of the 14-17% tariffs on Canadian frozen potatoes is not expected to lead to increased Atlantic exports as McCain already has plants in the EU and the EU is a net exporter of frozen potato products. However, the fact that no new tariffs can be put in place creates greater certainty for innovative firms that are developing new or improved products. And for frozen blueberries, CETA will ensure that the currently suspended 14% tariff will not be re-imposed.

Non-tariff barriers can create obstacles. A proposed new EU standard for structural lumber was expected to effectively shut-out Canadian producers from the EU market but negotiations on this issue, outside of CETA, seem to have ensured equivalency for existing North American standards.

There is a strong preference for national procurement on defence spending, globally as well as in the EU, which can make it challenging to access the EU market without a local presence or EU partner. This is not likely to change under CETA given security provisions in the agreement, limiting prospects for the region's aerospace and defence industry. In the civil aerospace industry, despite an existing bilateral agreement on aviation safety, some Atlantic firms still need to take additional steps beyond Transport Canada approval to maintain the appropriate EU certification.

For other highly regulated industries such as pharmaceuticals and other health care products, national regulations must often be met in addition to EU standards. Purchasing and reimbursement schemes also vary greatly from one country to another. These varying national requirements can impose substantial costs on Atlantic firms to secure regulatory and market approval, limiting the scope to expand into other EU markets. However, Canadian testers can seek approval under CETA to certify to EU standards which will provide some cost savings for Atlantic firms.

CETA is expected to improve the overall willingness of EU firms to do business with firms in Canada and will provide greater regulatory certainty, giving Atlantic firms opportunities to comment on pending EU regulatory changes. Labour mobility will also improve making it easier for firms looking to develop new markets or to service existing clients.

EU Market Strategies

Despite supranational agencies and agreements, national tastes, regulations and other requirements still vary by country within the EU. Developing new markets typically requires a costly investment of resources which is why some Atlantic firms remain focused on their existing markets rather than diversifying into the EU. Even for firms looking to enter the EU, or broaden their existing country focus within the EU, the costs of market entry can be substantial, often requiring a targeted approach and the customization of their products for the EU market. As many Atlantic firms provide specialized (niche) products and services, it is essential that they find the right clients and market opportunities for their particular capabilities.

One common strategy used by a number of existing Atlantic exporters is the development of a local presence (e.g., sales team or local facility) or a local partner (such as an agent or distributor) in the EU. This is seen as critical for firms that produce customized products to ensure that they understand and meet their clients' requirements. Even for firms that manage their own marketing from Canada, some emphasize how much they invest in regular meetings with their EU clients to ensure they are responsive to customer needs.

Atlantic firms use local partners to help identify new market opportunities, secure new business, and to navigate EU and national regulatory and other business requirements. Trade shows may be used to find new customers and local partners.

Conclusions

The EU is already an important market for some products and firms and this is likely to remain so under CETA. Some Atlantic firms see potential for further growth in the EU but CETA is not expected to provide much additional benefit. Revenue gains are expected in the seafood industry, but how much depends upon how producers and exporters respond to the elimination of tariffs.

Similarly, for a number of Atlantic producers and industries, the EU is not a current market (or with minimal exports at best) and in many cases, this is not likely to change under CETA. For example, the transportation costs for fresh farmed salmon make it unlikely that Atlantic producers could be competitive against existing EU producers and suppliers. Non-tariff barriers and other challenges continue to limit prospects in the lumber and defence industry. Other firms see sufficient growth potential in their existing markets (such as the US or Asia) that the costs of market entry into the EU cannot be justified at present. However, CETA is expected to encourage some specialized producers to explore new market opportunities in the EU.

Aside from the removal of tariffs in the seafood sector, this report has not identified any major impacts of CETA that will benefit or otherwise affect Atlantic exporters of manufactured products. However, for select industries or products where there is expected to be potential for increased exports, a detailed examination of the CETA implications for that specific industry would be beneficial. Similarly, businesses would benefit from greater understanding of how provisions relating to labour mobility, regulatory harmonization, and investment could be of benefit.

At a more general level it is clear that many successful Atlantic exporters are niche players, providing specialized or customized products. This makes it difficult to provide broad assessments of market potential in the EU: detailed analysis is required, tailored to an individual firm's capabilities and market opportunities. Similarly, while some companies may respond to the presentation of new market opportunities in the EU, for others, any trade or market development support needs to respond to the opportunities or priorities identified by the businesses themselves, which may be in markets other than the EU. At a broader level, encouraging the development of innovative Atlantic firms with differentiated products remains key to future export success, whether in the EU or other global markets.

Chapter 1

Introduction

This report examines the potential for increased exports from Atlantic Canada to the European Union (EU), focusing on opportunities for Atlantic manufacturers, in light of the expected implementation of the Canada-EU Comprehensive Economic and Trade Agreement (CETA). The EU is the largest economy in the world and has traditionally been Atlantic Canada's second largest export market although the region has struggled to recover from the 2008/2009 global recession. CETA will eliminate tariffs on a number of key products, reduce non-tariff barriers, and help flows of labour and investment.¹

This report is intended to help business leaders, industry associations and trade and business development officials better understand the opportunities for Atlantic manufacturers in the EU and support the identification and creation of detailed market entry and business development strategies for specific firms, industries and market segments. It is not intended to provide a complete and detailed analysis of the implications of CETA for any particular product or industry.

The analysis in this report focuses on nine key industries, which include a mix of resource, non-resource and energy industries. The industries and products selected for detailed analysis were chosen based upon three main criteria: the size of existing exports from Atlantic Canada (to focus on the region's current export capacity); recent export trends (to focus on industries that are growing); and existing sales to the EU (to ensure inclusion of industries that have already established a presence in the EU market).²

For each industry selected for detailed analysis, the report provides the context to understand the size and regional distribution of the industry; the key products produced by Atlantic manufacturers and where these enter global value chains; and the current importance of the EU market for Atlantic exporters. The size and potential growth of the EU market is then assessed followed by a discussion of market challenges and other factors that need to be considered when selling in the EU market. Each chapter concludes with a brief assessment of the potential for increased exports to the EU, noting any specific implications of CETA for Atlantic producers. The analysis draws upon published data and reports, supplemented with interviews with select Atlantic firms.

¹ For a profile of the EU see Chaundy, David and Landin, Claire (2015). *A Brief Profile of the EU: Key Considerations for Atlantic Exporters*. Halifax: APEC.

² For a detailed analysis of these factors see Chaundy, David (2015). *The Changing Global Market for Atlantic Manufacturing*. Halifax: APEC.

Overview

Seafood exports are Atlantic Canada's largest export after refined petroleum with exports exceeding \$3 billion in 2013 (including seafood, aquaculture and processed products) and a sizeable share of exports to the EU for some species (especially shrimp and scallops). Chapter 2 examines the key drivers of seafood consumption in the EU market and the potential impacts of tariff reductions on exports from Atlantic Canada.

Chapter 3 focuses on frozen blueberries which have seen Atlantic exports triple in value over the last two decades to almost \$120 million. The EU market currently accounts for nearly 40% of these exports.

Wood products, primarily lumber, are included as another large resource-based industry. While lumber exports have been recovering, existing sales to the EU are very limited. The analysis in Chapter 4 examines the reasons for this and whether this is likely to change under CETA.

Chapters 5 and 6 focus on two mid-size industries that are not dependent on local natural resources but that have seen steady growth in global exports. Chapter 5 examines the aerospace industry which relies on the EU for more than 20% of its current exports. Chapter 6 focuses on pharmaceuticals and diagnostics, an important part of the broader chemical industry in the region, with close to half the region's current exports of these products destined to the EU.

Chapters 7 and 8 focus on two manufactured energy products. Refined petroleum is by far Atlantic Canada's largest export but is primarily sold to the US. Exports to the EU have increased since 2008 but fluctuate substantially on a year-to-year basis. Liquefied natural gas (LNG) is not currently produced in Atlantic Canada but there are several proposed projects that could lead to the export of LNG, with Europe one of the key target markets. Chapter 8 examines the drivers and determinants of these potential projects.

Chapters 9 and 10 focus on two key Atlantic exports, crude oil and iron ore, that are key inputs into manufacturing value chains. Chapter 9 examines whether changing North American energy markets will lead to increased exports of crude oil to the refining industry in the EU, either from the Atlantic offshore or from western Canada, via the proposed Energy East Pipeline. Chapter 10 explains that Atlantic Canada's iron ore exports provide a key input for global steel manufacturing. While the production of steel in the EU has been stagnant for over a decade, relative to strong growth in China, the EU has typically accounted for about half of Atlantic Canada's exports of iron ore. There is potential to increase the supply of iron ore from Labrador, but a number of proposed

mine developments and expansions are currently on hold due to a steep drop in global iron ore prices.

Chapter 11 summarizes the key findings from the preceding analysis and highlights some key strategies used by Atlantic firms to succeed in the EU market.

Chapter 2

Seafood

Chapter Summary

- **The seafood industry is the largest component of the food industry in Atlantic Canada with exports reaching \$3.4 billion in 2014. The seafood industry is important in all four Atlantic provinces, although species vary in importance by province. The EU currently represents a large share of the global sales of frozen and processed shrimp and frozen scallops from Atlantic Canada. Fresh and frozen lobster are the other key export to the EU.**
- **The EU is the largest seafood market by value in the world with an increased dependence on imports due to declining EU fish stocks. Per capita seafood consumption is projected to increase over time with large supermarkets being a key driver of product requirements.**
- **While the elimination of EU tariffs provides potential revenue gains of \$30-40 million for Atlantic exporters, competition for market share may limit any price gains. Increases in after-tariff prices in the EU will induce increased export volumes to the EU, but this will be at the expense of existing markets due to supply constraints.**

This chapter examines the EU market potential for seafood.

2.1 Context

Seafood processing contributes 9% of manufacturing GDP and is Atlantic Canada's most important non-energy export. Exports of fish and seafood amounted to \$3.4 billion, or 26% of non-energy exports. Employment in seafood processing has fallen almost 30% over that last decade but was still 14,000 in 2013.

Lobster, snow crab and shrimp are by far the largest catches for the region in terms of value although their importance varies across the region. In Prince Edward Island, lobster accounted for 75% of landed value in 2013. Shrimp (37%) and crab (34%) accounted for the majority of landings in Newfoundland and Labrador. In Nova Scotia lobster (49%) and scallops (19%) were the most important species. In New Brunswick, lobster was the highest value catch (54%), followed by crab (24%). Quebec also catches lobster, shrimp and crab, but in smaller quantities.

Table 2.1 The Importance of Species Varies Across Provinces**Commercial fishery landings and aquaculture production by province, 2013 (\$ millions)**

	NL	PE	NS	NB	ATL	QC
Commercial fisheries						
Lobster	17.5	85.8	414	124	641	39.3
Snow crab ¹	219	9.7	75.7	55.2	360	74.0
Shrimp	237	-	66.4	7.2	311	31.4
Scallop	3.3	1.0	158	7.6	169	1.6
Clams	35.7	1.4	2.2	1.5	40.7	1.2
Other shellfish	9.3	7.9	3.4	6.8	27.5	5.9
Greenland turbot	50.3	-	0.1	-	50.3	6.0
Halibut	5.6	0.4	28.4	0.7	35.1	3.2
Other ground fish	29.5	0.1	39.1	-	68.8	1.8
Herring	8.1	3.6	17.2	14.2	43.2	2.9
Other pelagic fish	9.3	4.3	40.3	9.5	63.3	1.6
Total fisheries	625	114	845	227	1,811	169
Aquaculture						
Finfish	182	3.2	43.4	117.3	346	10.9
Shellfish	15.1	38.0	10.9	5.7	69.7	0.9
Total aquaculture	197	41.2	54.3	123	415	11.8

Notes: 1. Snow crab is also referred to as queen crab.

Source: Fisheries and Oceans Canada, Statistics Canada

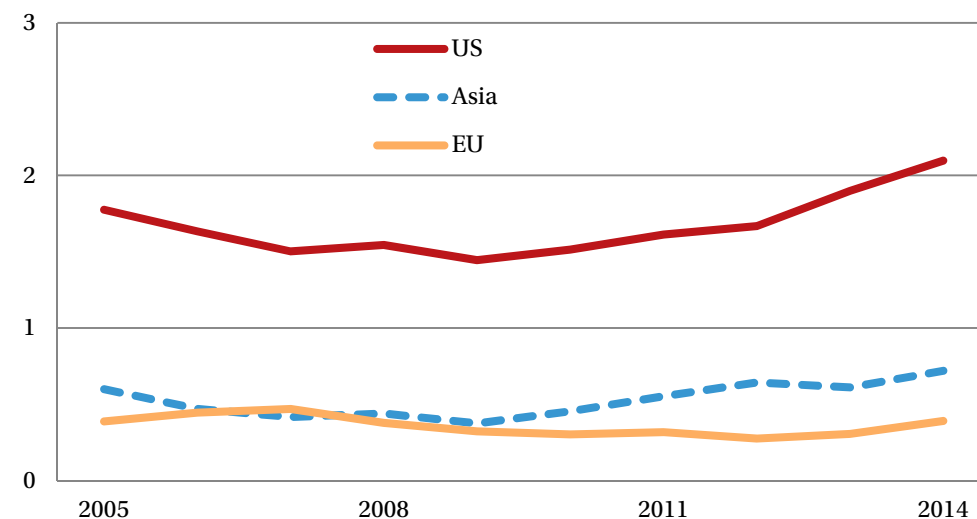
Following several years of declining value due largely to the rising strength of the Canadian dollar, the value of Atlantic Canada's seafood exports have increased steadily since 2009, rising from \$2.3 billion in 2005 to \$3.4 billion in 2014. This growth is attributable mainly to rising prices as economies recover from the financial crisis and recession of 2008/2009, but also in part to increasing production of key species, and most recently, to the weakness of the Canadian dollar.

Due mainly to on-going economic weakness, the EU market did not form part of this recent period of growth. Exports to the EU declined in absolute and relative terms, dropping from \$470 million in 2007, to a low of \$275 million in 2012, before recovering to \$391 million in 2014.

The relative importance of the EU market in terms of export share declined from 18.5% in 2007 to 11.5% in 2014. By contrast, the relative importance of Asia has increased steadily, rising to a 21% share of Atlantic exports (accounted for mainly by the doubling in value of lobster, crab and shrimp). The relative importance of the US has remained fairly stable at about 60%.

Figure 2.1 The US Remains the Dominant Market for Atlantic Seafood Exports

Seafood exports by destination, Atlantic Canada (\$ billions)



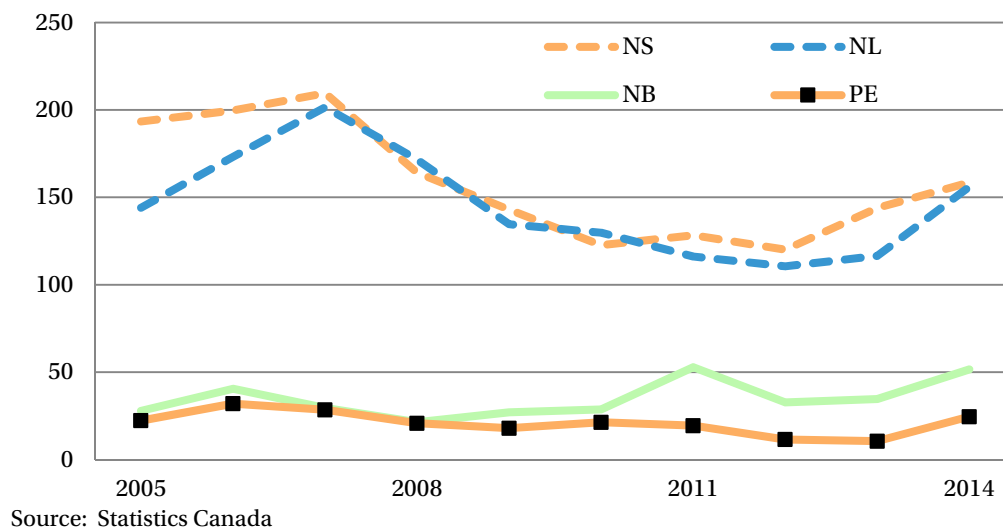
Source: Statistics Canada

Atlantic Canada's export strength is concentrated in just five species: lobster, snow crab, shrimp, scallop and farmed Atlantic salmon. Combined, they account for 84% of total seafood exports from the Atlantic provinces and hence they are the focus of this analysis. For the EU, however, just three of these species – shrimp, lobster and scallop in their various product forms – account for 95% the region's seafood exports. For reasons explained later, negligible quantities of snow crab and salmon produced in the Atlantic provinces find their way to EU markets.

Participation in the EU market varies widely by province. Nova Scotia and Newfoundland and Labrador lead the region, each with export values in the \$150 million range in 2014. Despite a substantial difference in species mix, the two provinces have generated much the same export revenues annually for most of the decade. Nova Scotia's strength lies in lobster and scallop, while coldwater shrimp dominates for Newfoundland and Labrador. New Brunswick and Prince Edward Island export mainly lobster, with total seafood exports in 2014 of \$50 and \$25 million, respectively.

Figure 2.2 Nova Scotia and Newfoundland and Labrador Account for Most of Atlantic Canada's Exports to the EU

Seafood exports to the EU, by province (\$ millions)



Atlantic seafood exports to the EU compete with local production, as well as global imports (including the US) in broader species groups valued at over \$11.5 billion in 2013 (Table 2.2). However, the range of important species (by value) within the three main seafood groups – crustaceans, molluscs and salmonids – tends to be limited. Similarly, sources of supply tend to be concentrated among a few exporting nations in each case.

- Crustaceans:** EU imports were in the range of €3.5-4 billion in 2013 (CAN\$5-7 billion), comprised mainly of shrimp, and also including lobster and various species of crab. Warm water shrimp dominates the category, originating mainly from Ecuador, India, Vietnam, Bangladesh and Argentina. Coldwater shrimp originates mainly from Denmark (Greenland) and Canada. It does not compete directly with the warm water varieties, due mainly to its small size: coldwater shrimp is used mainly in salads and sandwiches, while several warm water species are large enough to feature as ‘centre of plate’ offerings. American lobster originates exclusively from Canada and the US, while rock lobster is imported mainly from the Caribbean and South Africa. The US exceeds Atlantic Canada’s live lobster exports to the EU, though the country focus in each case tends to be somewhat different.
- Molluscs:** With significant domestic production in the EU, imports place well down the ladder of relative importance at about €1.5 billion in 2013 (CAN\$2 billion). Scallops, mussels and oysters are the leading shellfish; this category also

includes squid and octopus. Peru, Argentina, Canada and the US are the leading scallop suppliers. Canada exports minimal quantities of oyster and mussel to the EU.

- **Salmonids:** comprised almost exclusively of farmed Atlantic salmon, EU imports ranged between €3-3.5 billion in 2013 (CAN\$4.5-5 billion). Norway is the dominant supplier (85%), followed by Faroe Islands. Production within the EU originates in the UK and Ireland.

Table 2.2 Atlantic Canada is an Important Supplier of Lobster and Shrimp

EU imports, 2013 (\$ thousands)

Code	Species & product	Atlantic	US	World	Atlantic share (%)
Crustaceans					
HS 030616	Cold-water shrimp (frozen)	99,458	23,901	218,151	46
HS 160529	Shrimp: in airtight containers	38,055	297	539,498	7.1
HS 160521	Shrimp: not in airtight containers	17,423	210	706,391	2.5
HS 030617	Shrimp (other)	-	6,045	3,264,803	-
HS 030612	Lobster (frozen)	41,554	10,988	52,542	79
HS 030622	Lobster (live)	41,675	148,244	189,919	22
HS 030611	Rock lobster (frozen)	-	-	150,104	-
HS 030621	Rock lobster (live)	-	-	25,899	-
HS 160530	Lobster (prepared)	3,277	-	11,093	30
HS 030614	Crab (frozen)	1,624	3,138	232,198	0.7
HS 160510	Crab (prepared)	0	121	133,318	0.0
Molluscs					
HS 030729	Scallop (frozen)	39,280	76,543	300,512	13
HS 030721	Scallop (fresh)	130	19,476	42,750	0.3
Salmonids					
HS 030214	Atlantic salmon (whole fresh)	0	204	5,006,134	0.0
HS 030441	Atlantic salmon (fillet)	25	291	702,216	0.0
Total		282,500	289,458	11,575,528	2.4

Note: World total excludes intra EU trade among member states.

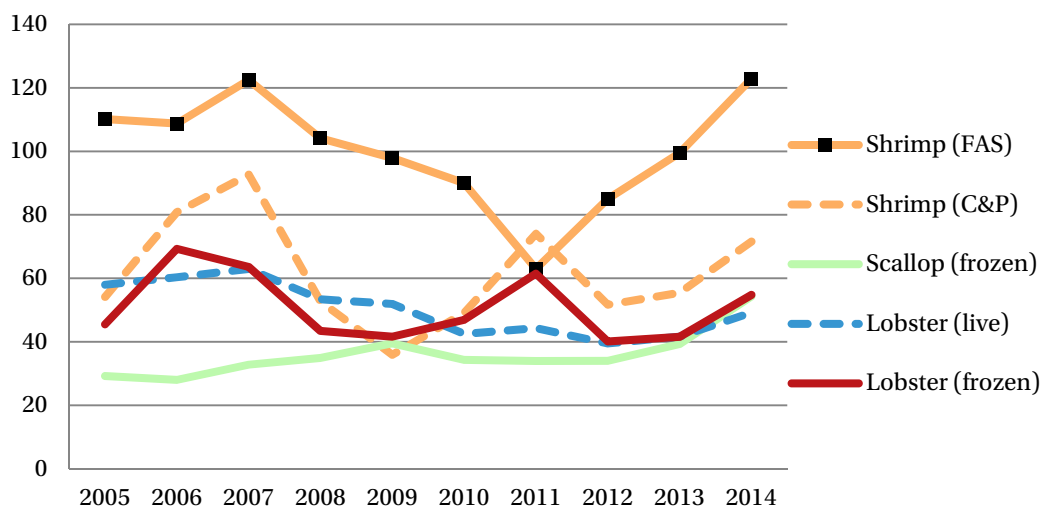
Source: International Trade Centre (Trade Map), Trade Data Online

Atlantic Canada's share of EU imports (as shown in Table 2.2) varies widely by product depending largely on how broadly or narrowly the product is defined. The six-digit HS code for some products is species-specific (e.g. HS 030612 American lobster), while for others it is more general (e.g., HS 030617 shrimp, other). The Atlantic provinces market share is relatively high (exceeding 10%) for lobster, coldwater shrimp and scallop, either because these species are unique to our waters (American lobster) or to northern

latitudes (coldwater shrimp, scallop). Nonetheless, these species compete in the broader categories with large volumes of comparable products that can serve as substitutes. For example, lobster would include various species of rock lobster (also known as spiny lobster), while scallop includes sea scallop as well as king, queen, bay and calico. The value of Atlantic Canada's exports to the EU has been highly variable for several species and relatively stable for others against the general background of broad shifts in economic activity (Figure 2.3). The wide fluctuations in shrimp and lobster reflect a certain amount of opportunism in response to exchange rate movements and relative price shifts in competing markets. The sharp decline in frozen at sea shrimp exports to Denmark and the UK was largely offset by corresponding increases to Russia and China. By contrast, the scallop trend exhibits relative stability given its product characteristics and strong market position in the EU.

Figure 2.3 EU Market Highly Volatile for Some Seafood Exports

Seafood exports to the EU, Atlantic Canada (\$ millions)



Note: FAS=frozen at sea; C&P=cooked and peeled

Source: Statistics Canada

Though the EU is comprised of 28 members, fewer than 10 represent significant markets for seafood exports from the Atlantic provinces (Table 2.3). The relatively wealthy countries in the northwest dominate demand, though the countries of clearance for these imports (as shown in Table 2.3) are not necessarily the final destinations for the export value indicated. This is particularly the case for the Netherlands and Belgium in the case of lobster, and Denmark in the case of shrimp. They serve as points of entry from which some imports are distributed to other markets, either directly or following further processing. Scallop markets are reasonably well reflected in the trade data, with France the major market.

Table 2.3 Atlantic Seafood Exports Focused on a Few Key EU Markets
Seafood exports to the EU by country and product, Atlantic Canada, 2014 (\$ thousands)

HS Code	Shrimp		Lobster		Scallop		Crab		Salmon		Total
	Prepared	Frozen	Live	Frozen	Prepared	Frozen	Fresh	Frozen	Whole	Fillet	
UK	43,964	36,786	10,823	3,072	276	6,560		163			101,643
Denmark	10,566	62,817	794	1,567	25	122					75,890
France	665		6,361	15,642	343	37,922		304		25	61,262
Netherlands	7,497	5,930	10,511	758		4,620		1,284			30,598
Belgium			16,785	10,114	1,317	1,169					29,385
Germany	3,315	1,510	2,531	7,137	609	2,715	130				17,947
Sweden	5,575	8,131	606	2,647	400	418					17,777
Spain		450	88	7,813		807		133			9,291
Italy			364	5,642	306						6,313
Ireland		154		253							407
Others		7,077	363	144							7,584
EU total	71,582	122,854	49,225	54,789	3,277	54,331	130	1,883		25	358,096
Global total	99,551	363,110	603,262	668,183	250,965	112,759	90,934	759,539	364,372	52,725	3,365,400
EU share (%)	72	34	8.2	8.2	1.3	48	0.1	0.2	0.0	0.0	11

Source: Trade Data Online

The EU accounts for a substantial share of global exports from Atlantic Canada in three product categories: prepared shrimp (cooked & peeled), frozen shrimp (shell on) and frozen scallop, at 72%, 34% and 48% respectively. For the largest global product categories – live and frozen lobster – the EU accounts for about 8% of Atlantic Canada's export value. The EU attracts virtually none of the Atlantic region's \$1.1 billion trade in snow crab and farmed Atlantic salmon (most of which are exported to the US). Among the other provinces, Quebec competes with the Atlantic provinces in the EU market (mainly frozen lobster and coldwater shrimp), though quantities and value tend to be relatively small (\$5-15 million annually in the past five years).

The US as a competitor

The species exported to the EU by the US are the same or very similar to those exported from the Atlantic provinces. As a result, the US would be seen as a close competitor, although their country focus is somewhat different. Under CETA, the Atlantic provinces will have an advantage in the EU for as long as the US faces tariffs into this market. The EU is a relatively more important market destination for the US for both lobster and scallop. In value terms, the US exported three times the value of live lobster to the EU in 2014 compared with the Atlantic provinces, concentrating on three markets: Italy, Spain and France (and to a lesser extent the UK). The US also exports a larger amount of scallop (frozen and fresh) than Atlantic Canada.

Table 2.4 US Seafood Exports are Close Competitors

Seafood exports to the EU by country and product, US, 2014 (\$ thousands)

	Lobster		Shrimp		Scallop		Total
	Live	Frozen	Frozen	Prepared	Frozen	Fresh	
HS Code	030622	030612	030616	160521/29	030729	030721	
Italy	59,488	831		10	39	23	60,391
France	28,475	4,242	52	40	11,012	11,169	54,990
Netherlands	3,802	1,011	1,396	267	37,510		43,986
Spain	39,322	2,410	127	17	379	606	42,861
UK	16,628	3,104	892	1,131	13,035	295	35,085
Denmark	865	241	14,767	7,684	3,362	294	27,213
Belgium	2,975	1,691	323		16,775		21,764
Sweden	3,856	203	10,948	469	796	217	16,489
Germany	1,531	705	766	377	2,627	1,128	7,134
Greece	586	301					887
EU total	157,528	14,739	29,271	9,995	85,535	13,732	310,800
Global total	641,583	83,352	57,563	41,367	155,584	36,885	1,016,334
EU share (%)	25	18	51	24	55	37	31

Source: International Trade Centre (Trade Map)

It is important to note significant bilateral trade between the US and Atlantic Canada in lobster. First, Canada has been the destination for 40-50% of US global live lobster exports in the past several years (US\$312 million in 2014), where the lobster is processed and exported to the US and other markets including the EU.

Second, the US is the destination for 65-70% of Canada's live lobster exports (CAN\$400 million in 2014), though shippers indicate that this may overstate the importance of the US market since some of this volume is re-exported and may find its way into the US export trade figures as export of the US. The route through the US (Boston and New York) provides shippers with advantages, particularly during peak holiday periods (more flights and greater capacity at lower cost) when cargo space from Halifax and Moncton is constrained.

2.2 EU Market Size and Potential

The EU is the world's largest seafood market by value, with expenditures in the range of CAN\$75 billion annually and consumption of over 12 million tonnes of fresh, frozen and prepared products. Japan, with a population one quarter the size, ranks a close second because of its substantially higher per capita consumption. The total value of the US market (Canada's leading seafood export destination) is relatively low by comparison with the EU and Japan, due largely to the lower unit value of seafood consumed. China, with per capita consumption in the 30kg range, ranks as the world's largest seafood market by volume, consuming over 35% of global supply (much of it derived from domestic aquaculture). With a growing middle class and rising incomes, Canadian seafood exports to China have doubled in the past five years, exceeding \$500 million in 2014 (mainly crustaceans – lobster, snow crab and shrimp).

Table 2.5 The EU is the Largest Seafood Market in the World by Value

Seafood market characteristics by area, 2011

	EU-27	Japan	US
Population (millions)	500	126	320
Seafood expenditure (CAN\$ billions)	75	68	15
Total consumption (million tonnes) ¹	11.5	7.6	7.7
Expenditure per capita (CAN\$)	150	540	47
Per capita consumption (kg)	23.0	60.0	24.0

Note: 1. Live weight equivalent

Source: EUMOFA, Eurostat, Indexmundi, NOAA, US Census

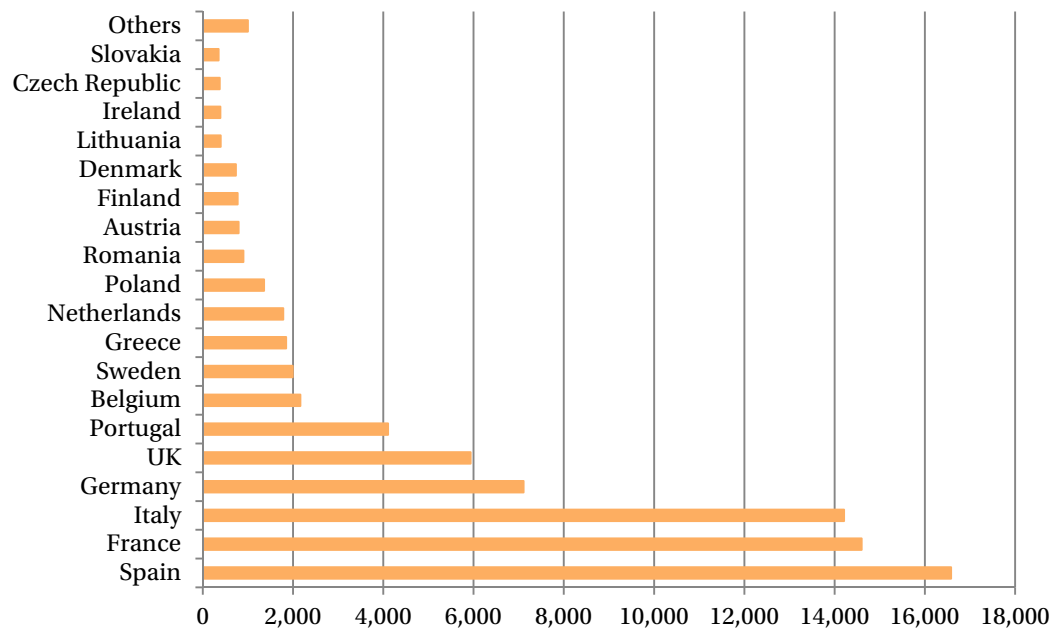
The EU is regarded as an evolving market, open to new species of fish (e.g., farmed species such as tilapia and pangasius) and new product forms (i.e., frozen, prepared). This is explained in large part by the long-term decline in EU fish stocks and the need to

find alternative species and sources of supply. The shift to value added products is attributable in part to the increasing dependence on imports, and also to changing tastes and the demand for consumption-ready foods. Added to these factors is the increasing volume of trade accounted for by large distributors and retail chains and the growing dominance of house brands.

Consumption varies widely among the EU member states, both with respect to value, quantity, species mix and product form. The top five countries – Spain, France, Italy, Germany and the UK – account for 75% of total EU seafood expenditures (Figure 2.4). These countries, as well as the Netherlands, are among the main markets for Canadian shrimp, lobster and scallops.

Figure 2.4 Spain, France and Italy are Major Seafood Consumers

Seafood expenditure by EU member state, 2012 (\$ millions)



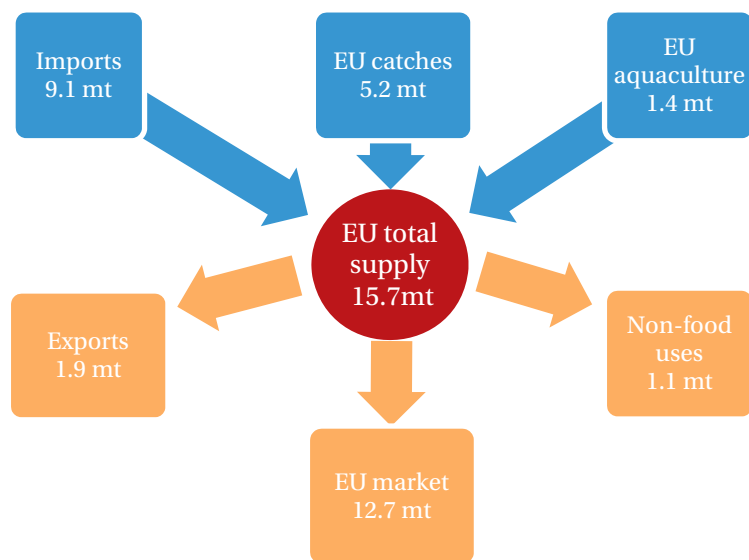
Source: European Commission

The EU relies heavily on seafood imports to meet demand, with an average self-sufficiency rate of about 45% across all species groups. This represents a decline from the 60% range since the late 1990s, and is attributable to a combination of increasing demand and overfished domestic fish stocks. Demand by volume in the EU is dominated by groundfish/whitefish species (cod, haddock, pollock), salmon, crustaceans (shrimp, lobster, crab) and molluscs (oyster, mussel, scallop); domestic supply is dominated by pelagic species (herring, mackerel, whiting). The imbalance between supply and demand is met through imports that accounted for an estimated 58% of total EU supply in 2014.

The EU seafood imports are valued at the equivalent of CAN\$40-45 billion annually. The supply balance by species group varies widely, ranging in import dependence from a high of about 80% in the case of groundfish, to being a net exporter of pelagic species. The balance for selected species groups – ones of the greatest current interest and future potential for Canadian exporters – is shown in Table 2.6.

Figure 2.5 EU Seafood Supply and Demand

EU market seafood supply, 2014 (metric tonnes, live weight equivalent)



Source: AIPCE-CEP 2015

EU import dependence for groundfish, crustaceans and Atlantic salmon exceeds 70%, dropping to the 35% range for molluscs. Of interest is the importance of aquaculture production in all species groups with the exception of groundfish. This does not reflect a preference for cultured product – if anything, the preference is for wild-caught – but rather, that demand has outstripped the supply capabilities of capture fisheries for these and many other species.

Table 2.6 Europe is Highly Dependent on Imports of Groundfish
EU import dependence by species group, 2011 (thousand tonnes)

	Production		Imports		Export		Consumption		Total	Import dependence (%)	
	Capture	Culture	Capture	Culture	Capture	Culture	Capture	Culture		Capture	Culture
Crustaceans	214	0.2	407	292	100	1.8	521	291	812	66	100
Groundfish	516	0	2,469	21	137	0	2,848	21	2,869	83	100
Salmonids	8.4	358	72.7	765	38.1	66.8	43	1,055	1,098	90	68
Molluscs	244	627	307	148	6	7	545	768	1,313	56	19

Source: European Commission

Market Drivers

A gradual increase in per capita consumption is predicted for the EU (FAO 2007). Overall, consumption is expected to rise from the current level of 23 kg per person to 25 kg by 2030. Growth is expected to be strongest in the more affluent northwestern states (UK, France, Netherlands, Germany) and the new EU members in the east where per capita consumption is relatively low, with a reduction in Spain and Portugal (which are currently about double the EU average) and little or no change in Ireland and Sweden.

Facilitating the upward demand trend, particularly over the past decade, have been the harmonization of standards and spread of modern distribution systems to new EU members in central and eastern Europe. These factors, coupled with the introduction of new species (imported) and product forms, have contributed greatly to market development. Among some of the key market characteristics and trends (European Commission 2009):

- **Positive country trends:** demand has continued to increase in some well-established markets such as France, with fish also becoming a more important protein source in eastern European markets that traditionally have consumed fish in modest quantities.
- **Greater variety of product forms:** fresh fish continues to dominate, though the demand for frozen products and prepared meals is increasing. The latter reflects not only the needs of consumers, but also improvements in processing, packaging and distribution systems. Demand for salted/dried product is regional and stable in some traditional markets (Spain, Portugal), but declining in others (Italy).
- **Market flexibility and openness to new species:** the EU market has had to adjust to a decline in domestic stocks of traditional species (cod, haddock, redfish, and various flatfishes) by importing these, and also by substituting with imports of

Alaskan pollock, as well as cultured species such as salmon and sea bream. The EU market has become greatly dependent on cultured whitefish supplies from China and Vietnam including tilapia and pangasius (Vietnamese catfish).

- **Rise of supermarkets:** This has become one of the major drivers of demand in the EU generally, and of species and product mix more specifically. Fresh formats (including modified atmosphere packaging) have been the main beneficiary of the rise in the supermarket chain as the main link in retail the value chain. Supermarkets account for upwards of 70% of fresh fish and seafood sales in most EU states. Mass distribution means lower costs and greater variety for consumers, but also places considerably greater demands on producers (fish harvesters/processors) to supply steady volume and meet product specifications. The latter accounts for much of the rapid growth of and preference for cultured production (salmon, pangasius, tilapia, prawns).
- **Growing importance of the restaurant sector:** rising affluence and lifestyle changes are driving an increase in out of home consumption of fish that favours the restaurant sector. This trend varies widely in its significance, and is more common in the EU states with higher incomes.

These trends may be explained by several factors:

- **Rising income levels:** several states have experienced solid economic growth since joining the EU. Higher incomes result in greater purchasing power and spending on goods like fish that would not have been affordable in past decades.
- **Greater consumer awareness:** this covers several issues including health and food safety, environmental considerations, and convenience and ease of preparation that eliminate barriers to consumption for consumers not familiar with fish and seafood products.
- **Distributor purchasing power:** the evolution of central distribution companies and supermarket chains greatly facilitate consumer access to top quality fish and seafood products, but this also drives producers to conform to product volume and supply schedules, specifications and the need for price stability. In fresh markets, this tends to favour year-round fisheries and aquaculture because they are capable of meeting these distributing and marketing needs.

- **Branding:** most major supermarkets have developed private labels, with the range of products marketed under these labels increasing. The private label provides supermarket with control over product specifications and provides the consumer with a greater sense of confidence in product quality.

Market Channels

Imported seafood enters the EU market through one of three channels:

- **Retail or food service sector:** dealing directly with customers in the retail and food service sectors is the preferred method of entering the market because processors would obtain higher prices. There are several large grocery chains, some with outlets in several countries (Ahold, Aldi, Carrefour, Lidi, Metro, Sainsbury, SPAR), but only a very few Canadian seafood exporters have the capacity and capability to meet customer requirements: year-round supply, high volume and consistently high quality. For certain products, some Canadian exporters work in three-way arrangements, supplying local EU processors who in turn meet end-use customers' specifications.
- **Processor:** the EU imposes tariffs mainly to protect producers (harvesters and processors) from external competition. Processors are the main beneficiaries, with higher tariffs on products that are closer to final form than on primary products (e.g., 20% on cooked and peeled shrimp vs. 12% on in-shell frozen). The difference in tariff level penalizes exporting companies for shipping seafood in processed form, leaving them with two alternatives: finding other markets or exporting product in an un-processed or semi-processed form. Harvesters, on the other hand, have required less and less protection over the years simply because they have less to protect: as the range and availability of locally caught species has declined, the market has grown increasingly dependent on imports.
- **Trader/distributor/broker:** most Canadian seafood companies access the EU market through one of these types of intermediaries. Traders and distributors in any market serve the important function of mediating demand and supply by accumulating in volume a wide range of species/products from many sources, and offering customers essentially one-stop service to meet requirements that vary widely by species, product form and quantity. Of course, this service comes at a price, not only for customers but also for suppliers. With consolidations, the major distributors in the EU are a substantial size with considerable influence over prices.

Access Requirements

That fish represents an excellent source of animal protein is widely recognized in Europe. Closely associated with this demand driver are concerns with food safety and resource sustainability. As a consequence, seafood suppliers to the EU must pay careful attention to labeling requirements and the need for certifications that are becoming conditions of market access. For certain market channels (i.e., retail), they are essential or becoming essential, to secure supply contracts:

- Country of origin labeling:** to fully qualify for tariff relief, CETA rules of origin for seafood products require that products be ‘wholly obtained’. This means they must be caught by Canadians fishing in Canadian waters, or caught by a Canadian registered vessel that is entitled to fly the Canadian flag when fishing in the Canadian Economic Exclusion Zone (EEZ), the high seas or in the EEZs of other countries. Alternate CETA rules of origin involving origin quotas are applicable to products such as cooked and frozen lobster, given the substantial volume of raw material that originates in the US. The rules have not been finalized, but the approach would establish a system of quotas allowing specified quantities of high import content products to enter the EU tariff-free (e.g., 2,000 tonnes of cooked and frozen lobster using US raw material).
- Food safety standards:** Fish processors exporting from Canada must meet Canadian Food Inspection Agency requirements. This is the minimum standard for entry into the EU. But companies wishing to sell to major European supermarkets and to the food service sector would ordinarily also have to have their plants certified by third-party audit (e.g., British Retail Consortium or BRC standard). The requirements may be even more stringent if the supplier wishes to pack under a retailer’s house brand, where strict product specifications and packaging requirements must be met. Qualifying as a house brand supplier would require third-party audit. These audits would typically cost between \$5-10,000, and would have to be updated regularly.
- Eco-labeling:** increasingly, supermarkets are requiring certification that fisheries from which they source products are sustainable based on third-party assessment (e.g., Marine Stewardship Council (MSC) certification). In some countries (e.g., Germany) this is effectively a requirement. Four of the species under consideration in this report have MSC certification for at least some Atlantic fisheries: all major fisheries for cold-water (northern) shrimp, snow crab and scallop are certified. The PEI lobster fishery and offshore lobster fishery are certified. The other lobster fisheries in the region are in the process of obtaining certification.

2.3 Market Prospects Under CETA

A tariff is an excise tax on an imported good (or service). It may be imposed as a means of gaining revenue or as a means of protecting local industries. EU tariffs on seafood are of the latter type; they seek to protect the employment and incomes of local producers (fish harvesters and processors) and the coastal communities dependent on them. The tariff regime is part of the EU Common Fisheries Policy.

Had all the current EU tariffs been applied in full to the products under consideration in this report, the cost of the EU tariff to Atlantic Canadian seafood exporters in 2014 would have been about \$44 million. With cooked and peeled shrimp (HS 16052099) entering tariff-free under a 30,000 tonne quota, the actual tariff was in the \$36 million range.

Table 2.7 EU Tariffs on Atlantic Seafood Will be Eliminated or Phased Out
Atlantic exports to the EU, tariff cost, 2014 (\$ thousands)

	Exports	Tariff (%)	Tariff cost	Status
03061310 - Shrimps and prawns, frozen, in shell	122,854	12	14,743	Eliminated
16052010 - Shrimps and prawns, not in airtight containers	28,900	20	5,780	Eliminated
16052099 - Shrimps and prawns, in airtight containers	42,681	20	8,536	Duty-free quota
03062210 - Lobsters, live (<i>Homarus</i> spp)	49,225	8	3,938	Eliminated
03061210 - Lobsters in brine, (<i>Homarus</i> spp), frozen, in shell	24,021	6	1,441	3-year phase out
03061290 - Lobsters, (<i>Homarus</i> spp), n.e.s, frozen, in shell	30,768	16	4,923	3-year phase out
16053099 - Lobster, prepared or preserved	3,277	20	655	5-year phase out
03072900 - Scallops, shelled or not, frozen	54,331	8	4,346	Eliminated
03072100 - Scallops, shelled or not, live, fresh or chilled	130	8	10	Eliminated
03061410 - Crabs, snow, frozen, in shell or not,	1,883	7.5	141	Eliminated
03042913 - Pacific and Atlantic salmon fillets, fresh	25	2	1	Eliminated
Total	358,096		44,373	
Total excl. 16052099	315,415		35,837	

Note: The detailed product codes used by the EU differ somewhat from the HS product codes used in earlier tables

Source: EC, Official Journal of the European Union, L 284, Trade Data Online

Tariffs work by reducing the exporter's price by the amount of the tariff. So, a 10% tariff on a shipment of 100 lobsters worth \$1,000 would cause the importer's price to drop from \$10/lobster to \$9/lobster, while the market price is unchanged. This drop in the net price (after the tariff) to the exporter causes the exporter to shift supply to other markets that pay more. As supply to the EU drops, the market price for lobster increases, inducing EU producers to increase supply if they can. But given the resource constraints, this is not

possible for most species. So, overall supply is less and the price higher than before the tariff was introduced. The net result is that EU producers are better off (higher price and greater market share), consumers are worse off (higher price and less overall supply in market), governments are better off (they gain tax revenue), and exporters are worse (they receive lower net prices).

The elimination or gradual phase-out of the EU tariff on seafood products under CETA will benefit Atlantic exporters in one of several ways. Several different impacts can be expected:

- **Price effect:** the extent to which the tariff reduction is likely to affect directly the price obtained by the exporter (rather than the importer or customer);
- **Export effect:** the extent to which the tariff reduction is likely to affect the quantity of product exported to the EU (either by existing suppliers or new ones drawn to the market by the improved terms of trade), and in turn, whether and how other markets are likely to be affected by the change in product flow;
- **Product effect:** the extent to which the tariff reduction induces processors to switch production and exports from low tariff products to ones that were previously high tariff, and what adjustments this switch is likely to trigger;
- **Revenue effect:** the extent to which the tariff reduction is likely to result in enhanced exporter revenues based on the price, export and product effects;
- **Supply effect:** the extent to which the cumulative impact of the market effects (price, export, product and revenue) is likely to induce changes in supply (e.g., are shore prices likely to rise and lead to higher landings and increased exports).

The expected impact of these effects is summarized in the impact matrix by species (Table 2.8). How these effects work their way through the system depends on several factors including specifics of the EU tariff regime, market and competitive conditions in the EU market, as well as resource prospects:

- **The effect of ATQs:** up to a specified quantity, several species/products are imported into the EU subject to tariff suspension or reduction (e.g., cooked & peeled shrimp). This referred to as an Autonomous Tariff Quota (ATQ). The tariff applies fully only to tonnages that exceed the annual ATQ. So, exporters would be affected only to the extent the quantity they export is actually subject to the tariff that is being removed. The point is, elimination of tariffs would mean little on products that Atlantic provinces companies manage to export within the ATQ.
- **The incidence of the tariff:** incidence is the term used to indicate who actually pays a tax. Depending on competitive conditions, it could be the exporter (processor), the importer or the consumer (or all to varying degrees). Where demand is strong and supply tight with few substitutes, then the tariff can be pushed forward to the importer or consumer. In soft market conditions or where alternative markets are limited, the processor (exporter) is more likely to absorb the tariff in a reduced selling price.
- **The terms of sale:** processors may sell on an FOB (free on board) or CIF (cost, insurance, freight) basis. Exporting on an FOB basis means the exporter transfers ownership (and risk) to the importer at the specified point (it could be the plant gate or at the point where the ship or aircraft is loaded). The importer is responsible for all costs beyond that point, e.g., shipping costs and clearing customs at destination, including payment of any tariffs or duties. Exporting on a CIF basis means the exporter includes the cost of freight and insurance in the price of the goods. The importer pays costs at the destination including unloading, any tariffs or duties and onward transportation. In both cases, the importer would actually pay the tariff when clearing customs, but the question is to what extent the cost of the tariff is reflected in the price of the goods. There is no obvious answer; the result is going to depend on the bargaining strength of the parties.
- **Competition amongst processors:** even in circumstances where the exporter gains in the first instance from the elimination or reduction in tariffs, competition for sales could drive exporters to bargain away the gain through aggressive pricing. This kind of intense competition occurs in fisheries characterized by many processors or shippers who buy aggressively from harvesters, have limited management or market expertise, and find themselves compelled to sell to meet cash flow requirements. Such enterprises will under-cut their fellow exporters to gain sales, resulting in a rush to the bottom in terms of export prices. They are easy prey for the large and well-informed importers in major markets.

- **Market structure:** with 3-4 exceptions (e.g., Clearwater, Ocean Choice International, East Coast Paturel) Canadian seafood companies exporting to the EU do not have local branch offices to handle shipments and sales, but sell to local distribution and trading companies who sell on to retail and food service customers. Those with EU sales offices typically sell directly to retail and food service customers (or processors), and may handle shipments from Canada themselves. These companies would see an immediate gain in margin on EU sales as tariffs drop. Other things equal, this gain would be expected to lead to increased exports to the EU, or possibly to a change to product formats with higher margins. The response would depend on conditions in other export markets at the time (specifically, on relative prices after factoring in exchange rates).

Table 2.8a: Summary Impact of Tariff Elimination under CETA - Shrimp

	Price effect	Export effect	Product effect	Revenue effect	Supply effect
Shrimp	Impact on exporter selling price	Impact on quantity exported to EU	Impact on product form and processing industry	Impact on exporter net unit revenues	Impact on raw material supply (landings)
Shrimp: frozen in shell Code: 03061310 ATL exports, 2014: \$363 m Of which EU: \$123 m (34%) Trend: increasing Tariff: 12% (eliminated) Tariff cost: \$14.7 m	• Likely to result in a price gain • Atlantic provinces exports more competitive with other importers	• Expect higher exports due to more competitive pricing • Increased supply to EU means lower exports elsewhere causing prices to rise	• Impact unlikely • Product form not affected by tariff because it is frozen at sea on freezer vessels.	• Positive revenue impact • Exporters gain most of the value of the tariff • May use higher net price to expand market share	• Could be positive impact on supply since low prices have resulted in harvests below quotas for offshore fleet
Shrimp: cooked & peeled Code: 03061320 ATL exports, 2014: \$100 m Of which EU: \$73 m (72%) Trend: increasing Tariff: 20% (phase out) Tariff cost: \$0 (ATQ)	• No price gain because 100% of product now enters EU tariff-free under ATQ • Potential gain in long term if development of retail products occurs	• Could lead to higher exports due to more competitive pricing • Increased supply to EU means lower exports in US causing prices to rise slightly	• Elimination of end-use restriction provides opportunity for shift to retail products • Shift of frozen in shell to C&P unlikely given need to thaw, process and refreeze	• Revenue impact depends on extent of market and product shifts, since C&P now enters EU tariff free	• No impact. • Catch is limited by inshore quota which is fully caught

Table 2.8b: Summary Impact of Tariff Elimination under CETA - Scallop

	Price effect	Export effect	Product effect	Revenue effect	Supply effect
Scallop	Impact on exporter selling price	Impact on quantity exported to EU	Impact on product form and processing industry	Impact on exporter net unit revenues	Impact on raw material supply (landings)
Scallop: frozen Code: 03072900 ATL exports, 2014: \$113 m Of which, EU: \$54 m (48%) Trend: increasing Tariff: 8% (eliminated) Tariff cost: \$4.3 m	- Exporters gain full cost of tariff - Limited number of exporters means market strength and ability to influence price	- Could lead to higher exports due to more competitive pricing - Impact would be enhanced with stronger euro	- No impact. - Product form not affected by tariff - Most product is frozen at sea on freezer vessels; little or no onshore processing	- Positive revenue impact from tariff relief - Some revenue gain also from higher US prices as exports shift from US	- No impact. - Catch is limited by quota which is fully caught
Scallop: fresh Code: 03072100 ATL exports, 2014: \$91 m Of which, EU: \$0.1 m (0.1%) Trend: stable Tariff: 8% (eliminated) Tariff cost: \$10,000	Exporters would gain full market price if removal of tariff makes EU attractive market	Unlikely for significant exports to EU given high US prices and high transportation costs of fresh product to EU	- No impact. - Trend is to produce frozen at sea to maintain quality and limit processing costs	Could be positive revenue impact if fresh production diverted from US market	- No impact. - Catch is limited by quota which is fully caught

Table 2.8c: Summary Impact of Tariff Elimination under CETA - Lobster

	Price effect	Export effect	Product effect	Revenue effect	Supply effect
Lobster	Impact on exporter selling price	Impact on quantity exported to EU	Impact on product form and processing industry	Impact on exporter net unit revenues	Impact on raw material supply (landings)
Lobster: live Code: 03062210 ATL exports, 2014: \$603 m Of which, EU: \$49 m (8%) Trend: increasing Tariff: 8% (eliminated) Tariff cost: \$3.9 m	• Modest gain possible • Most importers pay tariff and would try to absorb gains • Exporters highly competitive and could bargain away potential gains	• Highly seasonal demand (holidays). • Likely to result in modest gain in exports if shippers see higher prices • Logistical constraints a minor issue	• Demand for live product could increase slightly • Product shift unlikely because live category determined mainly by size & quality	• Indeterminate • Likely to be modest due to limited price effect • Re-directing supply from US would result in modest price & revenue gain	• No impact. Catch is virtually independent of market price
Lobster: frozen shell on Code: 030612 ATL exports, 2014: \$668 m Of which, EU : \$55 m Trend: increasing Tariff: 16% (phase out) Tariff cost: \$4.9 m	• Could result in at least 10% price gain to exporters based on EU market conditions • Risk is that processors would bargain away potential gains to gain market share	• Tariff relief would boost exports in response to higher (net of tariff) prices. • Increased supply to EU would come from US putting upward pressure on US prices	• Shift to frozen from live could result from price gain • Could also draw from brine frozen, given low margins on that product	• Would result in increased revenues given combined effects of price and product volume gains	• No impact. Catch is virtually independent of market price
Lobster: brine frozen Code: 03061210 ATL exports, 2014: <\$10 m Of which, EU: \$6-8 m (+80%) Trend: stable Tariff: 6% (phase out) Tariff cost: <\$0.5 m	• Even modest gain unlikely • Most importers pay tariff and absorb gains • Exporters likely to bargain away gains	• Highly seasonal demand (holidays). • Increased demand unlikely; product used as loss leader by major grocery chains	• Production could drop with shift to frozen in shell	• Would result in increased revenues if production shifts to whole cooks or meat products	• No impact. Catch is virtually independent of market price

Opportunities for Atlantic Manufacturers in the EU

Lobster: meat, frozen Code: 16053099 ATL exports, 2014: \$251 m Of which, EU: \$3 m (1%) Trend: increasing Tariff: 20% (phase out) Tariff cost: \$0.7 million	• Could result in at least 10% price gain • Risk is that processors would bargain away potential gains to gain market share	• Tariff relief would boost exports in response to higher net prices. • Increased supply to EU would come from US causing prices there to rise	• Shift to meat from brine could result from price gain • Unlikely that any EU demand increase would justify expansion in processing capacity	• Could result in increased revenues if production shifts from brine frozen • Re-directing supply from US would result in overall price & revenue gain	• No impact. Catch is virtually independent of market price
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Table 2.8d: Summary Impact of Tariff Elimination under CETA – Snow crab

	Price effect	Export effect	Product effect	Revenue effect	Supply effect
Snow crab	Impact on exporter selling price	Impact on quantity exported to EU	Impact on product form and processing industry	Impact on exporter net unit revenues	Impact on raw material supply (landings)
Crab: frozen Code: 03061400/90 ATL exports, 2014: \$760 m Of which, EU: \$2 m (0.2%) Trend: declining Tariff: 7.5% Tariff cost: \$140,000	• Could be gain but EU an insignificant market for snow crab	• Elimination of tariff not likely a significant factor affecting EU export position • Marketing effort needed to establish demand for snow crab	• Product form dictated by species & market • Dropping the tariff allows more attractive price, but marketing effort needed to open EU market	• Significant gain in revenues would occur only if elimination of tariff on snow crab resulted in marketing campaign that succeeded in positioning crab in EU	• No impact. • Catch is limited by quota which is fully caught

Table 2.8e: Summary Impact of Tariff Elimination under CETA – Atlantic salmon

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	Price effect	Export effect	Product effect	Revenue effect	Supply effect
Atlantic salmon	Impact on exporter selling price	Impact on quantity exported to EU	Impact on product form and processing industry	Impact on exporter net unit revenues	Impact on raw material supply (landings)
Salmon: whole/fillet Code: 030214/030441 ALT exports, 2014: \$417 m Of which, EU: \$25,000 (0%) Trend: none Tariff: 2.0% Tariff cost: \$1,000	• May be gain if tariff dropped, but EU an insignificant market for Canadian salmon growers	• Elimination of tariff not likely a significant factor affecting EU exports • Transportation cost rules out effective competition with Norwegian and EU suppliers	• Tariff too low to affect product form • Market demands whole fresh and fillet	• Insignificant gain even if Canadian producers had a presence in the market	• No impact. • Tariff too low to have an impact on output in Canada

The expected impact of tariff removal by species is as follows.

Shrimp

Shrimp is generally the leading seafood export to the EU from Atlantic Canada, generating an export value of \$194 million in 2014. Production takes place either in one of the region's 20 or so onshore processing plants, or at sea on board one of 12 factory freezer trawlers. The processing plants produce almost exclusively cooked and peeled (C&P) shrimp using raw material supplied by a fleet of some 400 inshore boats. This is a highly seasonal business, with 80-85% of C&P shrimp exported to the EU and the balance mainly to the US.

The factory trawlers produce two shell-on frozen products: raw and cooked, of which 35% typically goes to the EU (mainly to Denmark, the UK and Iceland mainly for C&P processing and re-export to other EU markets). The value of exports to the EU surged to 50% of the total in 2014 due to the combined effects of higher prices and more favourable exchange rates. China and Russia are the other major markets, typically taking 40-45%, though their share dropped to 35% in 2014.

Adverse exchange rate movements in key markets (the US and EU) between 2002 and 2007, as well as declining prices up until two years ago, also reduced the profitability of the Canadian shrimp industry. Generally declining prices are the result of rapid expansion of shrimp aquaculture, whose production has tripled over the past 20 years. Marketing coldwater shrimp faces the additional challenge posed by its relatively small size compared with warm water species (especially farmed).

Exchange Rate Influences

Exchange rates and exchange rate movements can greatly influence the value of exports in Canadian dollar terms. Consequently, Atlantic seafood producers take currency into consideration when deciding on export markets. For example, in 2002, a two-pound lobster sold to the US for US\$5.00/lb would return CAN\$16.00 to the Canadian shipper. In 2012, that same lobster selling for US\$5.00/lb would return CAN\$10.00, a decline of almost 40% due solely to the weakening of the US dollar as the Canadian dollar strengthened.

Similar exchange rate movements have occurred with respect to the euro (€) and the UK pound sterling (£). For example, the Canadian dollar began to experience weakness against several currencies in 2014. This is benefitting seafood exporters because stronger foreign currencies mean more Canadian dollars for each unit of foreign currency earned. The sharp upturn in the pound sterling greatly benefitting cooked and peeled shrimp exporters.

The EU tariff diminishes the profitability of the Canadian shrimp industry to the extent it reduces the prices received by exporters (by 12% for shell-on frozen and by 20% for C&P, if applied). The EU is one of the only markets of any size for C&P shrimp and a major market for shell-on products (the alternatives for shell-on frozen product are such lower value markets as China and Russia).

Shrimp exporters in the Atlantic provinces will benefit from elimination of the tariff and the non-tariff barriers currently imposed by the restrictions on end use under the ATQ that requires shrimp to undergo further processing in the EU prior to final sale. It creates an opportunity to gain a larger share of the final selling price and also to expand sales. It also opens up the possibility of shifting production from primary and intermediate production to branded end-use products. These opportunities are important given the competitiveness of the industry and the slim margins on which it tends to operate.

However, there are concerns about the future of the northern shrimp fishery. The resource has begun to decline in the northern waters off eastern Canada, and off Greenland and Iceland. This has caused a cut in quotas and catches in some areas (adversely affecting inshore fishery in Newfoundland and Labrador as well as the processing plants dependent on the catch), contributing to reduced supplies and higher prices and values observed in Atlantic Canada's exports to the EU (Figure 2.2).

Lobster

The major challenge facing the lobster industry in Atlantic Canada and the US northeast over the past several years has been finding a place in the market for an 80% increase in supply (up from 80,000 to 140,000 t). The run-up in supply coincided with the financial crisis, resulting in several years of weak prices. The industry is only just beginning to recover, thanks largely to an expansion of sales to Asia, but also to the strengthening of the currencies of our main trading partners, including the EU. While the total value of lobster exports from Canada increased by about 45% from 2012 to 2014, the value of exports to the EU increased by just 33%. Though the absolute value of lobster exports to the EU increased, the relative importance of the EU market to the Atlantic provinces declined from 9.3% to 8.5%.

Removing the 8% tariff on live lobster exports to the EU benefits Atlantic shippers in two ways: it creates an opportunity to gain a larger share of the final selling price and to expand sales. Both are important given the increases in supply in recent years and the competitiveness of the industry.

Whether an increased share of final selling price or expanded sales is likely to be realized depends on competition across the value chain and how any gains are used.

With supplies of live lobster increasing over the past few years, it has become a buyer's market. Unless there is a greater effort to market Canadian lobster in the EU and other markets, competition for sales amongst the many shippers of live lobster could see them bargain away the decrease in the tariff. This would benefit EU distributors, retailers and the food service sector, and possibly consumers, if competition forced prices down at this level.

The options for using any gain in the final selling price (both for shippers and importers) are to simply add to margin; reduce prices in an attempt to expand live sales; "invest" the gain in developing distribution networks and marketing campaigns for live product; or, invest the gain in processing capacity for such products as raw tails (frozen), frozen split lobster, whole frozen, etc. The risk is high that the gain would be used to intensify competition for sales within the live lobster segment. Harvesters would gain through competition for raw material, while consumers would gain through lower prices. Other things equal, this could leave shippers slightly better off since any expansion in sales to the EU would be drawn from other markets, resulting in stronger prices there.

The elimination of the 6-20% tariffs on various processed lobster products will be phased in over 3-5 years. As they are removed, processed products would become more profitable, creating an opportunity to expand output and exports, and to redirect exports to the EU from other markets where prices net of transportation are lower (e.g., the US). Expanding output could mean taking supply from the live segment (with possible price consequences).

On balance, the eventual elimination of tariffs on processed products – particularly those at the 16-20% level – provide an excellent opportunity to improve margins at existing supply levels. The opportunity is also there to gain margin by shifting supply from lower priced markets. The opportunity for entry into and expansion of the processed segment is less obvious; it has been there for many years based on the large US market, but the number of processors has remained fairly stable. The competition for both raw material and market share tends to be intense, and the relatively low margins on processed lobster would appear to provide limited incentive to enter the industry.

Scallop

The scallop industry consists of offshore and inshore sectors, with offshore production concentrated on Georges Bank and other banks on the Scotia Shelf, as well as St. Pierre Bank off the south coast of Newfoundland and Labrador. Scallops are shucked at sea, with an increasing share of offshore production harvested on freezer vessels. This contributes to quality as well as efficiency. The offshore sector consists of seven vertically integrated companies that carefully control the balance of supply between markets.

Exports to the EU are almost exclusively by the offshore sector. Exporters deal directly with retail and food service customers, usually on long-term contracts enabled by stable and predictable supply. Smaller inshore companies tend to be focused on the North American market.

Production and exports of sea scallops take two forms, frozen (75%) and fresh (25%). The US and the EU are the leading markets. The EU takes 45-50% of Atlantic Canadian scallop exports in frozen form, but only very limited quantities (0.1%) in fresh form. The industry has begun to produce some value added products in retail packs for the North American market, though to date, any value added products for the EU have been processed in the EU to avoid the high tariff (20%).

Eliminating the 8% tariff on frozen and fresh scallops would result in a corresponding increase in the net price for Atlantic exporters (based mainly Nova Scotia and Newfoundland and Labrador). They would gain more or less the full value of the tariff in higher prices, given competitive conditions in the market. This could result in a shift of exports from the US to the EU in response to the higher net prices. Higher prices could also attract the interest of the many smaller companies in the inshore sector.

Elimination of the 20% tariff on prepared scallop products also creates an export opportunity for value added production. Depending on the relative profitability of fresh, frozen and processed sea scallop products, this could mean expanding value added output (at the expense of fresh and frozen volume, since overall supply is quota-limited).

Snow Crab

Snow crab is processed into essentially one product: frozen sections (the leg cluster). The cluster is broken off, cooked, glazed, frozen and packed for shipping. This is a commodity product, consumed mainly in casinos, cruise ships and buffets. There is minimal meat extraction in Atlantic Canada because it is a costly process and not supported by the market and margins. The US, Japan and China dominate the global exports from Atlantic Canada (97% of the total). Much of the export to China is to shuck the meat for re-export to Japan.

Snow crab processing represents a major segment of the seafood industry in the Atlantic provinces, with exports exceeding \$600 million in 2014. Exports to the EU are minimal (under \$2.0 million in 2014), less than 0.1% of the total. Removing the 7.5% tariff positions snow crab more favourably in the EU market, but in and of itself this will do little to change the export pattern simply because snow crab (as opposed to other crab species) is not an established product. Improving the export potential would require a

major marketing effort. The product characteristics make it attractive for the EU market, not just because of its intrinsic qualities, but also because snow crab is MSC certified in each of the Atlantic fisheries.

Atlantic Salmon

The opportunity to export farmed Atlantic salmon to the EU from the Atlantic provinces is poor, not because of the tariff, but because of competitive conditions. Salmon is a commodity and market demand is for fresh (not frozen) whole salmon and also fillets. Norway dominates supply to the EU because of its production capacity and close proximity to the market. The UK (mainly Scotland) is also an important supplier.

In order to meet market requirements for fresh product, producers in the Atlantic provinces would have to ship by airfreight. The transportation cost would push the import price well above the competitive level. Canadian producers have the large US market on the doorstep, a market whose demand exceeds Canadian supply capacity (the balance is made up from Norwegian and Chilean exports). In short, unless prices in other markets were to rise significantly relative to those in the US, there is limited incentive to shift focus.

2.4 Conclusions

High tariffs have prevented Canadian producers from taking full advantage of the export opportunities offered by the large and highly valued EU seafood market. This will change once CETA takes effect.

Eliminating tariffs lowers the cost of exporting to the EU, resulting in the potential for an immediate saving of tens of millions of dollars for Canadian seafood producers already in the market. Using these savings to reduce prices would allow producers to re-direct product to expand market share, thereby reducing the industry's dependence on the US market. Elimination of relatively high tariffs on certain finished products, coupled with the elimination of end-use restrictions, opens up the possibility of expanding value-added production in Atlantic Canada.

The EU market is familiar ground for many seafood producers in the Atlantic provinces, while for others it is uncharted territory. Prospective exporters would have to acquaint themselves with market channels and their supply requirements to determine which would be the best fit for their operations. They would also have to become familiar with and meet the various technical requirements applied to food products: food safety standards and certifications, country of origin labeling, and the increasing need for eco-certification for capture fisheries. Companies wishing to sell to major European supermarket chains and to the food service sector would ordinarily also have to have

their plants certified by third-party audit to the British Retail Consortium (BRC) or equivalent standard.

While CETA creates the potential for improved terms of trade, there is no guarantee that exporters will actually experience improved prices or margins. Much depends on how well they understand the market and how effectively they do business. When confronted with the bargaining strength of large distributors or retailers, there is a risk that smaller companies – of which there are many in the Atlantic provinces – could bargain away potential gains. This hurts all exporters, particularly ones dealing in price sensitive commodity products such as live lobster and shrimp. The industry would do well to explore collaborative approaches to marketing.

Chapter 3

Frozen Wild Blueberries

Chapter Summary

- **Wild (lowbush) blueberries are grown by producers in all three Maritime provinces but commercial processing and subsequent export are largely done by Oxford Frozen Foods and Wyman's of PEI.**
- **The EU currently accounts for almost 40% of Atlantic Canada's frozen blueberry exports and are used as an ingredient by EU food manufacturers. Demand for blueberries in Europe is expected to grow due to rising incomes, especially in central and eastern Europe, along with increased product awareness including knowledge of potential health benefits.**
- **A major expansion by Oxford Frozen Foods in New Brunswick will expand the current wild blueberry acreage. Beyond this, increased supply will largely have to rely on improving yields. An EU tariff of 14% on frozen blueberries from Canada has been suspended for a number of years although CETA would permanently eliminate this tariff. Producers need to maintain their responsiveness to changing European tastes and regulations and remain cost competitive.**

This chapter examines the EU market potential for frozen wild blueberries.

3.1 Context

Frozen blueberries are an important and growing contributor to exports from the Atlantic provinces. The value of frozen blueberry exports from the region has more than tripled over the last two decades to reach \$118 million in 2014.³ Increased exports reflect growing production. The acreage devoted to blueberries in Atlantic Canada has increased by almost 30% over the last decade while the volume of marketed production has more than doubled.

Wild blueberries are grown by over a thousand producers in Nova Scotia, New Brunswick and Prince Edward Island. However, large scale is required to run an efficient processing

³ References to exports and imports of frozen blueberries in this chapter refer to the product code HS081190 which includes frozen fruits and edible nuts, excluding strawberries, raspberries, blackberries, mulberries, currants and loganberries. Frozen blueberries account for the majority of exports in this product category from Atlantic Canada; frozen cranberries account for the remainder (see box in text).

facility and because there are currently limited processing facilities in New Brunswick, most of the crop is shipped to Quebec or Nova Scotia to be processed, and is then reflected in the frozen blueberry exports of those provinces. The largest processor in the Atlantic region, Oxford Frozen Foods, is also the largest producer of frozen North American wild blueberries in the world. Oxford is investing in a new processing facility in New Brunswick. Wyman's of PEI is also an important processor in the region. Both processors grow berries on their own land, in addition to purchasing berries from local producers.

Table 3.1 Blueberries are Grown Across the North East

Blueberry acreage (thousands) and number of blueberry producers, 2012

	CA	QC	NL	PE	NS	NB	Maine
Cultivated acres	180	70.0	1.0 ¹	12.2	41.9	31.9 ²	39.0
Number of farms	3,770	800	17	150	910	330	800

Notes: 1. 2011 2. An expansion by Oxford Frozen Foods could increase the blueberry acreage in New Brunswick by 15.7 thousand acres.

Source: Statistics Canada, National Agriculture Statistic Service

Wild or lowbush blueberries are mainly grown in the Atlantic provinces, Quebec and Maine.⁴ They are distinguished from cultivated or highbush blueberries which are largely grown in British Columbia, other parts of the US, Chile, Poland, Germany and Spain. Globally, over 95% of wild or lowbush blueberries are used in processing whereas about 70% of cultivated or highbush blueberries are destined for the fresh blueberry market.⁵

Most frozen Atlantic blueberries are sold to other food processors, typically large multinational firms, as ingredients in the manufacture of other foods, including glass jar preserves, jams, yogurt, muffins and other bakery products. The retail market also accounts for a large and growing share, although this is not currently the case in the EU.

Blueberries are viewed as providing a number of health benefits, as they are high in antioxidants as well as being a good source of nutrients and fibre. Wild blueberries contain higher levels of anthocyanin than their cultivated (highbush) counterparts, which mean greater antioxidants and increased interest from health conscious consumers. Research suggests wild blueberries contribute to brain health, show potential in the prevention of certain types of cancer, protect against cardiovascular disease, reduce cholesterol, lower blood pressure, protect against stroke, help manage the risk of

⁴ Types of lowbush blueberries are also grown in Europe and China, but these are not necessarily close substitutes in the market.

⁵ Brazelton, Cort (2011). *World Blueberry Acreage and Production 2010*. US Highbush Blueberry Council. <http://www.oregonblueberry.com/update/USHBC-report.pdf>.

Type 2 diabetes and more.⁶ According to the US Food and Drug Administration, frozen blueberries have all of the same health benefits as fresh.

Exports to the EU made up 37% of Atlantic Canada's frozen fruit exports in 2014 and were worth \$44 million. The US is the other main market at present, with exports valued at \$49 million in 2014. While exports to the EU have increased over the last two decades, the most rapid growth has been in exports to the US and Asia (most notably Japan and China).

Table 3.2 Nova Scotia and Quebec are Main Canadian Exporters of Frozen Blueberries to the EU

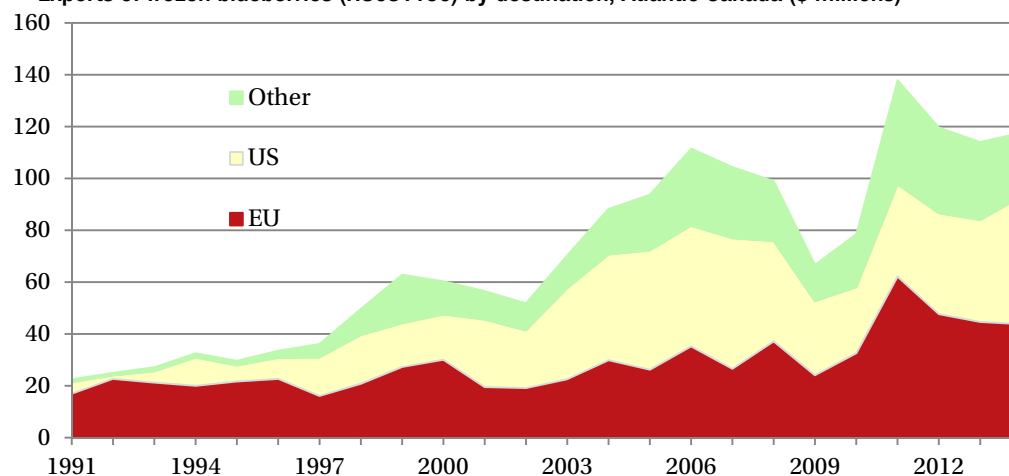
Exports of frozen blueberries (HS081190) from primary exporting provinces, 2014
(\$ millions, unless noted)

	CA	BC	QC	NS	PE	ATL
Total exports	303	92	88	104	12	118
EU exports	73	0	29	41	3	44
EU share (%)	24	0	32	39	26	37

Source: Trade Data Online

Figure 3.1 The EU Remains A Core Market for Atlantic Canada's Frozen Blueberries Despite Rapid Growth in the US and Other Markets

Exports of frozen blueberries (HS081190) by destination, Atlantic Canada (\$ millions)



Source: Trade Data Online

⁶ For a comprehensive review of current research visit <http://www.wildblueberries.com/health-research/research/>.

Cranberries

At the time of the most recent Agricultural Census (2011) there were 1500 acres of cranberries in production in Atlantic Canada, spread across New Brunswick (74%), Nova Scotia (22%), Newfoundland and Labrador (13%) and Prince Edward Island (7%). The same year, the farm gate value of cranberries from the Maritimes was \$7.9 million¹ (15% of that of blueberries) and they accounted for about 10% of frozen fruit exports from the region.

Cranberries are grown in New Brunswick by a group of nine producers who have formed Atlantic Canada Cranberries Inc. (ACCI). Terra Beata Cranberry Farm runs a processing facility and exports most of the berries grown in the region, including those grown at their own farm in Nova Scotia. Cranberries are also grown and processed by Wyman's of PEI. While some berries move on to further processing (drying or preserving) in Atlantic Canada, the vast majority are exported frozen to processors in Europe, the US and Asia. The frozen berries are used to make juice and sauce as well as being dried for retail and cereal ingredients.

The EU has been a very favourable market for Atlantic cranberries. Terra Beata ships the overwhelming majority of their berries to the EU. They benefit from their proximity to the Port of Halifax through which their berries are shipped, and find clients there that value their high quality product. The US market, in contrast, is extremely competitive, with major processors such as Ocean Spray dominating the market.

Though the cranberry business has been bleak recently, with frozen prices falling by as much as 70% since 2008 and inventories growing, Atlantic producers remain optimistic.

Note: 1. Data for Newfoundland and Labrador is not available.

3.2 EU Market Size and Potential

The EU is the world's largest importer of agriculture and agri-food goods. Total EU imports of frozen fruits (HS081190) amount to €950 million (CAD \$1,300 million), accounting for 51% of global imports. Of this, by far the largest importer was Germany. Other large importers were France, the Netherlands, Belgium and the UK. Belgium and the Netherlands are trading hubs for products entering Europe, and as such their import values include product bound for re-export.

International demand for blueberries has been increasing over the past two decades and is expected to continue to grow due to rising incomes, especially in emerging market economies with their rapidly expanding middle class. Growing awareness of blueberries and their potential health benefits will further boost demand. As a result, consumption and product utilization have grown, with more than 4,000 new products containing

blueberries introduced to global markets in 2012.⁷ These demand drivers apply to the EU with the majority of these new products being introduced in Europe, including developed markets such as the UK.

Table 3.3 Germany, France and the UK are Big EU Importers

Top EU importers of frozen blueberries (HS081190), 2013

Country	Imports (€ millions)	Import share (%)	Country	Net imports (€ millions)
Germany	242	25	Germany	217
France	140	15	France	129
Netherlands	102	11	UK	47
Belgium	87	9.2	Austria	36
UK	52	5.4	Italy	11
Other EU	327	34	Other EU	-168
Total EU	949	100	Total EU	270

Note: Net imports refer to imports less exports and reduces the impact of transshipment through major ports in the Netherlands and Belgium.

Source: International Trade Centre (Trade Map)

EU imports of frozen blueberries have grown much faster than incomes (Figure 3.2). Researchers have estimated that in Germany, the largest importer of Atlantic Canada's blueberries, the income elasticity of blueberries is 0.7.⁸ This means that if income in Germany grows by 1.5% this year (the IMF forecast of its real GDP growth), then demand for blueberries would grow by 1.1%, all other things being equal.

Overall demand in Europe is expected to exceed the region's production by a ratio of 4:1 by 2017, providing significant potential for further import growth.⁹ Demand growth will be driven by rising incomes, particularly in central and eastern European economies, changing demographics, and increased product awareness (including growing recognition of their health benefits). The typical blueberry consumer in the US is 55 years old and older with above average income.¹⁰ Rising incomes in central and eastern European countries and aging populations in western Europe are therefore likely to favour demand growth.

⁷ Garner, David. *Market Analysis: Blueberry Supply and Demand*. DGC Asset Management Limited. <http://www.blueberrieschile.cl/paper/paper76.pdf>.

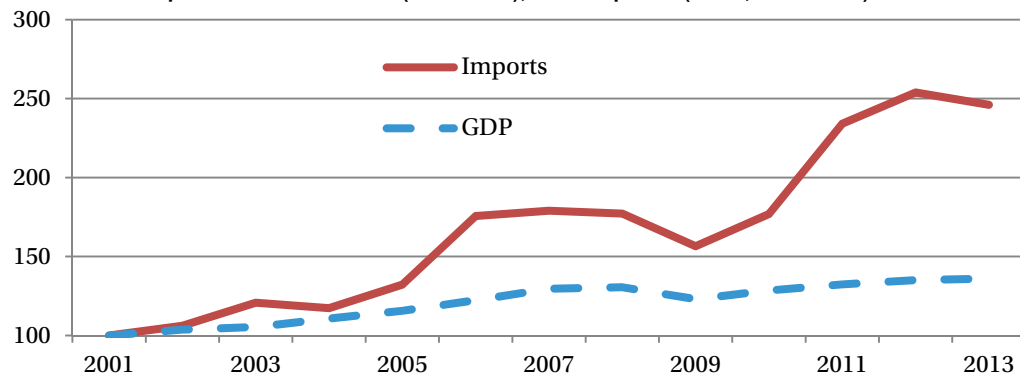
⁸ Lambert, Remy and Criner, George K. (2014). *World Blueberry Production and Consumption*. http://www.nswildblueberries.com/index.php?option=com_rsfiles&view=rsfiles&Itemid=176

⁹ Garner, David.

¹⁰ Agriculture and Agri-Food Canada (2012). *Blueberries (Fresh and Processed) American Eating Trends Report*. <http://www.agr.gc.ca/eng/industry-markets-and-trade/statistics-and-market-information/by-region/united-states/blueberries-fresh-and-processed/?id=1410083148486>

Figure 3.2 Strong Growth in EU Imports of Frozen Berries

EU GDP and imports of frozen berries (HS081190), current prices (Index, 2001=100)



Source: Eurostat, International Trade Centre (Trade Map)

3.3 EU Market Challenges and Considerations

When CETA comes into force EU tariffs will be eliminated on fresh and frozen fruits and vegetables. The listed tariff on frozen blueberries was 14.4%, but it has been temporarily suspended for a number of years; the implementation of CETA would permanently eliminate this tariff. Currently, the highest tariffs are on secondary-processed blueberry products such as purees and concentrates (17.6-18.4%). While this segment is very small in Atlantic Canada, the elimination of these tariffs may provide a modest boost to export of these products.

In selling to the EU, processors must ensure that their product will meet the standards of the European market. In the case of blueberries, this means that the fruit can only be treated with pesticides approved by the European Food Safety Authority, a different and generally more restrictive list than that required by North American authorities. While not mandated, to be successful in the market, food products must be processed according to HACCP (Hazard Analysis Critical Control Point) principles. The EU legislates maximum residual pesticide levels, food safety and traceability and food hygiene. A Phytosanitary Certificate is required and all frozen blueberries coming from non-EU countries are subject to plant health checks.

In the EU, the overwhelming majority of Atlantic blueberries are sold to other food processors, with the retail market accounting for a much smaller share than in North America, though it is growing. European manufacturers use Atlantic Canada's frozen blueberries in many different consumer products. In Germany, fruit is most often preserved in glass jars, whereas in France, industrial bakeries produce blueberry muffins. Different end products may require a different size or grade of berry. The client may also

have specifications about country of origin or requirements related to shipment size and timing. Although European importers and brokers can be a resource to establish relationships and bridge cultural divides, direct communication with food manufacturers is critical to ensure their expectations and needs are met.

At the same time that demand has been increasing, global production of blueberries has increased 363% between 1990 and 2012.¹¹ This increase was largely from growth in cultivated berries in the US, western Canada and Chile. Wild blueberry production grew more slowly, driven largely north of the border by growth in New Brunswick. The markets for wild and cultivated blueberries are closely linked. Though cultivated blueberries traditionally focused on the fresh market, the rapid growth in production in recent years has lead cultivated blueberry producers to sell in the frozen market as margins in the fresh market have declined. Chile has increased the portion of its berries sold into the frozen market from 10% in 2005 to 30%. The ability for wild blueberry producers to differentiate their product on health benefits will help them defend their market share. The price for processed blueberries is also typically lower, and more volatile, than for fresh blueberries.¹² Food manufacturers can often utilize different fruits in their products depending upon availability and price.

Canada remains the largest external exporter to the EU but producers in Quebec are also well established in the EU market. Blueberries can be shipped to the EU cost effectively from Atlantic Canada with close access to the Port of Halifax which has connections to Europe and other international locations.

Table 3.4 Canada is the Largest External Exporter to the EU Market

Top exporters to EU countries of frozen blueberries (HS081190), 2013

EU exporters	Exports (€ millions)	Export share (%)	Non-EU exporters	Exports (€ millions)	Export share (%)
Poland	121	12.8	Canada	70	7.3
Netherlands	53	5.5	Serbia	62	6.5
Belgium	51	5.4	China	45	4.8
Sweden	50	5.3	Ukraine	38	4.0
Greece	34	3.6	Belarus	34	3.6

Source: International Trade Centre (Trade Map)

The production of wild blueberries requires long term planning and investment. Wild blueberries are not planted, but an existing patch can be encouraged and developed to be suitable for commercial production.¹³ This process can take up to 10 years. This limits

¹¹ Lambert, Rémy and Criner, George K. (2014).

¹² Garner, David.

¹³ McIsaac, Dale (1997). *Wild Blueberry Fact Sheet: Growing Wild Lowbush Blueberries in Nova Scotia*. Truro: Nova Scotia Department of Agriculture and Marketing.

responsiveness to demand on the production side, though frozen berries can be held in inventory to smooth short-term variations in demand. There is limited availability of potential new land in Atlantic Canada to develop blueberries, beyond Oxford Frozen Foods's current expansion in New Brunswick. Though growth in wild blueberry acreage is limited by the natural occurrence of the plants, production capacity can be expanded by increasing the yield from existing acres. There is significant potential for improved productivity in the region. Access to honey bees to ensure pollination remains a key requirement.

Processing requires large scale to be efficient, thus capacity growth comes with a significant upfront investment. Oxford Frozen Foods' new processing facility in New Brunswick will nearly double their processing capacity.

3.4 Assessment

The EU remains an important market for frozen blueberries with potential growth due to rising incomes, especially in central and eastern European economies, as well as increased product awareness and utilization by food manufacturers. As the current tariff on frozen blueberries has been suspended, CETA will have no direct impact on current sales but will permanently eliminate this tariff (i.e., eliminate any risk of it being enforced in the future). Suppliers need to remain responsive to customer requirements, EU food safety regulations and maintain their cost competitiveness.

Producers acknowledge that growth in established markets such as the US is easier than entering new markets, but tariff reductions, such as with the current Canada-South Korea trade agreement, can help facilitate market expansion. In particular, trade with China, a huge potential market, is currently hampered by a 30% duty, placing Canadian exporters at a considerable disadvantage.¹⁴

http://www.dal.ca/content/dam/dalhousie/images/sites/wild-blueberry/pdfs/Growing_Wild_Lowbush_Blueberries_NS.pdf.

¹⁴ Canadian wild blueberries compete with cultivated blueberries from Chile. A trade agreement between China and Chile eliminated this 30% duty. Chinese blueberry imports are also subject to a 13% value added tax which applies to all exporting countries.

Chapter 4

Wood Products

Chapter Summary

- **The manufacture of wood products, primarily lumber, continues to be an important industry in New Brunswick and Nova Scotia. Though employment has declined in the past decade, the sector still supports over 8,000 jobs.**
- **Although the EU market for wood products is sizeable, the EU is largely self-sufficient with low import shares and rising exports. Demand is not expected to grow much in the near term.**
- **The EU accounts for a very small share of Atlantic lumber exports and this is not expected to increase. EU product requirements make it uneconomic in general for Atlantic lumber mills to focus on the EU market; the best prospects are for speciality wood products manufacturers.**

This chapter examines the EU market potential for wood products, primarily lumber.¹⁵

4.1 Context

Wood product manufacturing employs 8,000 people in Atlantic Canada, in addition to the 6,700 employed in forestry and logging. Exports of wood products were nearly \$700 million in 2014, or 5% of Atlantic Canada's non-energy exports. Of this, over 70% was lumber. New Brunswick accounts for the majority of the employment (68%) and revenue (67%) in this industry, with Nova Scotia representing most of the remaining production.

Atlantic Canada focuses exports of wood products on the US markets, sending almost 90% to the US in 2014. While Atlantic Canadian producers have exported to a number of other countries, including Ukraine, China, India, Pakistan, Mexico, Israel, Iraq and several Caribbean Region nations, little of this activity is particularly recent.

¹⁵ In this chapter, unless otherwise specified, data for the EU refers to the EU-27, excluding Croatia who joined the EU on July 1, 2013, due to the greater data availability for the EU-27.

Table 4.1 Lumber is the Largest Contributor to Atlantic Exports of Wood Products
Exports of wood products, 2014 (\$ millions)

	CA	ATL	NL	PE	NS	NB
Lumber (HS 4407)	8,661	506	4.5	-	92	409
Wood pellets (HS 4401)	387	53	-	-	20	33
Windows, doors, etc. (HS 4418)	1,062	45	-	-	0.2	45
Fibreboard (HS 4411)	291	45	-	-	14	31
Particle board (HS 4410)	1,432	8	-	-	0.4	8
Wood continuously shaped (HS 4409)	153	7	-	-	5.5	1.5
Other	1,948	30	-	0.1	4	26
Total wood products	13,935	695	4.6	0.2	136	554

Source: Trade Data Online

Wood Pellets

Eleven wood pellet plants in Nova Scotia, New Brunswick and Newfoundland and Labrador make up about 35% of Canada's wood pellet production. Wood pellets are manufactured for both local residential use and increasingly for the export market.

The EU is the world's largest market for pelletized wood energy but much of this is dependent on requirements and incentives for renewable energy. In 2014, 43% of Atlantic Canada's wood pellet exports went to the UK, where the electricity sector is under obligation to generate a certain portion of energy as renewable. UK demand is currently growing rapidly as several large power plants convert to biomass but is then likely to plateau.¹ One forecast anticipates 40% overall growth in EU pellet demand between 2015 and 2020.²

However there are some concerns about the sustainability of such energy policies. For example, Atlantic Canada's exports to the Netherlands went from a peak of \$19 million in 2009, to zero in 2013 after a subsidy to electricity generators for the use of biomass was cancelled. Falling costs for oil and natural gas along with renewables such as solar makes wood pellets less competitive, raising questions "as to whether energy users in the EU will continue to absorb the high energy costs that result from subsidizing wood energy" (UNECE, 2014, pp. 26-27).

There has also been rapid growth in global wood pellet production. Russia has doubled its production to 1.5 million tonnes in 2012, about three times Atlantic Canada's capacity. Investment in new plants continues to grow despite signs of excess capacity in North American and southeastern Europe. The US is a rapidly growing competitor to Canada in the UK wood pellet market.

1. Wilson, Jennifer (2015). *UK Wood Pellet Market*. London: USDA Foreign Agriculture Service. http://gain.fas.usda.gov/Recent%20GAIN%20Publications/UK%20Wood%20Pellet%20Market%20London%20United%20Kingdom_1-16-2015.pdf

2. Murray, Gordon (2014). *International Pellet Markets and Canadian Pellet Industry Update*. Prince George: Wood Pellet Association of Canada. http://www.pellet.org/images/2014-06-13_G_Murray_IBCES.pdf

Europe was historically a significant export market for Atlantic Canadian wood products manufacturers, at least until the formation of the EU in the early 1990s. The EU has declined in significance as a market for Atlantic Canadian wood products, with EU exports representing only about 7% of total exports; excluding wood pellets this share falls to 3%. A couple of Atlantic softwood producers sell lower grade products to offshore markets, including the UK. One speciality hardwood producer also sells to the EU (e.g., cut-to-size components).

Table 4.2 The EU Imports Minimal Wood Products from Atlantic Canada Other than Wood Pellets

Atlantic exports, 2014 (\$ millions, unless noted)

	EU exports	Total exports	EU share
Lumber	2	506	<1
Wood pellets	30	53	57
Windows, doors, etc.	1.5	45	3
Fibreboard	12	45	27
Particle board	0.3	8	3
Wood continuously shaped	4	7	62
Other	0.5	30	2
Total wood products	51	695	7

Source: Trade Data Online

Almost all of Atlantic Canada's lumber exports to the US are used in residential and light commercial construction applications. However, the typical North American timber frame construction is not the dominant residential construction practice in Europe, though its use is increasing. Nevertheless, EU housing construction remains an important driver of wood products demand. In particular, wood is frequently used in non-structural applications including for windows, doors and other millwork applications.

4.2 EU Market Size and Potential

EU demand for wood products amounted to about €50 billion in 2013. The market consists of three main product groups with fairly equal and stable market shares: lumber at about 39%; panel and composites (which includes OSB, plywood, fibreboard, particle board and other engineered wood products) at about 27%; and windows, doors and other millwork at about 34%.

Overall EU demand for wood products grew significantly during the second half of the 1990s, almost doubling in size between 1995 and 2000. European (EU-15) reliance on

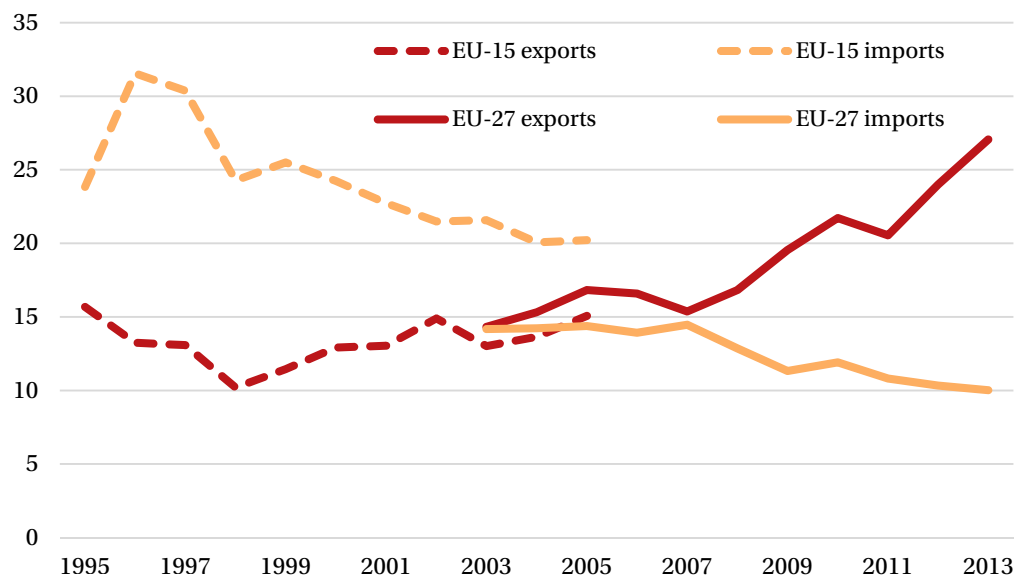
imports was also significant in this period, particularly for lumber where the import share was in the 25-30% range.

The market for EU wood products is now considerably different, reflecting in large part the expansion of the EU itself. With the addition of Austria, Finland and Sweden in 1995 – marking expansion from EU-12 to EU-15 – three significant wood products exporters to the EU became an internal part of that market. The further expansion and inclusion of more than ten mostly central and eastern European states in the mid-2000s has created an EU that is now self-sufficient in wood products.

Import shares for lumber have now fallen to about 10%. Imports of panels / composites currently represent about 10% of total EU wood products demand by volume, but less than 6% of by value, suggesting a reliance on imports for the lower valued products in this category.

Figure 4.1 EU Expansion has Reduced Import Dependence While Exports Rise

Imports and exports as a share of lumber demand, EU-15 and EU-27 (%)



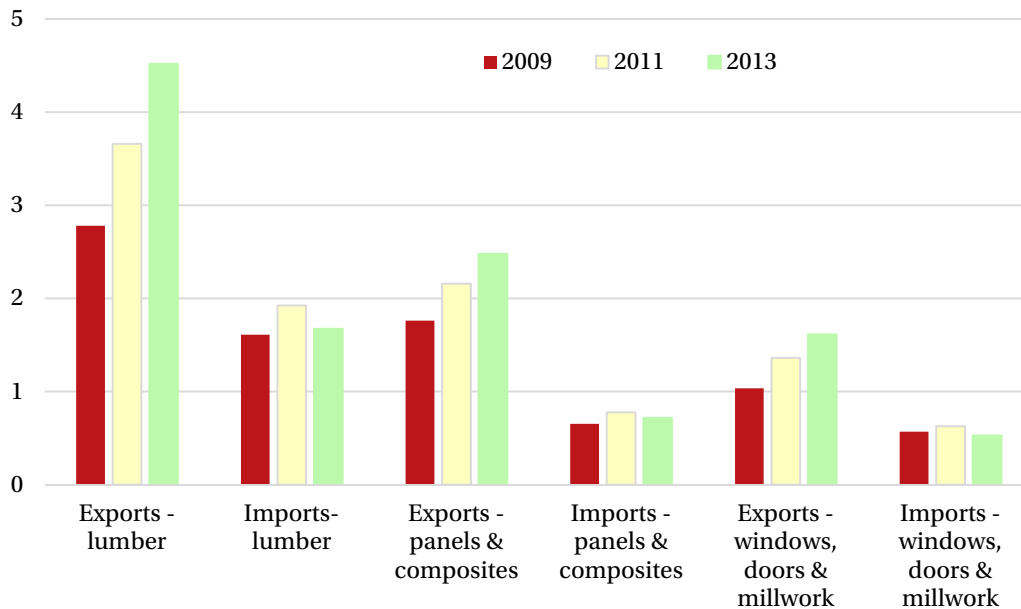
Source: Eurostat

Import shares for windows, doors and other millwork are now less than 3% (down from about 5-6% in the late 1990s), reflecting the longstanding strength of European manufacturers of such products, who convert both imports and domestic lumber products into further processed, higher valued output.

Indeed, the EU is growing its wood products exports significantly, with total exports of wood products now exceeding imports by a ratio of almost 3:1. The growth in EU exports of wood products has also increased harvesting activity within the EU. This trend is expected to continue as plantation timber supplies (planted in the post-World War II era with help from Canada among other countries) reach maturity and harvesting age.

Figure 4.2 Exports Growing Across All Categories While Imports Remain Flat

Exports and imports by product category, EU-27 (€ billions)



Source: Eurostat

Despite this trend towards a reduced reliance on imports, the EU remains an important and large market for wood products exporters from across the globe, with total wood products imports of almost €3 billion (or about 6% of total demand) in 2013. In volume terms, EU wood products imports totalled more than 12 million cubic metres, of which more than 8 million is accounted for by lumber. This volume alone represents more than twice the total of all lumber products manufactured in Atlantic Canada during 2014.

However, total demand for wood products in the EU has been flat since 2010 and imports as a share of demand have declined since 2010. This is not expected to change in the near term as the continuing economic problems in Europe constrain growth in demand for wood products. As the United Nations Economic Commission for Europe (UNECE) noted: “Recession, sovereign debt problems, low rates of household formation and

lethargic economies continue to constrain Europe's housing construction market; with no improvement expected before 2015 or 2016."¹⁶

Economic growth is forecast to be flat or very slow growth across Europe for the coming two or more years. In such an economic environment housing activity is expected to remain tepid at best. As a result, industry participants and observers do not view Europe as offering significant growth potential for wood products exports within any near to mid-term scenario.

4.3 EU Market Challenges and Considerations

As described by CanadaWood, a wood products industry associations' collaboration, "monitoring of European market access has been on-going for the best part of a quarter of a century following the introduction, in 1989, of the Construction Products Directive in order to create a 'single market' for construction products throughout the European Union and the consequent development of European standards some 200 of which are for wood and wood-based products."¹⁷ Since 1989, Europe has introduced a variety of non-tariff barriers to imports of wood products. These have related to product standards as well as to various plant health issues in which characteristics such as the presence of parasites in wood (e.g., pinewood nematode) were portrayed as threats to the sustainability of European forest resources.

The implementation of such regulations has led to requirements for example, for Atlantic Canadian lumber producers to invest in kiln drying and heat treatment facilities in order to meet changing market access requirements.¹⁸

Most recently, proposed changes to the protocols and acceptable marking of strength-graded structural lumber that were originally expected to become effective in 2015 would have required the inclusion of DG (Dry Graded) as the only permitted identifier for dry (kiln-dried or otherwise), strength-graded timber. According to the Canadian industry's position, by not allowing the use of KD (indicating kiln dried) as an alternative, the proposed change would exclude Canadian strength-graded timber from EU markets, affecting more than 95% of Canadian lumber exports to the EU.

As the Canadian industry has pointed out in communications to the Government of Canada, and as Canada has communicated to the European Commission, almost all

¹⁶ United Nations Economic Commission for Europe, Committee on Forests and the Forest Industry (2014). *Market Statement on Forest Products Markets in 2014 and 2015*.

<http://www.unece.org/fileadmin/DAM/timber/statsdata/Market-Statement-2014-extract-from-report.pdf>

¹⁷ Canada Wood (2015). UK – EU Market Access Update, February.

¹⁸ This contributed to a substantial reduction in Atlantic lumber exports to the EU in the first half of the 1990s.

Canadian structural lumber production is kiln-dried and heat-treated and is marked accordingly (KD-HT). Kiln-drying is the most widely used method for the drying of strength-graded lumber and the KD mark is accepted worldwide. However, the proposed change and introduction of the new DG mark would be unique to the EU and would not be accepted in North America. Thus, this proposed change would require producers to segregate production destined for European markets (from lumber destined to the US or other international destinations), and increase costs for producers and exporters who would also have to replace currently acceptable lumber grade stamps.

In effect, Canadian producers wanting to export lumber to Europe would effectively have to maintain different inventories for different markets. This would impose incremental costs during the grading and marking process, as well as increasing carrying costs for duplicated inventory. Producers and associations indicate that the incremental costs involved would make exporting to Europe uneconomic, with the result that Canadian lumber will be effectively shut out of the EU-market, notwithstanding that the product meets and in many cases exceeds EU strength, moisture content and other quality requirements for structural lumber.

However, it now seems that the EU Commission will not accept any proposed change to the standards for strength-graded lumber unless it treats the KD designation as equivalent.¹⁹ While this development averts a potential new barrier for Canadian exporters to the EU, it is simply the most current of an array of European non-tariff trade matters that require constant attention from Canada's lumber exporters: Canada Wood tracked and discussed more than 25 European trade-related matters in its February 2015 EU market access update.

Softwood lumber producers also face other practical challenges in exporting to the EU. Atlantic Canadian mills are configured to produce commodity products, predominantly for North American markets which have different product dimension standards than Europe. Thus, responding to the needs of export customers can frequently require adjustments to mill set up and therefore, unless orders are of sufficient volume and inclusive of a sufficiently wide spectrum of grades to generate reasonable returns, the incremental cost and effort of changing mill and output specifications is often not warranted.

¹⁹ This update is based on discussions with officials at the Department of Foreign Affairs, Trade and Development in early July, following the March 2015 completion of the original draft report.

4.4 Assessment

In the context of slow economic growth, stable demand and overall market self-sufficiency in the EU, the opportunities for Atlantic Canadian wood products manufacturers are limited. This is particularly the case for producers of softwood lumber where a need to customize product requirements reduces the economics of exporting to the EU, even under CETA. The wood products industry in Atlantic Canada, through its key industry associations and with support from the provincial and federal governments, is actively investigating development of export market opportunities elsewhere in the world, such as the Caribbean region. These efforts appear to offer better prospects than the pursuit of opportunities in Europe.

However, there could be opportunities for individual producers in the EU, particularly those focused on speciality products that cannot be classified as undifferentiated commodities. One Atlantic hardwood products manufacturer does currently export to the EU amongst other international markets. This company maintains sales staff in these markets. This approach is essential because the products being manufactured and exported are produced specifically to meet the requirements of individual customers and flexibility to meet these changing requirements is essential to success.

Chapter 5

Aerospace

Chapter Summary

- **All four Atlantic provinces are active in the aerospace industry. The maintenance, repair and overhaul (MRO) segment is important in Prince Edward Island and Newfoundland and Labrador, while parts manufacturing occurs in Nova Scotia and New Brunswick.**
- **Exports to the EU make up over 20% of Atlantic Canada's aerospace exports. The European passenger fleet is expected to grow 71% by 2033 creating increased demand for parts and MRO.**
- **Atlantic firms face strong competition in Europe. Many firms have found that an on-the-ground presence or a local partner is key to winning EU contracts, although CETA may increase the willingness of European firms to do business with Canadian companies.**

This chapter examines the EU market potential for the aerospace industry.

5.1 Context

Atlantic Canada has a growing aerospace industry. Aerospace employment grew 26% between 2004 and 2013, to about 3,400, while total manufacturing employment in the region fell 24% over the same period. The aerospace industry includes software-based products and services; design and manufacturing of parts (including aerostructures and engineered products); and maintenance, repair and overhaul (MRO).²⁰

The largest segment of the Atlantic aerospace industry is MRO, which includes maintenance of engines, accessories and complete aircraft as well as aircraft modification and conversion. This segment is particularly important in Prince Edward Island, where firms such as Vector Aerospace Engine Services – Atlantic (Vector Aerospace ES-A), 3Points Aviation and Tronos are located. Provincial Aerospace, in Newfoundland and Labrador, is a surveillance aircraft operator with MRO capabilities.

²⁰ The discussion of aerospace trade in this chapter focuses on the manufacturing of parts (captured in HS880330: Parts of Airplanes or Helicopters not elsewhere specified) and MRO (reflected in HS8411: Turbo-jets, turbo-propellers and other gas turbines). Due to the service nature of MRO, with imports and exports of engines for MRO work, it is not always fully captured in the trade data. For example, AerospacePEI estimates revenue of \$380 million in 2013, compared to exports of \$123 million.

Firms such as STELIA Aerospace North America Inc. (formerly Composites Atlantic Limited) and APEX Industries focus on the manufacture of aircraft parts in Nova Scotia and New Brunswick respectively. The industry serves both military and commercial customers.

In the MRO segment Atlantic firms are contracted by fleet owners and operators, commonly airlines or governments in the case of defence. Due to extensive licensing and certification requirements that are often specific to a part or process, firms usually specialize in a few aircraft or engine types. For example, Vector Aerospace ES-A currently services four Pratt & Whitney engine types: PT6A, JT15D, PW100, and the PW150A engine series. Certification and approvals are required from, among others, Transport Canada, Original Equipment Manufacturers (OEMs) and the National Aerospace and Defense Contractors Accreditation Program (Nadcap), an independent global program.

The procurement of new aircraft is characterized by a tiered structure. Atlantic Canadian firms are primarily parts and component manufacturers (tiers 2 and 3). Though they can sell directly to OEMs the trend in the industry is for OEMs to have fewer suppliers and to share more risk with the systems integrators (tier 1).²¹

Exports to the EU make up 22% of Atlantic Canada's aerospace exports, with \$21 million in aircraft parts and \$25 million in turbo prop and turbo jet engines. EU exports are largely in the commercial segment, while military work, done by firms such as IMP in Nova Scotia, remains focused on serving the Canadian military. While Atlantic firms have been awarded military contracts in Europe (such as IMP with the Norwegian Air Force), the bulk of military trade is with the US.

Table 5.1 PEI Accounts for Half of Atlantic Canada's EU Aerospace Exports
Aerospace exports, 2014 (\$ millions, unless noted)

	CA	ATL	NL	PE	NS	NB
Turbo-jets and turbo-propellers¹						
Total exports	4,649	145	0.2	141	3.4	-
EU exports	1,149	25.4	-	25.4	-	-
EU share (%)	24.7	17.6	-	18.0	-	-
Aircraft parts²						
Total exports	2,165	72.3	10.4	0.7	57.3	3.8
EU exports	315	21.2	9.4	0.3	10.0	1.5
EU share (%)	14.6	29.4	90.4	47.9	17.4	39.6

Notes: 1. HS 8411 2. HS 880330

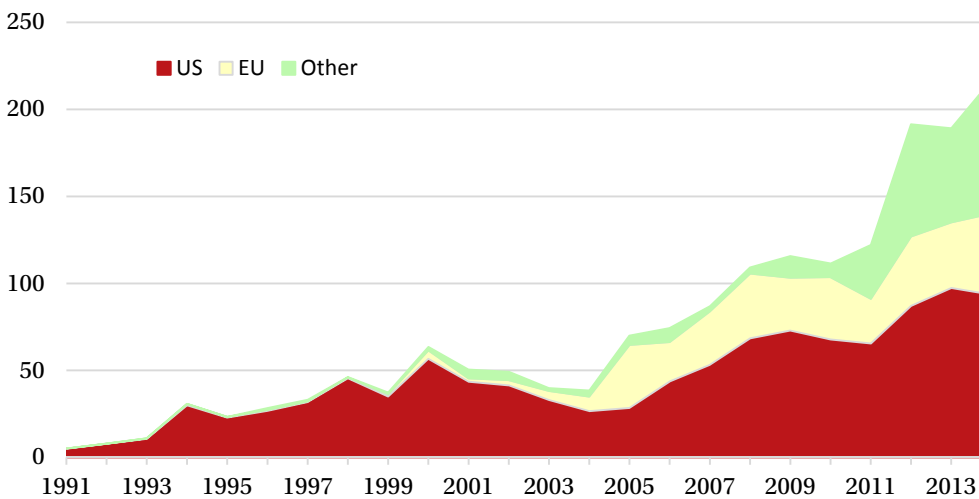
Source: Trade Data Online

²¹ Champagne, Roch., Furphy, Sam., Lee, Jennifer., and Vézina, Martin (2013). *A New Reality of the Aerospace Supply Chain*. Deloitte. http://www.ontaero.org/Storage/29/2375_Deloitte_presentation_11-12-2013.pdf

The US was the dominant market for all Atlantic aerospace exports until the early 2000s, and still represents 43% of exports. Gains in the EU and, more recently, other markets such as Australia, Kenya and South Africa, have begun to complement the role of the US. Vector Aerospace ES-A's other facilities in Brisbane, Nairobi and Johannesburg, contribute significantly to the observed diversification.

Figure 5.1 The EU and Other Markets are of Growing Importance

Aerospace exports (HS 8411 and 880330) by destination, Atlantic Canada (\$ millions)



Source: Trade Data Online

5.2 EU Market Size and Potential

Globally, the EU is the largest importer of aircraft and aircraft parts. It accounts for €71 billion (CAN\$104 billion), or about 40% of global imports (HS 88: Aircraft and spacecraft). The EU is home to some of the world's largest aerospace companies including Airbus, a French company with major manufacturing facilities in France, Germany, Spain and the UK, and Rolls-Royce, one of the world's largest airplane engine manufacturers, headquartered in the UK.

Going forward, the commercial sector will benefit from growth in global traffic, with passenger traffic expected to double by 2033.²² The global fleet will expand to meet this demand, with the number of passenger planes also forecast to double. The Asia-Pacific region is leading the trend, with economic growth driving increased air traffic. Support is also coming from economic recovery in the US and parts of Europe.²³ The EU currently

²² Airbus (2014). *Flying on Demand*. Blagnac: Airbus.

²³ AlixPartners (2014). *Global Aerospace and Defense Industry Outlook*.

<http://www.alixpartners.com/en/Publications/AllArticles/tabid/635/articleType/ArticleView/articleId/1392/Commercial-Growth-Continues-Defense-Scrambles.aspx#sthash.HGBYrUJz.dpbs>

accounts for 21% of the passenger jet fleet and that fleet is forecast to increase 71% over the next 20 years. However, due to rapid gains in Asia Pacific (162% over 20 years) the EU's share of the global fleet is expected to fall to 19%.

Table 5.2 France, Germany and the UK Lead EU Imports

Top EU importers, 2014

Turbo-jets and turbo-propellers (HS 8411)			Aircraft parts (HS 880330)		
Country	Imports (€ billions)	Import share (%)	Country	Imports (€ billions)	Import share (%)
UK	12.2	35.0	France	11.4	44.1
Germany	7.6	21.9	Germany	5.9	22.8
France	6.9	19.7	UK	3.3	12.7
Netherlands	1.7	4.9	Italy	1.4	5.3
Italy	1.6	4.6	Spain	1.4	5.3
Other EU	4.8	13.9	Other EU	2.5	9.8
Total EU	34.8	100	Total EU	25.8	100

Source: International Trade Centre (Trade Map)

In contrast to the commercial sector, aerospace defence is in decline.²⁴ Total global defence spending fell 2% in 2013, and the trend is expected to continue. Recent declines were led by the US, the UK, and France. Several large European defence programs are ending and cash strapped governments are reluctant to introduce new spending. The shortfall in Western defence spending was partially offset by increases in China, Russia and the Middle East; however, these markets are often not accessible to Western defence companies. In these countries, and most others, there is a desire to support local industry and create jobs. Canadian-owned firms must have a significant presence in a foreign market or have a distinct competitive advantage in order to penetrate these markets.

The growth in the global fleet will increase demand for MRO and components. The fleet is also aging, with older aircraft requiring more intense maintenance and modifications.²⁵ However, new models of aircraft and engines entering the fleet require less maintenance than older models.²⁶

²⁴ AlixPartners (2014).

²⁵ Canadian Trade Commissioner Service (2014). *Market Overview – French Aerospace Industry*. <http://www.tradecommissioner.gc.ca/eng/document.jsp?did=154882>

²⁶ AlixPartners (2013). *Pockets of Turbulence: The 2013 Aerospace and Defense Industry Outlook*. <http://www.alixpartners.com/en/Publications/AllArticles/tabid/635/articleType/ArticleView/articleId/661/Pockets-of-Turbulence.aspx>

5.3 EU Market Challenges and Considerations

Few tariffs exist on aircraft parts due to the Plurilateral Agreement on Trade in Civil Aircraft, a World Trade Organization agreement signed in 1980 by Canada and the EU, among other countries. It eliminated import duties on all aircraft, other than military aircraft, as well as civil aircraft engines, all components and sub-assemblies, and flight simulators, including all parts and components.

Aerospace firms operating in the EU must comply with all regulations under the purview of the European Aviation Safety Agency (EASA), which pertain to both initial and continuing airworthiness. On July 26, 2011, a Canada-European Union Bilateral Aviation Safety Agreement (BASA) came into force. Under the agreement, EASA recognizes certification of Canadian aviation products and services, allowing the Canadian aviation firms to be more competitive in the European market.²⁷ Notwithstanding this agreement, some companies must take additional steps beyond Transport Canada certification to maintain EASA certification. Similar agreements exist between Canada and the US and between the EU and the US. Some aerospace parts and components also require CE Marking.

Atlantic Canadian firms face intense competition from local firms in Europe. The European aerospace sector had over €138 billion (CAN\$189 billion) in sales in 2013 and employed over 500,000 people.²⁸ The Canadian aerospace sector, in contrast, had revenues of \$25 billion and provided employment for about 36,000 people. Location can be an important consideration for purchasers. This is true with both public contracts, where governments prefer to provide employment in their own country, and in private companies, who may prefer to avoid the logistical complications that can arise in transporting large aircraft parts across the Atlantic.

In the MRO segment, turnaround time is a key factor for clients, thus efficient transportation is critical. With many capabilities available in Europe, Canadian firms must have a distinct competitive advantage to grow their market share. Canadian firms have confronted this challenge with sophisticated logistics and have maintained a competitive advantage by specializing and innovating to provide high quality, low cost services. When compared with other OECD countries, Canada's aerospace industry ranked first in terms of productivity.²⁹

²⁷ Transport Canada (<https://www.tc.gc.ca/eng/civilaviation/standards/int-baa-europe-3679.htm>)

²⁸ Aerospace and Defence Industry Association of Europe (2014). *Facts and Figures 2013*. http://www.asd-europe.org/fileadmin/templates/images/publications/Facts_Figures_2013.pdf

²⁹ Aerospace Industry Association of Canada (2014). *Guide to Canada's Aerospace Industry*. Ottawa: AIAC. <http://www.aiac.ca/resources-and-publications/products-and-services-guide/>

Canadian firms can also access EU and other foreign contracts by establishing a physical presence in the region. Atlantic firms have been successful by maintaining employees in key regions, establishing partnerships with a local firm or by local opening facilities. Vector Aerospace ES-A, for example, has three small shops in the US, in addition to its facilities in Australia and Africa. A local presence resolves logistical issues and shows an investment in the region that facilitates the acquisition of both public and private contacts.

The defence industry also faces a significant competitive challenge and opportunity from offset policies. These policies or agreements typically apply to defence contracts and specify that a foreign supplier must purchase products or services equal to some portion of the value of the contract in the purchasing country. In Canada these contracts are referred to as Industrial and Technological Benefits (ITBs).³⁰ These agreements can be a challenge when bidding on foreign defence contracts, but also present an opportunity when a foreign firm has been granted a domestic contract and is seeking Canadian sub-contractors to fulfill its offset requirements.

Atlantic firms have capacity to respond to increasing global demand, and growth opportunities in the EU. Some companies are investing in and expanding their physical capacity. One ongoing challenge is the availability of skilled labour. The Aircraft Gas Turbine Engine Repair and Overhaul Technology program at Holland College in Prince Edward Island, for example, has been critical in providing skilled workers to the local industry.

5.4 Assessment

There will be substantial growth in the commercial aerospace industry in the future, including in the EU, and Atlantic firms have the capabilities and capacities to benefit from this growth. To grow internationally, and in the EU specifically, firms in the parts and MRO segments may have to explore establishing an on the ground presence in these markets.

CETA has the potential to encourage European firms to be more open to Canadian contractors as a more open, free market is established between the two regions. However, CETA maintains a broad exception for national security that could be exercised to limit any growth in international defence contracting.³¹

³⁰ Industrial and Technological Benefits replaced Industrial and Regional Benefits (IRBs) in 2014.

³¹ CETA opens up government procurement at the sub-central level, subject to the defence exception. This opens up a few limited opportunities for aerospace, e.g. a provincial government procuring a helicopter for emergency medical response.

Chapter 6

Pharmaceutical and Diagnostic Products

Chapter Summary

- **Atlantic Canada has a number of companies in the chemicals industry, with several pharmaceutical and diagnostics firms located in Nova Scotia and Prince Edward Island.**
- **Almost half of Atlantic Canada's exports of pharmaceutical and diagnostic products are destined to the EU, primarily from Prince Edward Island. The EU, like many developed countries, is seeing health care spending rise but fiscal restraint and other factors have led market experts to predict annual growth of just 1-4% in pharmaceuticals in the major EU markets over the next five years.**
- **Atlantic firms have been successful in the EU by working with agents and distributors to navigate the complex and fragmented health care market.**

This chapter examines the EU market potential for pharmaceutical and diagnostic products.

6.1 Context

The chemical manufacturing industry in Atlantic Canada employs 1,600 people and has exports over \$200 million. The industry includes a group of firms manufacturing pharmaceutical and diagnostic products, which is the focus of this chapter. It also includes other chemical manufacturing related to the creation of by-products, such as the production and sale of sulphuric acid from Brunswick Smelter.³² Pharmaceutical and diagnostic products are especially important in Prince Edward Island and Nova Scotia. BioVectra, based in Prince Edward Island, is a global exporter of intermediate pharmaceutical products, while Seikisui Diagnostics, BioMedica, Precision BioLogic, and Dominion Biologicals are examples of firms producing products for blood diagnostics and typing. Veterinary vaccines are produced in Prince Edward Island by Elanco.

³²Not all chemical exports from Atlantic Canada have been identified. The data includes \$28 million in exports from Nova Scotia under the product code HS 832490: Chemical products and preparations of the chemical or allied industries not elsewhere specified and \$32 million in exports from New Brunswick under product code HS 2853: Inorganic compounds not elsewhere specified; liquid or compressed air, amalgams other than amalgams of precious metals.

The industry is characterized by a mix of firm structures. BioVectra, Sekisui Diagnostics and Dominion Biologicals are examples of firms which started as locally-owned before being acquired by large multinational firms; Novartis established its animal health facility in Prince Edward Island, which was subsequently acquired by Elanco. In contrast, Precision Biologic and BioMedica continue to be locally owned. Foreign ownership can affect firms' export strategies. For example, Dominion Biologicals distributes products through its sister company in Germany.

Atlantic firms are entering the global value chain either by selling their products to large biotech or pharmaceutical firms or by selling to hospitals. BioVectra, the main player in pharmaceuticals, largely sells to large pharmaceutical firms, while the diagnostic and testing products are more often sold directly to hospitals. When selling to hospitals companies choose whether to deal directly with hospitals, or to sell their product to a distributor. As such, the location of large pharmaceutical companies and the concentration of health care spending can both factor into the geographic focus of Atlantic firms.

The EU accounts for \$43 million or 47% of Atlantic Canada's exports of pharmaceutical and diagnostic products.³³ A far smaller portion, just 3%, of the region's other chemical exports are destined for the EU. While Prince Edward Island is the major exporter of pharmaceutical and diagnostic products, other chemicals are more likely to originate from New Brunswick and Nova Scotia.

Table 6.1 The EU is a Key Market for Atlantic Pharmaceuticals and Diagnostics Exports, 2014 (\$ millions, unless otherwise indicated)

	CA	ATL	NL	PE	NS	NB
Pharmaceutical and diagnostic products¹						
Total exports	7,868	93.2	1.0	77.6	12.3	2.3
EU exports	1,736	43.5	0.1	41.3	1.7	0.4
EU share (%)	22	47	6.3	53	14	16
Other chemicals²						
Total exports	15, 923	177	1.2	4.6	46.2	65.0
EU exports	930	3.5	-	0.3	2.7	0.5
EU share (%)	5.8	3.0	-	6.1	5.9	0.7

Notes: 1. HS 2922, 2930, 2932-2934, 30, 3822. 2. HS 28-38 excluding HS 31 Fertilizer (and otherwise specified).

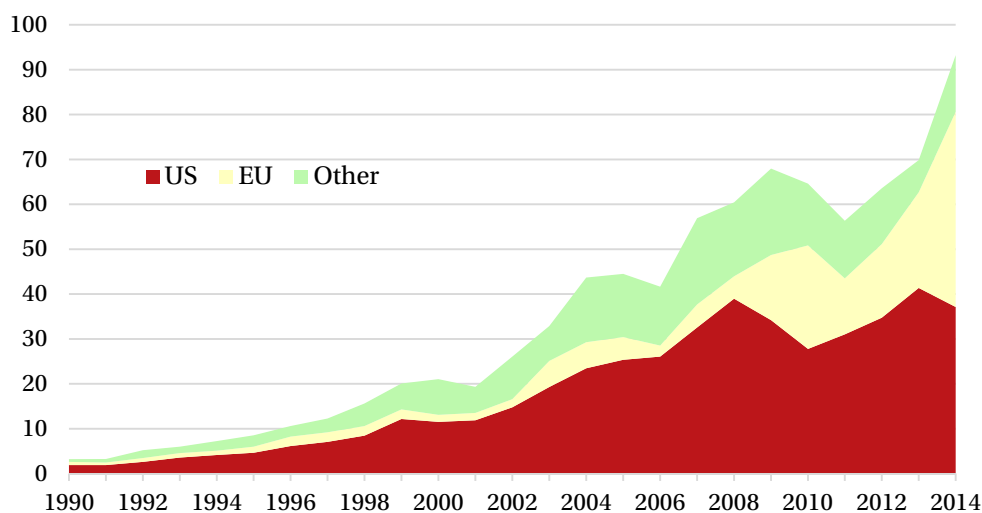
Source: Trade Data Online

³³For the purpose of this report pharmaceutical and diagnostic products are defined by product codes HS 2922: Oxygen function amino compounds; HS 2930: Organo-sulfur compounds; HS 2932-2934: Heterocyclic compounds; HS 30: Pharmaceutical products; and HS 3822: Composite diagnostic or laboratory reagents not elsewhere specified; Though some Atlantic firms in the diagnostics field fall under HS 30, HS 3822 covers the vast majority of Atlantic exports. Pharmaceutical compounds are defined for this report by product codes HS 2930 and HS 2932-2934.

In Atlantic Canada the firms involved in diagnostic products are producing diagnostic reagents. Diagnostic reagents made up \$36 million of Atlantic Canada's health science exports in 2014, a quarter of which was bound for the EU. These products originated from Prince Edward Island (82%), Nova Scotia (12%) and New Brunswick (6%). Within pharmaceutical products, the main contributor to exports is pharmaceutical compounds. Pharmaceutical compounds accounted for \$30 million of total exports in 2014, all originating in Prince Edward Island. This category made up the largest value, \$20 million, of Atlantic pharmaceutical and diagnostic exports to the EU.

Figure 6.1 The EU is Importing an Increasing Share of Atlantic Canada's Pharmaceutical and Diagnostic Products

Exports of pharmaceutical and diagnostic products by destination, Atlantic Canada (\$ millions)



Source: Trade Data Online

6.2 EU Market Size and Potential

The health industry in Europe is the second largest in the world, after the US.³⁴ The EU accounts for €184 billion (CAN\$252 billion), or 49% of global imports of pharmaceuticals (HS 30). The EU is also home to four of the world's ten largest pharmaceutical firms, including Sanofi, headquartered in France, and GlaxoSmithKline, based in the UK. Belgium, despite its relatively small size, is a hub for the pharmaceutical industry; 29 of the 30 global leaders in the pharmaceutical industry have a presence in Belgium.³⁵

³⁴ Canadian Trade Commissioner Service (2013). *Life Sciences Sector Profile for Europe*.

³⁵ Janssen. *Belgian pharmaceutical industry at the world's forefront?*

<http://www.janssenbelgium.be/en/economy/belgian-pharmaceutical-industry-at-the-worlds-forefront>

Health care spending accounts for almost 10% of GDP in the EU. However, this varies widely across countries, from around 12% of GDP in France, the Netherlands and Austria, to 6% of GDP in Latvia and Estonia.³⁶

Table 6.2 Germany is the Largest Importer in Atlantic Canada's Key Sectors

Top EU importers, 2013

Pharmaceutical compounds (HS 2930,2932-2934)			Diagnostic reagents (HS 3822)		
Country	Imports (€ millions)	Import share (%)	Country	Imports (€ millions)	Import share (%)
Belgium	7,044	20	Germany	2,233	25
Germany	6,030	17	France	1,133	13
Italy	4,850	14	Italy	939	10
France	3,703	11	Netherlands	918	10
UK	2,989	8.6	UK	867	9.5
Other EU	10,109	29	Other EU	2,990	33
Total EU	34,724	100	Total EU	9,080	100

Source: International Trade Centre (Trade Map)

Total expenditure on health care in the EU has been growing both in absolute terms and relative to GDP.³⁷ Many factors influence health care spending, each of which varies across the many health care systems in the EU countries. Factors include demographics, health, policy, social and economic factors, as well as supply side factors such as technology. A recent study for the European Commission suggests a minimum increase in the public health care expenditure to GDP ratio of 3 percentage points between 2010 and 2060, and without cost control measures, it could nearly double.³⁸ This is in addition to private expenditure, which makes up approximately 25% of health care spending in the EU, ranging from nearly 50% in Bulgaria and Cyprus, to as low as 15% in Denmark and the Czech Republic. Total health care spending is expected to grow significantly.³⁹

An important part of the health care market for Atlantic firms are diagnostic reagents. These are a component of in vitro diagnostics (IVD), a method of diagnostic testing that occurs outside the human body in an artificial environment. The IVD industry has two main components: reagents, which react with test samples, and the instruments which are commonly used to automate the process of bringing samples and reagents together. The global IVD market is expected to reach US\$75 billion by 2020, from US\$53 billion in

³⁶ World Bank. (<http://data.worldbank.org/indicator/SH.XPD.TOTL.ZS>)

³⁷ Przywara, Bartosz (2010). *Projecting future healthcare expenditure at European level: drivers, methodology and main results*. Brussels: European Commission.

http://ec.europa.eu/economy_finance/publications/economic_paper/2010/pdf/ecp417_en.pdf

³⁸ Medeiros, João and Schwier, Christoph (2013). *Estimating the drivers and projecting long-term public health expenditure in the European Union: Baumol's «cost disease» revisited*. Brussels: European Commission.

³⁹ Canadian Trade Commissioner Service (2013).

2013, growing at an annual rate of 5.3% during 2014-2020.⁴⁰ Asia Pacific is the fastest growing region, with demand driven by increasing use of sophisticated diagnostics and consumers with growing incomes to spend on health care. The IVD market in EU had revenues of €10 billion in 2013, accounting for 0.8% of the total health care expenditure in the EU.⁴¹ Diagnostic reagents have been the largest contributing category in terms of revenue.⁴²

The IVD market in the EU has been driven by the rising number of lifestyle diseases, increasing preventive health care practices, mounting disposable incomes, ageing population and improving health care infrastructure. However, in recent years the market has slowed. One major factor is recent measures taken by governments to control health care costs, exacerbated by broad-based austerity measures. Some Atlantic Canadian firms, which provide lower cost alternatives to products produced by large pharmaceutical and biotech companies, may be in a position to benefit from cost pressures, while others will have to continue to innovate and provide a high quality product at a price point that is attractive to health care providers.

The EU pharmaceutical sector is also important to Atlantic Canada's exports. However, the European pharmaceuticals market has had limited growth in recent years and this is expected to continue at least in the near term. Spending on pharmaceuticals is expected to grow 10-15% in Europe over 5 years to 2018 compared to 30% growth globally.⁴³ Austerity measures have disproportionately impacted public spending on medicines, especially in France and Spain, where per capita pharmaceutical spending is expected to shrink by 2018. Annual growth in the top five EU markets (Germany, France, Italy, the UK and Spain) will stay between 1-4% compared to 4-7% globally. The market overall is driven by many of the same factors that influence the overall health care market, including demographics and increasing incidence of chronic disease.

⁴⁰ Allied Analytics LLP (2014). *Global In Vitro Diagnostics (IVD) Market - Size, Share, Global Trends, Company Profiles, Demand, Insights, Analysis, Research, Report, Opportunities, Segmentation and Forecast, 2013 - 2020*. Summary retrieved from <http://www.researchandmarkets.com/reports/2876233/global-in-vitro-diagnostics-ivd-market-size>

⁴¹ European Diagnostic Manufacturers Association (2014). *European IVD Market Statistics*. <http://www.edma-ivd.be/index.php?mact=EuropeanIVDMarketStatistics.me8bc7.view.1&me8bc7details=106&me8bc7returnid=104&p age=104>

⁴² Ken Research (2014). *Europe In-Vitro Diagnostics Market Outlook to 2018 - Ageing Demographic and Mounting Consolidation to Drive Future Growth*. Summary retrieved from <http://www.news.kenresearch.com/post/82786129127/europe-in-vitro-diagnostics-market>

⁴³ IMS Institute for Healthcare Informatics (2014). *Global Outlook for Medicines Through 2018*. <http://www.imshealth.com/portal/site/imshealth/menuitem.762a961826aad98f53c753c71ad8c22a/?vgnextoid=266e05267aea9410VgnVCM10000076192ca2RCRD>

6.3 EU Market Challenges and Considerations

There are two critical concerns when selling pharmaceutical and diagnostic products in the EU: regulation and reimbursement. On both of these measures, the EU can be a good opportunity for Atlantic firms, as regulatory and reimbursement systems are more alike between Canada and the EU than between these markets and the largest market for health care products, the US. The EU can also be a better fit for Canadian medical companies than the emerging markets, with well-established health care systems with regulatory certainty and reliable reimbursement. However, in the health care sector, the EU is not a uniform market: each country has its own unique challenges and considerations.

In regulation, the first step to selling a final product in the EU is the CE mark. For medical devices, which include diagnostic reagents, compliance with ISO 13485 is required to obtain the CE mark. Many diagnostic products also fall under the scope of REACH, the Registration, Evaluation, Authorization and Restriction of Chemicals, an EU-wide initiative enacted in 2007 with the goal of streamlining the legislative framework on chemicals in the EU while protecting human health and the environment. In addition to the EU level regulation, individual countries have their own regulations, and depending on the product, some countries have more or less regulatory requirements.

Purchasing and reimbursement schemes vary greatly from one country to another.⁴⁴ This can be an important factor for firms selling directly to hospitals. There are many ways reimbursement can affect the market: some countries have a centralized decision making, while others have multiple autonomous regions; some purchase under long term contracts, while others do not.⁴⁵

It is in part the complex, heterogeneous nature of the EU health care market that makes local partnership a successful strategy. Many Atlantic firms choose to use agents or distributors on the ground in Europe who have in depth knowledge of the local markets. Distributors are particularly prominent when selling to hospitals, as they can take possession of the product and manage the reimbursement landscape. Agents can be important partners for firms that do business with large pharmaceutical and bio tech firms in the EU. They have knowledge of the local market, and can help in matching the needs of an OEM with the capabilities of an Atlantic manufacturer.

In addition to providing market expertise, agents and distributors provide an on the ground presence, which can be important in establishing relationships and

⁴⁴ Canadian Trade Commissioner Service (2013).

⁴⁵ Detailed information on reimbursement can be obtained from Eucomed <http://www.fundingmedtech.eu/>

communicating subtleties of highly complex products. Due to the large positive impacts that a successful relationship with a highly qualified agent or distributor can have on a firm's exports, the availability of these types of partners can be a determining factor in which EU countries an Atlantic firm will do business with.

While these are important issues when doing business in the EU in this sector, they are not unique to the EU; each country has their own regulatory requirements in the health care field, and they may be more or less onerous than the EU, or individual EU countries.

Atlantic firms face competition from multinational bio tech and pharmaceutical players. The EU pharmaceutical sector was worth €220 billion (CAN\$283 billion) in 2012 and employed over 800,000 people.⁴⁶ The same year, Canadian pharmaceutical manufacturers had sales of \$22 billion and employed about 27,000 people.⁴⁷ Atlantic firms compete by specializing in niche products, and providing high quality products and exceptional customer service. Atlantic firms are continually innovating and investing to remain on the forefront of the medical field and are seeking to expand their penetration of foreign markets. However, a large upfront investment is often required to obtain the approvals and certification to enter a new market. For this reason it can be efficient to focus on entering and growing market share in a small number of markets.

6.4 Assessment

The market for health care products will continue to grow with aging populations and increasing expectations of care in developed countries, and rising incomes in emerging markets. However, the EU is not a driving force behind this growth as governments work to contain health care costs. Atlantic Canadian firms that wish to take advantage of the size and stability of the EU market may focus on growing their market share and serving the growing need for preventative medicine and the ongoing care of the aging population.

CETA will have a limited impact on Atlantic Canada's trade with the EU in the pharmaceutical and diagnostic products industry as tariffs are not a meaningful barrier for Atlantic exports to the EU and there is limited potential for alleviation of the country specific regulatory requirements identified in this report.⁴⁸

⁴⁶ European Commission (http://ec.europa.eu/growth/sectors/healthcare/index_en.htm)

⁴⁷ Industry Canada. (https://www.ic.gc.ca/eic/site/lsg-pdsv.nsf/eng/h_hn01703.html)

⁴⁸ Two changes in CETA have the potential for limited impact. First, the protocol for greater acceptance of certification and test results could include medical devices. Second, Canada has agreed to provide additional protection for pharmaceutical products protected by eligible patents in Canada. This will affect EU firms selling in Canada, but will not directly impact Atlantic exports.

Chapter 7

Refined Petroleum Products

Chapter Summary

- There are currently two refineries in Atlantic Canada with a capacity of 415,000 barrels per day. The refineries are examining ways to reduce their feedstock prices including rail deliveries and pipeline into New Brunswick.
- Atlantic exports of refined petroleum products to the EU vary widely by year and country and are dependent on short-term needs in Europe.
- Demand for refined petroleum products is declining in the EU but refinery capacity is expected to fall over the next decade due to the age and inefficiency of refineries. Competition from other low cost producers in the US, India and the Middle East will make it challenging for Atlantic refineries to play a large role in the EU.

This chapter examines the EU market potential for refined petroleum products.

7.1 Context

Atlantic Canada currently has two oil refineries producing products for local and export markets. The largest refinery is the Irving Oil-owned facility in Saint John which has a capacity of 300,000 barrels and opened in 1960. The Irving refinery is the largest in Canada. The North Atlantic Refinery in Come-by-Chance, Newfoundland and Labrador began operations in 1973 and is now owned by Silver Range Financial Partners of the US.

Table 7.1 Atlantic Canada's Refining Capacity

Refinery	Capacity (barrels/day)	Share of exports to the EU, average 2010-14 (%)
Irving Oil, Saint John, NB	300,000	3.2
North Atlantic, Come-by-Chance, NL	115,000	11.5

Source: Company websites, Trade Data Online

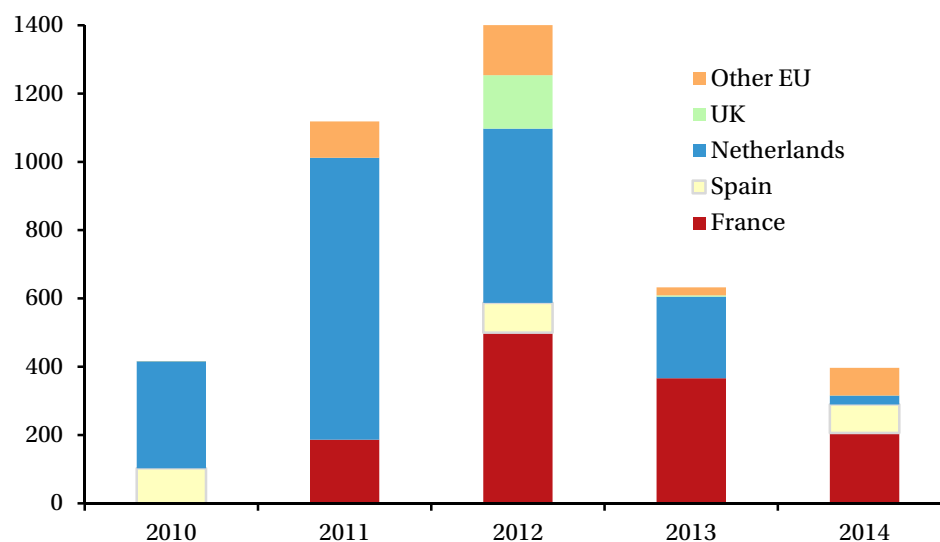
A third refinery, (Imperial Oil in Dartmouth, Nova Scotia) stopped refining in 2013 but has been converted into a storage terminal for refined oil products. Most of the products at the storage terminal are expected to be sold in regional markets.

The refineries produce gasoline, diesel, heating oil, kerosene, jet fuel, bunker fuel and asphalt products. They import crude oil from various sources including the Middle East, the North Sea, Africa and South America. More recently the Irving refinery has begun importing a large share of its crude oil by rail from the Bakken shale formations in the western US. Crude imports from the US have risen to over \$5 billion in 2014. Canadian crude production is also a source for the region's refineries, mainly from the Newfoundland offshore.

The planned Energy East oil pipeline project would see oil from western Canada shipped to Saint John. The Irving refinery is expected to be a key customer for that oil. It is uncertain at this time if that new source of crude will lead to any upgrades or capacity expansions in Saint John. Both the Saint John and Come-by-Chance refineries have had expansion plans on the table over the last decade but both were shelved during the 2008/2009 recession. Older and smaller refineries like the Imperial Oil refinery and a slightly larger facility near Montreal (closed in 2010) were shut down due to the significant upgrades needed to compete in the global market. Newer refineries built in China, Saudi Arabia, South Korea and the US are producing well over 500,000 barrels per day.

Figure 7.1 Atlantic Refined Exports to the EU Vary Widely

Exports of refined petroleum products, Atlantic Canada to the EU (\$ millions)



Source: Trade Data Online

Atlantic exports of refined petroleum products to EU countries varies widely by year and by destination. In 2014, about \$400 million were exported from the Atlantic region to the EU with about half of that total destined for France. In 2012 about \$1.4 billion of refined

products went to the EU with over \$500 million destined for the Netherlands and France as well as large amounts to the UK and Spain. The US remains the dominant market for Atlantic refined petroleum with about \$10 billion shipped in 2014.

7.2 EU Market Size and Potential

The EU imported €210 billion of refined petroleum products in 2013 which accounts for about 29% of the world total. Key import markets include the Netherlands (18%), Belgium (13%), Germany (13%) and France (13%). The large flows to the Netherlands and Belgium are in part due to their important role as the main entry ports into Europe.

Table 7.2 Netherlands and Belgium Import the Most Refined Petroleum

Top EU importers of refined petroleum products (HS2710), 2013

Country	Imports (€ billions)	Import share (%)
Netherlands	38.1	18.1
Belgium	27.8	13.3
Germany	27.6	13.1
France	26.2	12.5
UK	20.8	9.9
Other EU	69.6	33.1
Total EU	210.1	100

Source: International Trade Centre (Trade Map)

Consumption of refined products has been falling since 2005 in Europe due to the weakness in the economy. However, import values have more than doubled between 2005 and 2013. There is likely to be continued growth in imports of refined products over the next decade as many smaller and older refining facilities in the EU are expected to shut down. About half of the refineries in Europe were built around the time of World War II and geared toward gasoline production not diesel which is now the fuel of choice in many countries. Tax incentives have boosted diesel demand over the last 25 years and are expected to continue into the future. It will take billions of dollars of investment to convert each gasoline producing refinery. Many of the refineries producing gasoline are exporting product to global markets. Meanwhile lower cost producers in Russia, the US, India and the Middle East will continue to play a greater role in the European market.

7.3 EU Market Challenges and Considerations

The EU continues to rely on Russia for a large share of its total imports of refined petroleum products. As with other energy products like crude oil and natural gas, EU countries would like to lessen their reliance on the Russian market. Relations with Russia continue to be tense due to their involvement in the Ukraine but it is difficult to move away from a cheap source of supply that is right next door.

For the refineries in Atlantic Canada there are transportation advantages over some of the low cost countries such as the US and India but production costs are higher in the region due the more costly feedstock. If the Irving refinery can gain access to oil through the planned Energy East pipeline it may be able to lower its feedstock prices and increase its profitability and gain a competitive advantage in several markets including Europe.

7.4 Assessment

There is expected to be increased market opportunities for refined petroleum products into the EU as older EU refineries close. However, competition will be fierce and newer low cost producers of refined products have a significant cost advantage over Atlantic Canadian refineries. Atlantic refineries will use transportation advantages over some competitors and opportunities to fill shortages in the spot market to succeed. CETA is not expected to have a direct impact on the flows of refined petroleum products from Atlantic Canada as there are no tariffs or trade barriers that currently exist.

Chapter 8

Liquefied Natural Gas

Chapter Summary

- **The economic viability of four proposed liquefied natural gas (LNG) projects in Atlantic Canada is currently being evaluated. The projects would initially need to rely on securing supply from shale gas deposits in the US.**
- **Demand for imports of natural gas is growing in the EU due to weakening production and a desire to diversify away from dependence on supplies from Russia. The EU is one of the likely markets for the Atlantic Canadian LNG projects and they would have some transportation advantages over proposed projects on the Gulf Coast.**
- **Natural gas price spreads between Europe and North America are key factor affecting the viability of the proposed projects in the region.**

This chapter examines the EU market potential for liquefied natural gas (LNG).

8.1 Context

Liquefied natural gas exports have the potential to be a significant export from the Atlantic provinces in the future. There are currently no exports of LNG from Atlantic Canada but there are four proposed LNG export terminals in various stages of development in the region (Pieridae Energy, H- Energy, LNG Ltd. and a conversion of the Canaport LNG import terminal). While it is unlikely that all four would proceed, even if one were to go ahead it would have a sizeable impact on exports from the region. More will be known about these projects in 2016-2017 when they are closer to project sanction and engineering is further advanced.

The natural gas price spread between North America and other parts of the world is a major driving factor behind the rise in proposed LNG export projects on the east, west and Gulf coasts. North America natural gas prices were under US\$3.00/mmBtu in early 2015 compared to \$14.30/mmBtu in Japan and \$9.25/mmBtu in Europe. Natural gas prices in North America remain low due to the rising production from shale gas basins in the US including the Marcellus Basin in the northeast and the Haynesville basin in the south. The projects planned in Atlantic Canada are likely to focus on Europe, India and the Middle East due to their geographic advantage and strong price differential.

8.2 EU Market Size and Potential

The EU imported €14.3 billion of LNG in 2013 which accounts for about 11.5% of the world total. Of the EU total, 36% goes to Spain followed by France (20%), UK (20%) and Italy (10%). Other countries in the EU including Germany are examining imports of liquefied natural gas as they try to move away from its strong dependence on Russia for natural gas.

Table 8.1 Spain, France and the UK are Big EU Importers

Top EU importers of liquefied natural gas (HS271111), 2013

Country	Imports (€ billions)	Import share (%)
Spain	5.1	35.7
France	2.9	20.4
UK	2.8	19.5
Italy	1.5	10.4
Belgium	0.9	6.3
Other EU	1.1	7.7
Total EU	14.3	100

Source: International Trade Centre (Trade Map)

Consumption of natural gas in Europe increased steadily from 2002 until 2008 but has levelled off over the last few years due to the weakness of the EU economy since the recession. The manufacturing sector, which has become reliant on natural gas as a source of energy, remains fairly weak in Europe. However, imports have continued to increase as production in Europe, especially in the UK, has steadily declined.

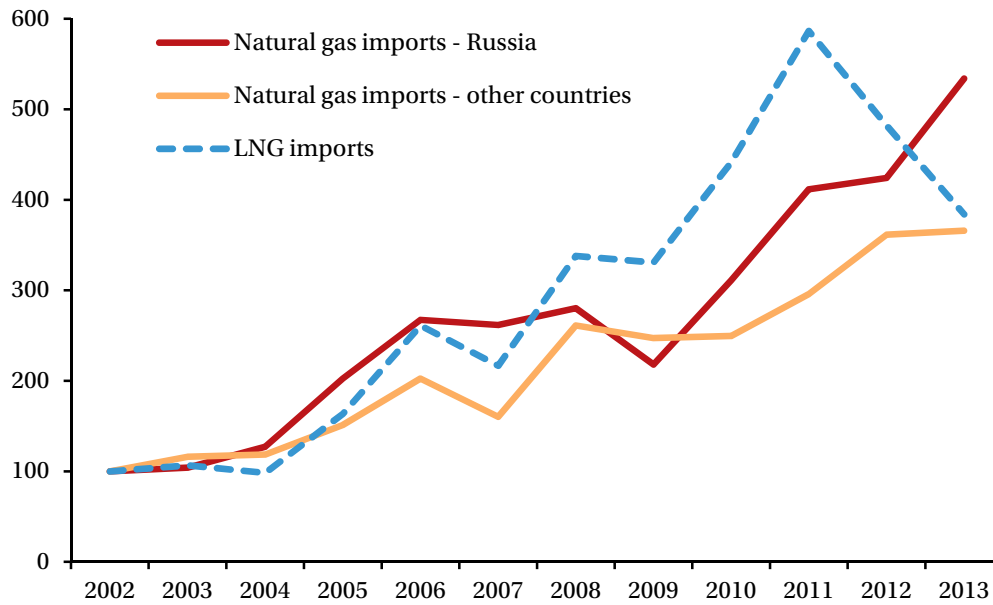
LNG and natural gas imports have both increased fourfold in value since 2001 and are up 46% since 2008 despite the weak overall demand from the industrial sector. The decline in North Sea production has created a reliance on Russia as a low cost alternative in many markets. Between 2009 and 2013 natural gas imports from Russia increased 145%. Russia accounted for about one-third of European imports of natural gas in 2013. Several central and eastern European countries as well as Germany, the EU's largest economy, exceeded those levels.

The 2014 Russian invasion of Ukraine is causing many European countries and the EU as a whole to examine ways to diversify its natural gas supply. LNG imports tend to be more expensive than gas imports from Russia by pipeline but there is more certainty of supply in the LNG contracts. In 2013 LNG accounted for about 10% of total natural gas imports into Europe. The largest competitors for Atlantic Canada in the shipment of LNG are: the US Gulf where several projects are planned; continued growth in areas that already ship

LNG such as Qatar and Algeria; and countries that are trying to market their natural gas reserves for the first time including several African countries.

Figure 8.1 Natural Gas Imports Rising in Europe

Natural gas and LNG imports (Index, 2002=100)



Source: International Trade Centre (Trade Map), UN Comtrade

LNG imports from North America are likely to play a major role in that diversification due to the price spread that currently exists. The LNG export facilities planned for Atlantic Canada are well positioned to take advantage of the European market. The Goldboro LNG project led by Pieradae Energy currently has an offtake agreement for 10 million tonnes of LNG from German utility E.On. The H-Energy project has ties to its owner's projects in India but is also looking to Europe as a potential user of the LNG. Australia LNG has also highlighted the Europe as a key market focus.

8.3 EU Market Challenges and Considerations

There are 15 proposed LNG export projects on the west coast of North America (including 12 in British Columbia); and 24 on the Gulf Coast with one under construction in Louisiana. The projects in Atlantic Canada have a significant geographic and transportation cost advantage over projects in the US Gulf of Mexico and may also benefit from a cooler climate. The distance between the projects in Nova Scotia and most LNG import terminals in Europe ranges from 2200 to 3000 nautical miles compared to 3900 to 5600 miles for projects in the Gulf.

One of the key risks to the proposed LNG export projects is the size of the price spread. In early 2014 prices spiked to over US\$6/mmBtu in North America and significantly higher in the US northeast due to high demand from cold weather compounded by pipeline constraints. There are projects planned in the US to alleviate the bottleneck in the US northeast including the Atlantic Bridge project by Spectra Energy which will help the movement of natural gas from other parts of North America into the US northeast and into the Maritimes.

A consistent high-volume supply of natural gas is crucial in the development of LNG projects in Atlantic Canada. There is potential for future natural gas development in the offshore and onshore of Atlantic Canada but no extraction is likely in the medium term: since November 2014, Newfoundland and Labrador, Nova Scotia and New Brunswick have introduced moratoriums on the use of fracking for onshore gas extraction. The supply of natural gas from the Nova Scotia offshore is set to slow and is likely stop flowing near the end of the decade. As a result, imports of gas from the US will be needed to supply LNG export projects planned for Atlantic Canada.

There are several factors that may influence EU demand for natural gas over the next decade. Relations with Russia are tense at the moment due to their involvement in the Ukraine as well as the uncertainty of supply from Russia. There have been issues in the past decade that have caused larger customers to rethink their reliance on cheap Russian gas but there were few options in the past. There are plans to develop other natural gas pipelines into the EU with many coming from the Middle East through Turkey but these are several years away from development. The EU also has significant shale gas reserves of its own that may eventually get developed. However, many countries in the EU also have moratoriums on fracking in place including France, Germany and the Netherlands.

8.4 Assessment

The EU has a growing need for alternative sources of energy, including natural gas, and proposed LNG projects in Atlantic Canada could be one potential source. A secure supply of natural gas from the US will be a key factor for proposed LNG projects in Nova Scotia and New Brunswick to move forward. Significant pipeline expansions in the US will be needed to make that happen. The size of the price spread between gas produced in North America and what is being paid in Europe for imported LNG will be an important determinant behind the economics of these projects along with the ability of project developers to minimize the capital costs on these multi-billion investments. CETA is not expected to have a direct impact on the flows of LNG from Atlantic Canada as there are no tariffs or trade barriers that currently exist on LNG.

Chapter 9

Crude Oil

Chapter Summary

- The current weakness in oil prices has pushed back some offshore oil development activity in Atlantic Canada but several exploration and development projects continue to move forward.
- Increased oil production in North America has led to a shift in exports of Atlantic Canada's crude oil to other parts of the world including the EU.
- Industrial demand for crude oil in the EU has declined over the last decade but EU production of crude oil has fallen at a faster rate leading to increased imports. A desire to reduce dependence on Russia for crude oil is expected to open up opportunities for further growth in imports.

This chapter examines the EU market potential for crude oil, the prime input in petroleum refining.

9.1 Context

The first crude oil production in Atlantic Canada began in the Nova Scotia offshore with the Cohasset-Panuke project which produced 44 million barrels between 1992 and 1999. Since that time most of the focus has been on the Newfoundland offshore which currently has three producing oil fields and a fourth project, Hebron expected to begin production in 2017. While activity on the \$14 billion Hebron project continues, a \$2.5 billion expansion plan to the White Rose field has been pushed back due to weak oil prices.

Table 9.1 Newfoundland has Significant Offshore Oil Production

Oil production and reserves, Atlantic Canada, 2014 (millions of barrels)

Oil field	First year of production	Production	Reserves remaining (total reserves)
Hibernia	1997	42.2	726 (1,644)
Terra Nova	2002	16.7	140 (506)
White Rose ¹	2005	19.9	191 (437)
Hebron	2017	0.0	707 (707)

Note: 1. Includes North Amethyst, South and West White Rose

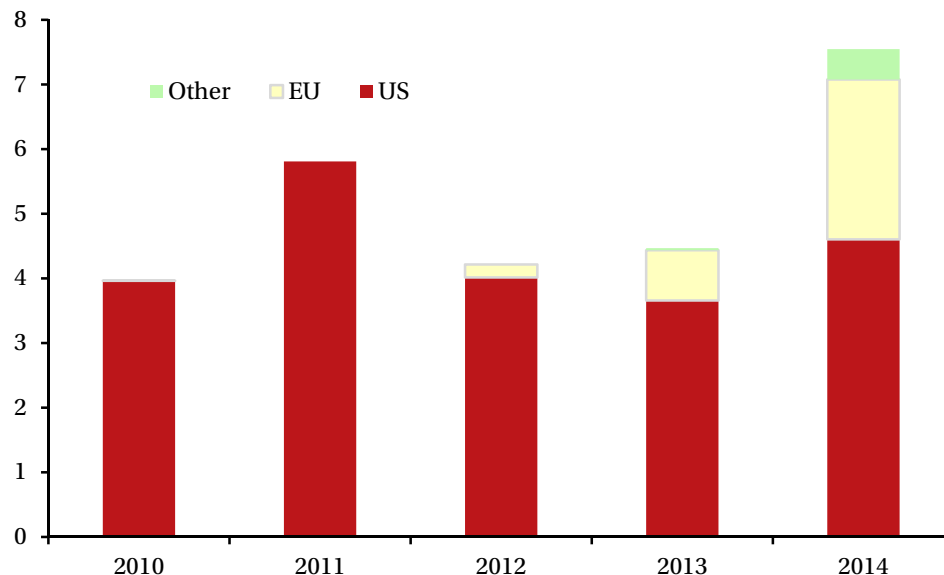
Source: Canada-Newfoundland and Labrador Offshore Petroleum Board

Atlantic Canada also has two crude oil storage and transshipment facilities. The Newfoundland Transshipment Limited facility at Whiffen Head is dedicated to Newfoundland offshore projects while the NuStar Terminal in Point Tupper acts as a transshipment terminal largely for international customers.

Crude oil produced in Atlantic Canada has typically gone to refineries in the US or Canada. However, there has been a shift over the last few years due to the rapid increase in production from the Bakken fields in the western US. This has led to lower crude oil prices for refineries in North America. Oil from the Bakken fields has been shipped by rail, pipeline and barge to refineries, including by rail to the Irving Oil refinery in Saint John. As a result the crude oil exports from Newfoundland have shifted some of their focus to European and other markets. In 2011, there were no significant crude oil exports to the EU from the Atlantic region. In 2014, there was nearly \$2.5 billion of crude exports to EU countries led by nearly \$1.5 billion to Italy and \$750 million to the UK. Italy and the UK have the largest refining capacities in the EU after Germany.

Figure 9.1 More Crude Oil Exports Going to the EU

Exports of crude oil (HS 270900), Atlantic Canada (\$ billions)



Source: Trade Data Online

Oil production in Newfoundland and Labrador peaked in 2007 at 134 million barrels. Since then production has declined steadily to less than 80 million barrels in 2014. This is despite several billions of investment to extend the life of the Hibernia and White Rose projects through the addition of nearby fields. Production will get a boost in 2017 with

first oil from the Hebron field but production is unlikely to get back above 100 million barrels per year.

Exploration activity has picked up of late in both the Newfoundland and Nova Scotia offshore areas in the hunt for more oil. Statoil Canada and its partner Husky Energy have discovered oil at its Bay du Nord, Mizzen and Harpoon properties in the Flemish Pass off of Newfoundland. There is an estimated 300 to 600 million barrels of oil at Bay du Nord and another 100-200 million barrels at Mizzen while Harpoon is still being evaluated. Bay du Nord was the world's largest conventional oil discovery of 2013. An 18-month exploration program is underway to further evaluate the commercial potential of these discoveries. The most recent call for bids in the Newfoundland and Labrador offshore totalled \$597 million in work commitments, including a \$559 million bid in a portion of the Flemish Pass by ExxonMobil, Suncor and ConocoPhillips.

The offshore sector in Nova Scotia got a boost when Shell Canada acquired eight offshore parcels for \$1 billion in the deep waters about 200 km southwest of Deep Panuke in 2012. Shell completed a seismic program on the parcels in 2013 and will begin drilling on the blocks in 2015. It is expected that 2-3 wells will be drilled in the first phase and another 4 exploration wells possible over the 2017 to 2019 period. BP bid \$1 billion for four deepwater parcels in the Nova Scotia offshore in late 2012 and completed a seismic program in 2014 followed by an exploration well likely in 2017.

Oil companies in Alberta's oilsands are looking at new ways to get their oil to markets outside of the US and western Canada. The planned Energy East oil pipeline project by TransCanada would see oil from western Canada shipped to Saint John. The Irving refinery is expected to be a key customer for that oil but a large focus of the project is on the export opportunities through the Port of Saint John. A 7.6 million barrel export terminal, which is a partnership with Irving Oil, would ship oil from Alberta to international markets with a focus on Europe. Engineering work is underway on the pipeline project and the regulatory process will continue over the next year. TransCanada announced in April 2015 that it would delay the start of construction with a new expected in-service date of 2020 for New Brunswick.

Two other projects have also been proposed that would see crude oil shipped by rail to ports in Atlantic Canada and then exported to international markets. A \$200 million rail terminal and transfer system is planned at the Port of Belledune which would include 1.2 million barrels of storage capacity. A similar rail/transfer system project has also been proposed at the NuStar terminal in Point Tupper, Nova Scotia.

9.2 EU Market Size and Potential

EU demand for crude oil was showing a moderate upward trend prior to 2008, but since then demand has fallen steadily as the EU struggled to recover from the global recession. That weakness intensified in 2013 due to the struggles of countries such as Italy, Spain and Greece which spilled over to the rest of the EU.

Table 9.2 Oil Demand is Falling Due to a Weak Economy in the EU

Total oil demand by country, 2013

Country	Million tonnes	% change 2012-13
Germany	117.0	-3.3
France	82.0	-3.7
UK	70.4	-4.0
Italy	64.9	-7.1
Spain	63.3	-4.9
Total EU	631.7	-3.4¹

Notes: 1. EU-27

Source: Wood MacKenzie

EU production of crude oil has also fallen dramatically over the last decade, from 3.1 million barrels per day in 2003 to 1.3 million barrels per day in 2013. Norway, which is not a member of the EU but is an important supplier of EU crude oil, has seen a similar decline from 3.1 million barrels per day to 1.5 million barrels per day over the same period. As a result, the volume of crude oil imports into the EU were growing at an average rate of 1.5% annually prior to the recession. However, since 2008, the fall in demand has been the dominant trend and import volumes have declined by 2.5% annually. Germany, Italy and France are the largest importers along with the Netherlands (which may partly reflect transshipment to other countries). With an economic recovery, there is likely to be continued opportunity for imports of crude oil as production in the North Sea is expected to continue to decline.

Russia has picked up much of the slack in production in Europe. Imports from Russia have increased from €26 billion in 2003 to €93 billion in 2013. Its share of total imports has grown to 28% of the total. Other areas are also playing a growing role including former Russian states (Kazakhstan and Azerbaijan) and Africa (Nigeria and Angola). Canadian crude imports into the EU totalled €1.4 billion in 2013 (0.4% of the total) but will be much higher in 2014. Along with the shipments from Newfoundland and Labrador there are shipments from western Canada's oilfields that are being moved via pipeline to the US gulf coast and shipped to European refineries.

As with other energy imports, the EU countries would like to reduce their dependence on Russia for crude oil. Relations with Russia continue to be tense due to their involvement in the Ukraine but it is difficult to shift away from a cheap source of supply that is connected by an extensive pipeline network.

9.3 EU Market Challenges and Considerations

Much of the crude produced in the North Sea, where reserves are declining, is a lighter density and sweeter (i.e., low sulphur content) variety. Refineries in Europe that can only process light, sweet crude are either going to look for replacement crude of a similar type or convert their facilities to handle the heavier crude that comes from Russia and other sources. The oil produced at Hibernia, Terra Nova and White Rose is considered light to medium density crude and sweet. The crude that is coming on stream in 2017 from the Hebron project is expected to be heavier in density and may only be processed at refineries that have the capability to process heavy crude. Heavier crude oil typically trades at a lower price than lighter crude products impacting profit margin per barrel.

The competition for crude imports into Europe will come from several sources. Russia will continue to be a dominant participant. However, due to the slow growth in Europe and more rapid growth in parts of Asia, Russia has moved some of its focus away from expansion into the European market. Other former Russian states and several African countries are also expected to expand their reach into Europe over the next decade. The US currently has a ban on the export of crude oil to non-free trade countries. If the US agrees a free trade agreement with the EU it would open up their ability to export to those countries.

9.4 Assessment

Despite the declining demand for crude products there is an opportunity for growth in imports of crude oil from Canada into the EU. Declining production in Europe and a move away from reliance on fuel products from Russia could lead to more increased EU imports. In addition, the continued growth in production of shale oil in the US and the addition of the Energy East pipeline will make it more difficult for offshore producers in Atlantic Canada to sell their oil to the US and Canadian markets. As a result, the EU could see continued growth over the next decade as a destination for Atlantic Canadian production. If the Energy East oil pipeline goes ahead it is expected to lead to increased flows of oil from via the Port of Saint John into Europe. CETA is not expected to have a direct impact on the flows of crude oil from Atlantic Canada as there are no tariffs or trade barriers that currently exist.

Chapter 10

Iron Ore

Chapter Summary

- **Iron ore is a key input in steel manufacturing and has been mined in Labrador for many decades. Global iron ore prices have fallen 60% since 2013 and the viability of several proposed mining projects will depend on a recovery of prices.**
- **Atlantic Canada exports of iron ore to the EU were \$820 million in 2014. The European steel industry has been slowly shrinking for several decades. However, with growth expected in the construction and automobile sectors, the outlook has improved and the EU is expected to remain an important player in steel production.**
- **CETA is not expected to impact the economics of exporting iron ore to the EU. The ability to compete with other producers, especially in Brazil, and the advancement of new iron ore projects in Labrador, will be the prime determinants of future Atlantic exports to the EU.**

This chapter examines the EU market potential for iron ore, the largest metallic export from Atlantic Canada and a key input for the steel industry.

10.1 Context

Iron ore is a key resource for the steel making industry and is used in building and automotive construction. Iron ore has been mined in Labrador for decades and has seen significant swings in production and investment due to past volatility in prices; the region's industry has experienced another two tumultuous years. In 2013, prices were strong and several projects were expanding or emerging in Labrador. Two new direct shipping (DSO) projects had begun, a new project was heading rapidly toward development, other existing producers were ramping up production and a port expansion was underway at Sept Isles, Quebec to ship the ore to international markets. Exploration was at a long-term high and new projects in the iron ore rich Labrador Trough were being evaluated.

Since 2013 iron ore prices have plummeted by over 60%. This has led to the closure of one of the main producing mines by Cliffs Resources at Wabush; one of the two DSO projects has halted production for the last two years; the Iron Ore Company of Canada

has held back its expansion plans; the planned \$1.3 billion Kami project is on hold; and exploration has slowed.

Table 10.1 Atlantic Canadian Iron Ore Production

Company	Ownership	Production, 2014 (million tonnes)
Iron Ore Company of Canada	Brazil, Japan, Canada	14.0
New Millennium/Tata Steel	Canada/India	0.3
Wabush Mines – Cliffs Resources ¹	US	1.0
Labrador Iron Mines ²	Canada	0

Notes: 1. Mine closed in 2014

2. Still active but no production in 2014/2015

Source: Newfoundland and Labrador Department of Finance

Proposed Iron Ore Developments

Alderon was expecting to start developing the \$1.3 billion Kami Iron Ore Project in Labrador near Wabush in 2014, pending financing of the project, but the decline in iron ore prices has pushed back the start of construction. Production from the open pit mine would begin at 8 million tonnes per year with a mine life of 30 years. Production could increase to 16 million tonnes with future investment. Alderon has entered an off-take agreement with Hebei Iron and Steel of China for 60% of the iron ore from Kami; the remaining would likely be sold in China or Europe.

Tata Steel Minerals Canada (TSMC), a joint venture of Tata Steel Global Minerals of India and New Millennium Capital, in addition to their current DSO project, are advancing a large project called LabMag with iron ore deposits that span the Quebec-Labrador border. Production could reach 22 million tonnes per year. A large share of the \$8 billion project will take place in Quebec including a portion of the 600km pipeline used to transport the slurry concentrate to a pellet processing plant also located in Quebec.

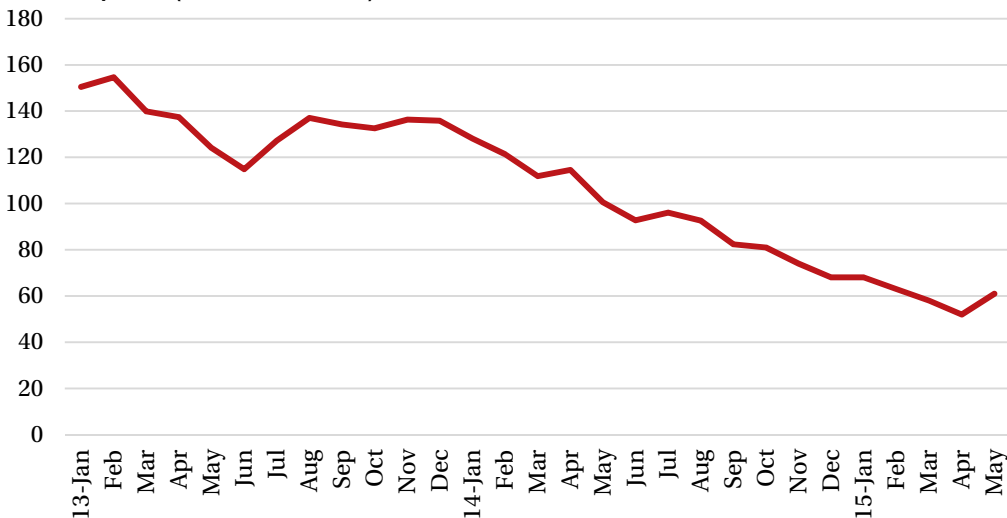
Century Iron Mines and its joint venture partner WISCO International Resources Development & Investment Limited of China are planning a direct shipping iron ore project in Labrador near Schefferville, Quebec. The project would see one million tonnes per year in the first year and two million tonnes over the remaining years of mine's life. The goal would be to generate cash flow from the DSO project which would lead to larger projects planned on other deposits in Labrador and Quebec.

The provincial government is entering exclusive discussions with Julienne Lake Alliance, a consortium led by Altius Resources Inc. to develop the Julienne Lake Iron ore deposit near Wabush. The province completed a \$2.6 million exploration plan on the property in 2011 that indicated a conservative estimate of 580 million tonnes of ore grading 33% iron. The mine could produce up to 22 million tonnes of iron ore concentrate per year over 25 years.

The drop in iron ore prices is largely due to a slowdown in the Chinese economy along with continued high production in many parts of the world. Prices are expected to remain low until more high-cost producers exit the market as the Chinese economy is expected to continue to grow at a more moderate pace in the medium term.

Figure 10.1 Falling Iron Ore Prices Slowing the Pace of Development in Labrador

Iron ore prices (\$US/metric tonne)

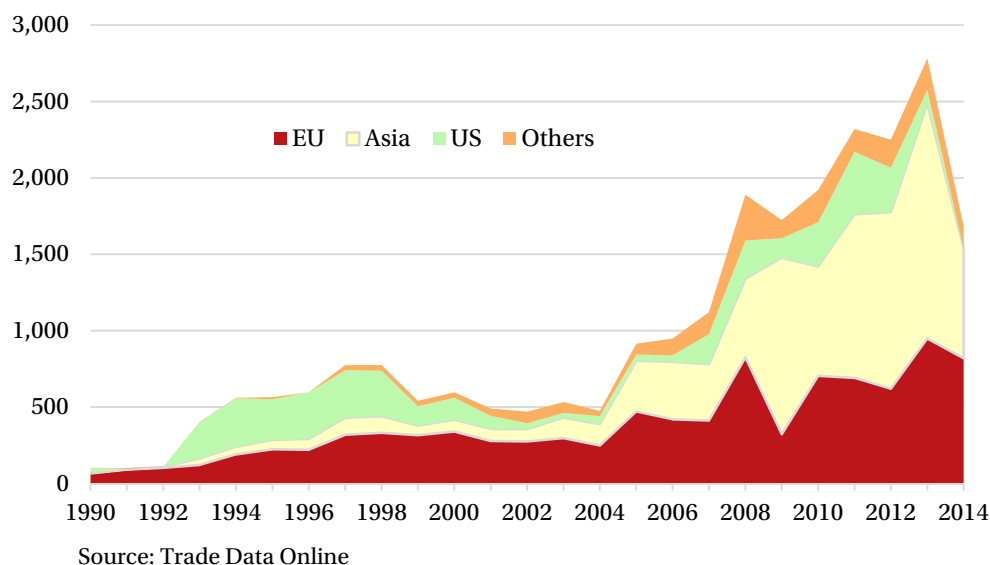


Source: ycharts.com

While Atlantic iron ore exports to the EU have grown since the mid-2000s, the most rapid growth has been in Asian markets, most notably China. The EU accounted for 49% of Atlantic exports of iron ore in 2014. This jump, from an average of 30% over the previous 5 years, was in part due to a large drop in Atlantic exports to China. Exports to China dropped from \$1.8 billion in 2013 to about \$900 million in 2014 due to declining demand, while exports to EU countries only fell from \$949 million to \$820 million. A majority of Labrador's iron ore exports to the EU go initially to the Netherlands, although it is likely largely heading to Germany for manufacturing and auto making, based on previous trade patterns. France, and the UK are other important destinations of Labrador iron ore.

Figure 10.2 The EU is an Important Market for Iron Ore

Exports of iron ore (HS2601), Atlantic Canada (\$ millions)



10.2 EU Market Size and Potential

The use of steel is the prime determinant of demand for iron ore. The EU is an important player in the steel market, accounting for 10% of global steel output and 9% of steel use, surpassing North America on both measures.⁴⁹ However, this importance has been receding with the growth of China and other emerging markets: in 1990 the EU accounted for 25% of global steel output. European steel consumption declined at an annual rate of 1% over the period 2000-2013.⁵⁰ While imports have fluctuated, the EU still produces the vast majority of the steel it consumes.

Growth in the steel industry has shifted to other parts of the world and demand in the EU has fallen to a new, structurally lower level.⁵¹ While the short term outlook has improved, in the long term the industry is expected to decline. In general, demand will depend on the outlook for the automobile and construction sectors. The slowdown in the construction sector in the EU lasted longer than that in the rest of the economy, however the short term outlook is positive, with new construction forecast to grow 10% cumulatively 2015-2017.⁵² Growth in construction is expected to be led by central and

⁴⁹ World Steel Association (2014) *Steel Statistical Yearbook*. Brussels: World Steel Committee on Economic Studies. <https://www.worldsteel.org/dms/internetDocumentList/statistics-archive/yearbook-archive/Steel-Statistical-Yearbook-2014/document/Steel-Statistical-Yearbook-2014.pdf>

⁵⁰ SteelConsult International (2014). *The Future of the European Steel Market*. Prague: EU Iron Ore Conference.

⁵¹ SteelConsult International (2014).

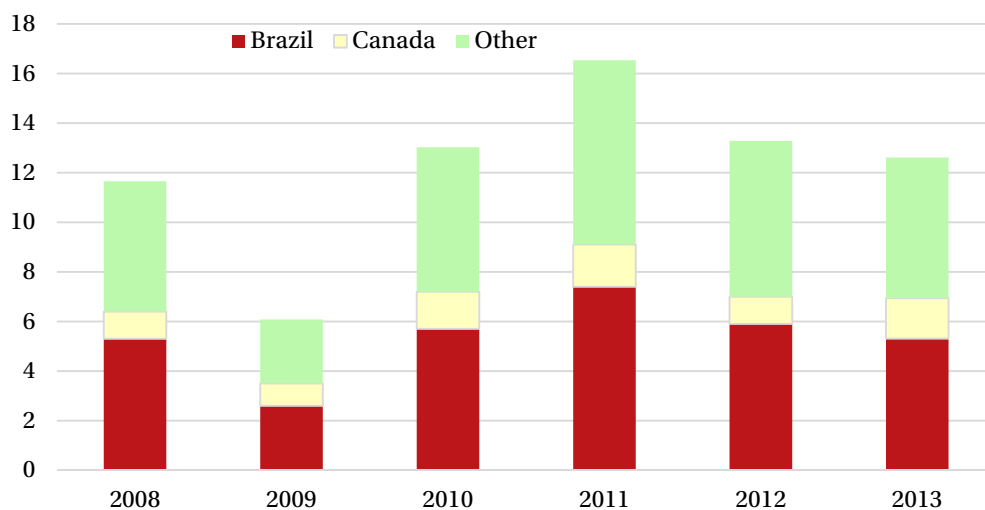
⁵² EUROCONSTRUCT 79th Conference (2015). <http://www.euroconstruct.org/pressinfo/pressinfo.php>

eastern Europe where new infrastructure projects will stimulate the market. The outlook for the automobile sector is similarly positive, if moderate.⁵³

If the European economy rebounds and the construction and manufacturing sectors improve there would be an increase in demand for iron ore that could be met by producers in Labrador. However, risks remain and the recovery has not been uniform, with persistent weakness in southern Europe.

Figure 10.3 Canada is an Important Source of Iron Ore for the EU

Imports of iron ore (HS 2601), EU (€ billions)



Source: International Trade Centre (Trade Map)

Recent trends in import values have been driven by price fluctuations. The value of iron ore imports into the EU peaked in 2011 as prices were at record levels. Imports fell in 2012 and 2013 as prices dropped but most of the losses were due to lower imports from Brazil and other countries. Most major importers of iron ore saw declines in the value of iron ore imported in 2013 including Germany which accounts for over 30% of all iron ore imports. Imports from Canada have increased their share from 10% of EU imports in 2011 to 12.9% in 2013.

⁵³ Randall, Steven (2014) *Outlook for the European and Global Ferrous Markets*. Prague: EU Iron Ore Conference

Table 10.2 Germany is the Centre of Iron Ore Demand in the EU**Iron ore imports and crude steel production by EU country, 2013**

Country	Iron ore imports (€ billion)	Country	Steel production (million tonnes)
Germany	3.9	Germany	42.6
France	1.4	Italy	24.1
UK	1.3	France	15.7
Italy	1.1	Spain	14.3
Austria	0.9	UK	11.9
Total EU	12.6	Total EU	166.3

Source: International Trade Centre (Trade Map), World Steel Association

10.3 EU Market Challenges and Considerations

The EU produces less than 2% of the world's iron ore, far less than they consume.⁵⁴ However, in the past decade, imports have declined and production has risen slightly.⁵⁵ There are several new and proposed iron ore projects in Sweden in particular. The volume of Nordic production (including Sweden and to a lesser extent Norway and Finland) is expected to increase by 40% over the next three to five years. Atlantic exporters will have to compete with increasing European supply in addition to other exporters. European producers, in general, are high cost, but produce a high quality product that commands a price premium. In contrast, other competitors, such as Brazil provide low cost iron ore. Australia is a major competitor and producer of low cost iron ore, but is a relatively small player in the EU. The Iron Ore Company of Canada mine in Labrador produces at a high quality and low cost compared to other mines in the Labrador Trough and is better positioned to weather the current weakness in the global market.

EU steel production faces its own challenges and long term risks. Even with strong demand, it may become more cost effective to import steel. If for example, the European producers face an increased carbon price in the future, this will further squeeze margins, and may put them at a competitive disadvantage relative to exporters that do not face a carbon price in their jurisdiction. At this time, many factors, including quality, lead times, freight costs, delivery reliability, and price risk still favour locally produced steel.

Future growth in iron ore exports to the EU will depend on the ability of producers in Labrador finding ways to be more competitive with those in Brazil which is key supplier

⁵⁴ World Steel Association (2014).

⁵⁵ SNL Metals & Mining (2014). *European iron ore mining – Where is it heading?* Prague: EU Iron Ore Conference.

of EU iron ore, as well as production in Sweden and Ukraine which benefit from closer proximity.

10.4 Assessment

While the EU is not expected to be a growth market in the long term, it is and will remain an important producer of steel and a major destination for Atlantic exports of iron ore. CETA is not expected to change the economics of iron ore exports to the EU as there are no tariffs on the export of Canadian iron ore to the EU at this time. However, until the market dynamics for iron ore readjust globally the price will remain low which will keep any new production from this region on the sidelines.

Chapter 11

Summary and Conclusions

Chapter Summary

- The EU is a large market and despite recent economic challenges offers potential for Atlantic firms to gain market share and benefit from future EU growth, including rising incomes in central and eastern European economies.
- The seafood industry will benefit from tariff elimination under CETA. In many other Atlantic industries tariffs on Canadian products are already low or non-existent, so the benefit of tariff elimination under CETA will be marginal.
- Some existing non-tariff barriers, such as a preference for local procurement in defence spending, are expected to remain under CETA. For firms in highly regulated industries such as health care and aerospace, obtaining EU or national approvals will continue to represent a significant cost to access these markets.
- Atlantic firms that are succeeding in the EU are typically providing specialized (niche) products and services. It is therefore very important to understand the detailed requirements of individual customers and how regulatory standards vary by country. Having sales teams in the EU, maintaining close relationships with EU clients, or using agents, distributors or other partners in the EU has been key to helping relatively small Atlantic firms navigate the complexities of the EU market and country- and firm-specific requirements.
- Some Atlantic firms will continue to sell to the EU, while others will be encouraged by CETA to take a closer look at opportunities in the EU. However, some firms that do not currently sell to the EU are likely to continue focusing on the US and other global markets due to their small scale and limited capacity to invest in new market development and in some industries, market entry in the EU may not be feasible due to a lack of cost competitiveness and the presence of substantial local production in the EU.

This chapter summarizes the key findings from the preceding analysis, including both prospects for the specific industries that were examined, and general strategies for successful market entry. It also includes, where possible, preliminary comments on EU prospects for a number of other Atlantic industries that were not examined in detail in

this report. As a result, the preliminary assessments for these industries should be treated as tentative, and are designed to help industry associations and trade development officers assess where a more detailed market analysis would be of value.

11.1 EU Opportunities by Industry

This section summarizes the opportunities in the EU for industries selected for analysis in this report and, where possible, includes preliminary assessments for a number of other industries. These industries (see Table 11.1) comprise the majority of Atlantic Canada's current export capacity.⁵⁶

Refined Petroleum

There are currently two refineries in Atlantic Canada with a capacity of 415,000 barrels per day. Atlantic exports of refined petroleum products to the EU vary widely by year and country and are dependent on short-term needs in Europe. Demand for refined petroleum products is declining in the EU but refinery capacity is expected to fall over the next decade due to the age and inefficiency of refineries. Competition from other low cost producers in the US, India and the Middle East will make it challenging for Atlantic refineries to play a large role in the EU.

Seafood

The seafood industry is the largest component of the food industry in Atlantic Canada. The EU currently represents a large share of the global sales of frozen and processed shrimp and frozen scallops from Atlantic Canada. Fresh and frozen lobster are the other key export to the EU. The EU is the largest seafood market by value in the world with an increased dependence on imports due to declining EU fish stocks. Per capita seafood consumption is projected to increase over time with large supermarkets being a key driver of product requirements.

The elimination of EU tariffs provides potential revenue gains of \$30-40 million for Atlantic exporters of lobster, shrimp and scallops. Increases in after-tariff seafood prices in the EU market will induce increased export volumes but this will be at the expense of existing sales to the US or other markets due to supply constraints (e.g., quota). Given the current structure and competitive nature of the seafood industry in Atlantic Canada, there is a strong possibility that any potential price gains in the EU will be bargained away in attempts to increase market share, benefitting EU importers rather than Atlantic exporters. Greater collaboration in marketing, for example, could help mitigate this risk.

⁵⁶ Chaundy, David (2015). *The Changing Global Market for Atlantic Manufacturing*. Halifax: APEC.

Table 11.1 Summary of Opportunities in the EU for Atlantic Manufacturers**Exports, Atlantic Canada, 2013 (\$ millions)**

Industry	Exports	EU Exports	Assessment of Atlantic opportunities in the EU
Large Exporters¹			
Refined petroleum	13,323	633	Declining EU refinery capacity may provide opportunities to meet short-term needs.
Seafood	2,236	270	Tariff elimination will provide potential revenues gains of \$30-40 million for lobster, shrimp and scallops with product diverted from non-EU markets.
Tires	1,003	15	Exports to the EU are not anticipated to grow as the market is served by Michelin's plants in the EU.
Paper	779	4	n.a.
Pulp	707	10	n.a.
Wood products	608	35	Potential for speciality suppliers. Limited prospects for lumber as the EU is largely self-sufficient and customization is not economic for small producers.
Fruit & vegetables	532	46	Despite the elimination of a 14-17% tariff, opportunities for frozen french fries are limited due to existing EU production, including McCain-owned plants in the EU. Rising incomes in central and eastern Europe and growing product awareness likely to support growth in frozen blueberries.
Mid-Size Export Industries¹			
Machinery & equipment	521	74	Opportunities for specialized, niche players but detailed assessments needed for each market segment. Improved labour mobility under CETA will help with installation and after sales service.
Metal products	317	18	Lead will not be exported as Glencore has a smelter in the EU. Exports such as wire & rope were not examined but structural steel products are not likely to be cost competitive.
Chemicals & pharmaceuticals	226	25	Modest EU demand growth for pharmaceutical and diagnostic products but Atlantic firms must navigate national regulatory and reimbursement schemes.
Plastics	203	2	n.a.
Aerospace	134	27	EU aerospace demand projected to grow but local partners or own local presence may be needed to compete against other EU firms, especially for defence contracts.
Other Exporters¹			
Miscellaneous manufacturing	138	43	Main export is gaming machines but are likely to decline as manufacturing capacity is being moved to the US.
Other food	133	2	n.a.
Textiles	94	1	n.a.
Beverages	67	4	Shipping costs limit beer exports but vodka exports to the EU have grown rapidly since 2010.
Gypsum	30	-	n.a.
Other transportation	76	1	n.a.
Furniture	24	-	n.a.

Notes: 1. See Chaundy (2015, Table 2.3) for detailed definitions.

Source: Trade Data Online, APEC

For some seafood species there is also the possibility of expanding value-added production, for example, with the development of new retail products. This will depend on the expected margins relative to now higher EU prices for existing products and the cost of product and market development. However, farmed salmon is not likely to be competitive in the EU due to transportation cost for fresh product while frozen crab is unlikely to benefit from tariff reductions without a major marketing effort.

Tires

Tires are Nova Scotia's largest export and are manufactured at Michelin's three facilities in Granton, Bridgewater and Waterville. Of the tires manufactured in Nova Scotia, about 25% are sold in the Canadian market, while most of the remainder are exported to the US. Michelin has facilities in Europe and manufactures tires in the market in which it intends to sell them because they are costly to ship. Further, due to differences in regulations, climate and road conditions, the tires that are sold on the EU market differ from those manufactured in Nova Scotia for the North American market. These considerations limit any EU export opportunities even under CETA.

Paper and Pulp

In the face of declining newsprint demand and competitive pressures, there has been a substantial reduction in Atlantic Canada's productive capacity in pulp and paper.⁵⁷ Exports of Atlantic Canada's pulp and paper products to the EU have declined more than 90% over the last decade, compared to a 27% decline in all international pulp and paper exports. While paper exports are down across the board, pulp exports are up, with big gains in shipments to Asia, partly due to the A.V. Group's own supply chain for the rayon industry. Pulp and paper products currently enter the EU market duty free, so CETA is not expected to increase Canadian exports of these products.⁵⁸

Wood Products

The manufacture of wood products, primarily lumber, continues to be an important industry in New Brunswick and Nova Scotia. Though employment has declined in the past decade, the sector still supports over 8,000 jobs. Although the EU market for wood products is sizeable, the EU is largely self-sufficient with low import shares and rising exports. Demand is not expected to grow much in the near term. The EU accounts for a very small share of Atlantic lumber exports and this is not expected to increase. Atlantic Canadian mills are configured to produce commodity products, predominantly for North

⁵⁷ See Chaundy (2015) and APEC (2014). Consolidation in Atlantic Canada's Forest Industry. *Report Card*, January. Halifax: APEC.

⁵⁸ Foreign Affairs, Trade and Development Canada (2012). *Initial Strategic Environmental Assessment*. <http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/eu-ue/initialea-ceta-aecg-eeinitiale.aspx?lang=eng>

American markets that have different product dimension standards than Europe. Thus, responding to the needs of export customers can frequently require adjustments to mill set up and therefore, unless orders are of sufficient volume and inclusive of a sufficiently wide spectrum of grades to generate reasonable returns, the incremental cost and effort of changing mill and output specifications is often not warranted. However, opportunities will continue to exist in the EU for specialty wood producers. In addition, wood pellets are currently exported to the EU, particularly the UK. While demand has been increasing, it is dependent upon the continuation of existing renewable energy policies in the EU.

Fruit and Vegetables

The EU currently accounts for almost 40% of Atlantic Canada's frozen blueberry exports. Most exports of frozen blueberries from Atlantic Canada are sold as an ingredient to other food manufacturers. Demand for blueberries in Europe is expected to grow due to rising incomes, especially in central and eastern European countries, along with increased product awareness including knowledge of potential health benefits. A major expansion by Oxford Frozen Foods in New Brunswick will expand the current wild blueberry acreage but beyond this, increased supply will largely have to rely on improving yields. The current 14% EU tariff on frozen blueberries from Canada has been suspended for a number of years, but CETA would permanently eliminate this tariff. Producers need to maintain their responsiveness to changing European tastes and regulations and remain cost competitive.

Atlantic Canada is home to 40% of Canada's potato production, primarily in Prince Edward Island (26%), but also with significant production in New Brunswick (14%). Three quarters of Atlantic Canada's international potato exports are frozen potato products such as french fries. Frozen potatoes are exported from Atlantic Canada primarily to the US, but also to Asia and Latin America. Over the past decade, exports to the EU have made up no more than 1% of frozen potato exports, with McCain having its own manufacturing facilities in the EU. Canadian frozen potatoes entering the EU market currently face tariffs of 14-17%, which will be eliminated by CETA. However, market opportunities remain limited. Belgium, Germany and the Netherlands are major potato producers and the EU is a net exporter of frozen potato products. The growth markets for Atlantic frozen potatoes are seen to be Asia and South America, where a growing middle class is driving demand.

Machinery and Equipment

Atlantic Canada's machinery and equipment industry produces a very diverse group of products that feed into many industries and this makes it difficult to provide any broad assessment of market opportunities. Detailed assessments are needed for each market

segment. Atlantic exports in this industry include engines for aircraft (which are discussed in Chapter 5). It also includes many within the ocean technology sector, including navigational products. Some Atlantic firms view the EU as a mature market with limited potential but market opportunities in the EU likely exist for other innovative firms that provide specialized and unique solutions. These firms will likely receive limited benefits from tariff reductions under CETA as their success is driven by innovation and product positioning, rather than by cost competition. However, the increased labour mobility under CETA is a potential benefit for these firms than are installing equipment and providing after sales service.

Metal Products

Exports of metal products include both primary and fabricated metal products. The largest share of this is refined lead produced at the Brunswick Smelter but this facility does not export to the EU as its parent company, Glencore, has a smelter in the EU. Other products such as wire and steel rope were not examined although exports of structural steel products are not expected to be competitive in the EU.

Chemicals and Pharmaceuticals

The chemical manufacturing industry in Atlantic Canada includes firms working in human and animal health as well as industrial chemicals. In human health, a large share of the pharmaceutical and diagnostic products produced in the region are exported to the EU. While health care is a growing field, government spending restraint and other factors will moderate growth potential in the EU. Atlantic firms have been successful in the EU by working with agents and distributors to navigate the complex and fragmented health care market.

Plastics

Atlantic Canada exported \$203 million worth of plastic and articles of plastic in 2013, the bulk of which originated from Nova Scotia, where large plastics firms such as Copol International, Farnell Packaging, Intertape Polymer Group and PolyCello are located. The primary destination for these exports was the US (95%), while just 1% was destined for the EU. Most of the plastic exported into the EU from Atlantic Canada faces tariffs of 3-7% depending on the specific product.⁵⁹ These tariffs will be eliminated upon implementation of CETA. However, Atlantic plastics manufacturers are not expected to be cost competitive in the EU due to the lower cost of resin in Europe while US producers are benefiting lower energy costs due to increased shale gas production.

⁵⁹ Plastics refer to HS code 39: Plastics and articles thereof. Atlantic Canada primarily exports under the product codes HS 3920: Other film, plates, sheets, foil and strip of plastics - non-cellular and HS 3921: Other film, plates, sheets, foil and strip of plastics - cellular.

Aerospace

All four Atlantic provinces are active in the aerospace industry. The maintenance, repair and overhaul (MRO) segment is important in Prince Edward Island and Newfoundland and Labrador, while parts manufacturing occurs in Nova Scotia and New Brunswick. Exports to the EU make up over 20% of Atlantic Canada's aerospace exports. The European passenger fleet is expected to grow 71% by 2033 creating increased demand for parts and MRO. Atlantic firms face strong competition in Europe. Many firms have found that an on-the-ground presence or a local partner is key to winning EU contracts, although CETA may increase the willingness of European firms to do business with Canadian companies.

Other

In the beverages industry, breweries account for about three quarters of the region's exports, though distilleries have a growing share. Breweries in the region have tended to focus on the US market, in part due to the shipping costs, which make up a significant share of the value for a relatively bulky product like beer. Further, the methods of distribution in the EU market (including tied houses in some countries such as the UK and Germany) differ from those in North America, making established strategies less effective. While less than 1% of Atlantic Canada's exports of beer are destined for the EU, a much larger share of distillery exports, especially vodka, are being sold in the EU (20% in 2013). These exports have increased rapidly since 2010.

In the miscellaneous manufacturing category, by far the largest export is of gaming machines produced by IGT in New Brunswick. They have been active in the EU for many years and already have extensive market coverage. The EU is a mature market with limited growth opportunities, other than in some of the emerging central and eastern European countries. More importantly, in April 2015, IGT announced it was moving its manufacturing capacity from Moncton to Nevada which will eliminate Atlantic Canada's exports in this category.

11.2 Expected Impacts of CETA

The EU is a huge market with potential for relatively small Atlantic firms to capture some market share. Although the EU economy has struggled since the 2008/2009 global recession, reflecting sovereign debt concerns and fiscal austerity, modest growth is projected going forward. In addition, rising per capita incomes in central and eastern Europe offers potential for growth in consumer products such as seafood and blueberries. Similarly, the aging population in many European nations will increase health care demands providing growth opportunities for Atlantic firms in pharmaceuticals and diagnostics, for example.

Atlantic seafood exporters will be the prime beneficiaries of reductions in EU tariffs, with current EU tariffs estimated to cost the region \$30-40 million, although the nature of these benefits will depend upon the competitive response of the industry (see Chapter 2 for a detailed discussion). Outside of seafood, EU tariffs are generally low and not perceived to be a major barrier to competitive success, or tariff removal is not expected to have much impact on Atlantic exports. For example, the elimination of the 14-17% tariffs on Canadian frozen potatoes is not expected to lead to increased Atlantic exports as McCain already has plants in the EU and the EU is a net exporter of frozen potato products. However, the fact that no new tariffs can be put in place creates greater certainty for innovative firms that are developing new or improved products. And for frozen blueberries, CETA will ensure that the currently suspended 14% tariff will not be re-imposed.

Non-tariff barriers can create obstacles. A proposed new EU standard for structural lumber was expected to effectively shut-out Canadian producers from the EU market but negotiations on this issue, outside of CETA, seem to have ensured equivalency for existing North American standards.

There is a strong preference for national procurement on defence spending, globally as well as in the EU, which can make it challenging to access the EU market without a local presence or EU partner. This is not likely to change under CETA given security provisions in the agreement, limiting prospects for the region's aerospace and defence industry. In the civil aerospace industry, despite an existing bilateral agreement on aviation safety, some Atlantic firms still need to take additional steps beyond Transport Canada approval to maintain the appropriate EU certification.

For other highly regulated industries such as pharmaceuticals and other health care products, national regulations must often be met in addition to EU standards. Purchasing and reimbursement schemes also vary greatly from one country to another. These varying national requirements can impose substantial costs on Atlantic firms to secure regulatory and market approval, limiting the scope to expand into other EU markets. CETA will not directly affect these costs. However, Canadian testers can seek approval under CETA to certify to EU standards which will provide some cost savings for Atlantic firms.

CETA is expected to improve the overall willingness of EU firms to do business with firms in Canada and will provide greater regulatory certainty, giving Atlantic firms opportunities to comment on pending EU regulatory changes. Labour mobility will also improve making it easier for firms looking to develop new markets or to service existing clients.

11.3 EU Market Strategies

Despite supranational agencies and agreements, national tastes, regulations and other requirements still vary by country within the EU. Developing new markets typically requires a costly investment of resources which is why some Atlantic firms remain focused on their existing markets rather than diversifying into the EU. Even for firms looking to enter the EU, or broaden their existing country focus within the EU, the costs of market entry can be substantial, often requiring a targeted approach and the customization of their products for the EU market. As many Atlantic firms provide specialized (niche) products and services, it is essential that they find the right clients and market opportunities for their particular capabilities.

One common strategy used by a number of existing Atlantic exporters is the development of a local presence (e.g., sales team or local facility) or a local partner (such as an agent or distributor) in the EU. This is seen as critical for firms that produce customized products to ensure that they understand and meet their clients' requirements. Even for firms that manage their own marketing from Canada, some emphasize how much they invest in regular meetings with their EU clients to ensure they are responsive to customer needs. Atlantic firms use local partners to help identify new market opportunities, secure new business, and to navigate EU and national regulatory and other business requirements. Trade shows may be used to find new customers and local partners.

11.4 Conclusions

The EU is already an important market for some products and firms and this is likely to remain so under CETA. Some Atlantic firms see potential for further growth in the EU but CETA is not expected to provide much additional benefit. Revenue gains are expected in the seafood industry, but how much depends upon how producers and exporters respond to the elimination of tariffs.

Similarly, for a number of Atlantic producers and industries, the EU is not a current market (or with minimal exports at best) and in many cases, this is not likely to change under CETA. For example, the transportation costs for fresh farmed salmon make it unlikely that Atlantic producers could be competitive against existing EU producers and suppliers. Non-tariff barriers and other challenges continue to limit prospects in the lumber and defence industry. Other firms see sufficient growth potential in their existing markets (such as the US or Asia) that the costs of market entry into the EU cannot be justified at present. However, CETA is expected to encourage some specialized producers to explore new market opportunities in the EU.

Aside from the removal of tariffs in the seafood sector, this report has not identified any major impacts of CETA that will benefit or otherwise affect Atlantic exporters of manufactured products. However, for select industries or products where there is expected to be potential for increased exports, a detailed examination of the CETA implications for that specific industry would be beneficial. Similarly, businesses would benefit from greater understanding of how provisions relating to labour mobility, regulatory harmonization, and investment could be of benefit.⁶⁰

At a more general level it is clear that many successful Atlantic exporters are niche players, providing specialized or customized products. This makes it difficult to provide broad assessments of market potential in the EU: detailed analysis is required tailored to an individual firm's capabilities and market opportunities. Similarly, while some companies may respond to the presentation of new market opportunities in the EU, for others, any trade or market development support needs to respond to the opportunities or priorities identified by the businesses themselves, which may be in markets other than the EU. At a broader level, encouraging the development of innovative Atlantic firms with differentiated products remains key to future export success, whether in the EU or other global markets.

⁶⁰ For a brief overview of CETA see Chapter 6 of Chaundy, David and Landin, Claire (2015). *A Brief Profile of the EU: Key Considerations for Atlantic Exporters*. Halifax: APEC

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