

## Maine's Lobster Industry Tested Amid Tariffs and Coronavirus

*Before the global pandemic, Maine saw an 80 percent decline in sales to China due to Trade War. Canada is riding the wave as the single-most exported of lobster*

At five in the morning, Perley Frazier loads his 42 by 15 feet wide boat with stacks of crates and goes out on the water. Five minutes into the ride, the pristine blue of the Gulf of Maine is interrupted by a sea of floating buoys. Some are faded, withered by the saltwater. Others, like Frazier's, are freshly painted indicating to whom the metal traps underneath belong to.

He spots his signature black, white, and red striped buoys a mile off the coast, and with the help of his two sternmen, hauls up the lobster traps onto the main deck.

"Can't do it all on my own," 71-year-old Frazier says. For the past 45 years, he's been fishing in his hometown of Stonington, the largest lobster port in Maine. Like many in the field, Frazier has been a first-hand witness to the tumultuous industry that sustains the state. Since the early 2000s, the population of American lobster (*Homarus americanus*) on the Maine coast has doubled, landing an average of more than 100 million pounds of lobster a year for the past decade. But with the boom of the adult lobster population came the decrease of juvenile lobsters, vulnerable to the warming waters of the Gulf of Maine. This 400-year-old industry withstood many setbacks due to climate change, but today, a different force is testing the resilience of Maine fisheries.



*American lobster (Homarus americanus). Photo by Aliya Uteuova*

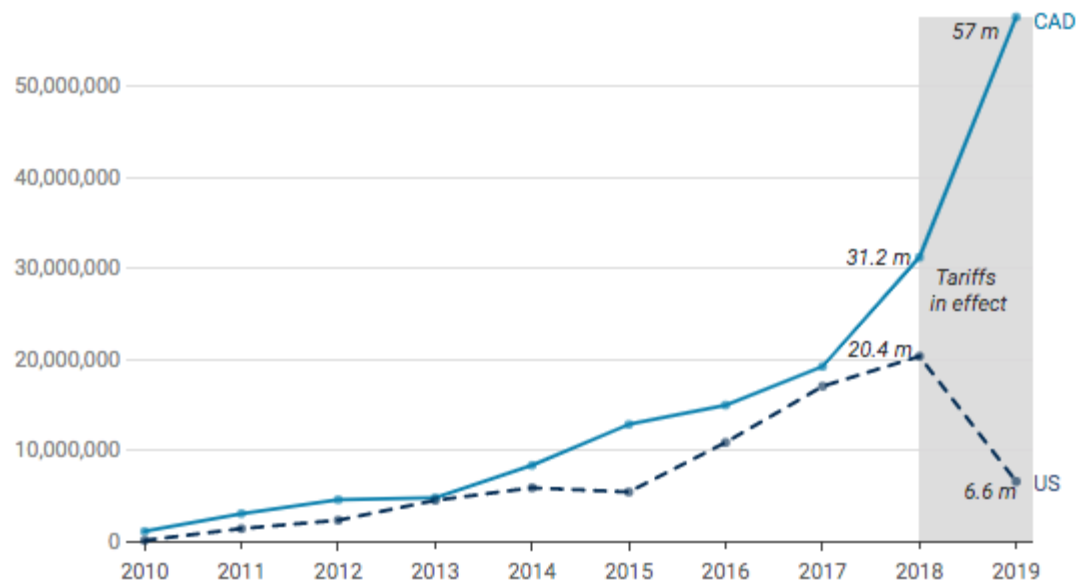
In an attempt to encourage consumers to buy more American goods, in June 2018 the Trump Administration placed tariffs on billions of dollars' worth of goods coming from China. Meaning that importers must pay a tax on the product they want to sell to the US (OR: This means that both nations' importers must pay a tax on the product they want to sell to each other). Days later, China pushed back with retaliatory tariffs on US goods of a similar value, including American seafood.

Before the trade war, the rising middle class in China gave way to increased demand of American and Canadian live lobster, making China the largest lobster market outside of North America. But since July 7, 2018, the lobster industry has taken a hard hit as the initial 25 percent tariffs rose to 45 percent over the past two years. Since the tariffs went into effect, more than 80 percent of US lobster shipments to mainland China have ceased.

"I don't think that USTR [United States Trade Representative] necessarily knew that this was going to have such a huge impact on us," Annie Tselikis, executive director of the Maine Lobster Dealers' Association, says.

While US sales drop due to tariffs, it doesn't mean that Chinese stakeholders aren't buying lobster. Instead, they're buying it from Canada.

## Pounds of Lobster Sold to China from 2010-2019



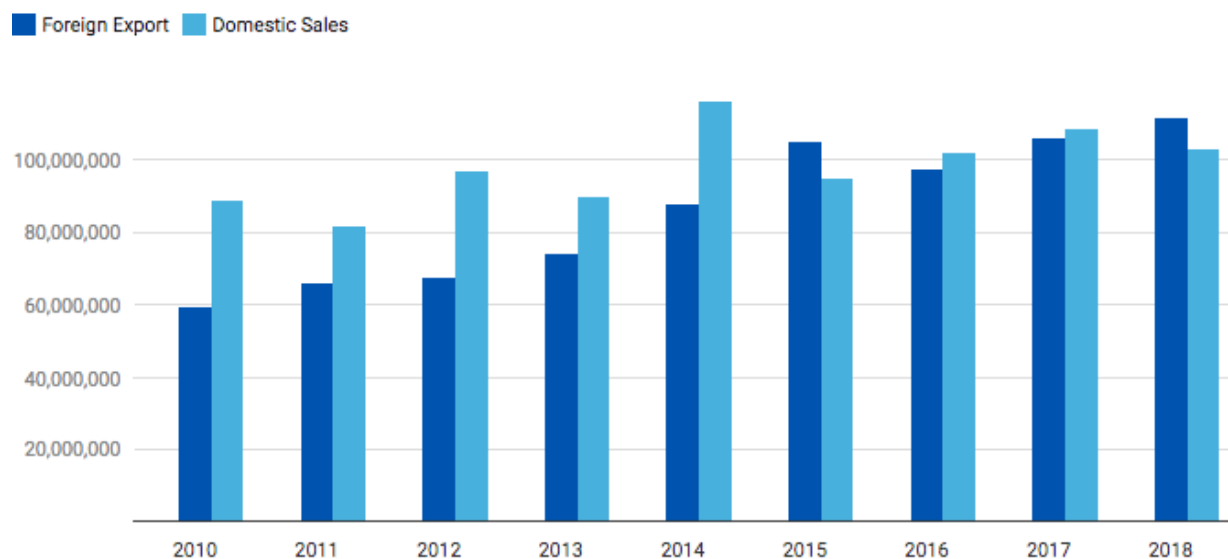
*Graphic by Aliya Uteuova. Source: UN Comtrade*

In 2018, Canada's lobster sales to China went up 62 percent from the previous year. During that same time period, lobster imports to Canada from the US went up by 18 percent. The analysis of UN Comtrade data reveals that the increase in Canada's sales to China correlates with the spike of US lobster sales to Canada.

But while Canadian dealers are capitalizing on China exports, Canada alone cannot meet all of the global and domestic demand, especially at off-peak landing times of the year.

In 2018, Canada landed lobster 215 million pounds of lobster, of which 112 million were exported worldwide. Besides 2015, last year was the only year in the past decade when Canada exported more than half of its total lobster harvest.

### **Pounds of Lobsters Sold Abroad and Domestically**



*Graphic by Aliya Uteuova. Source: UN Comtrade and Dept. of Fisheries and Oceans Canada*

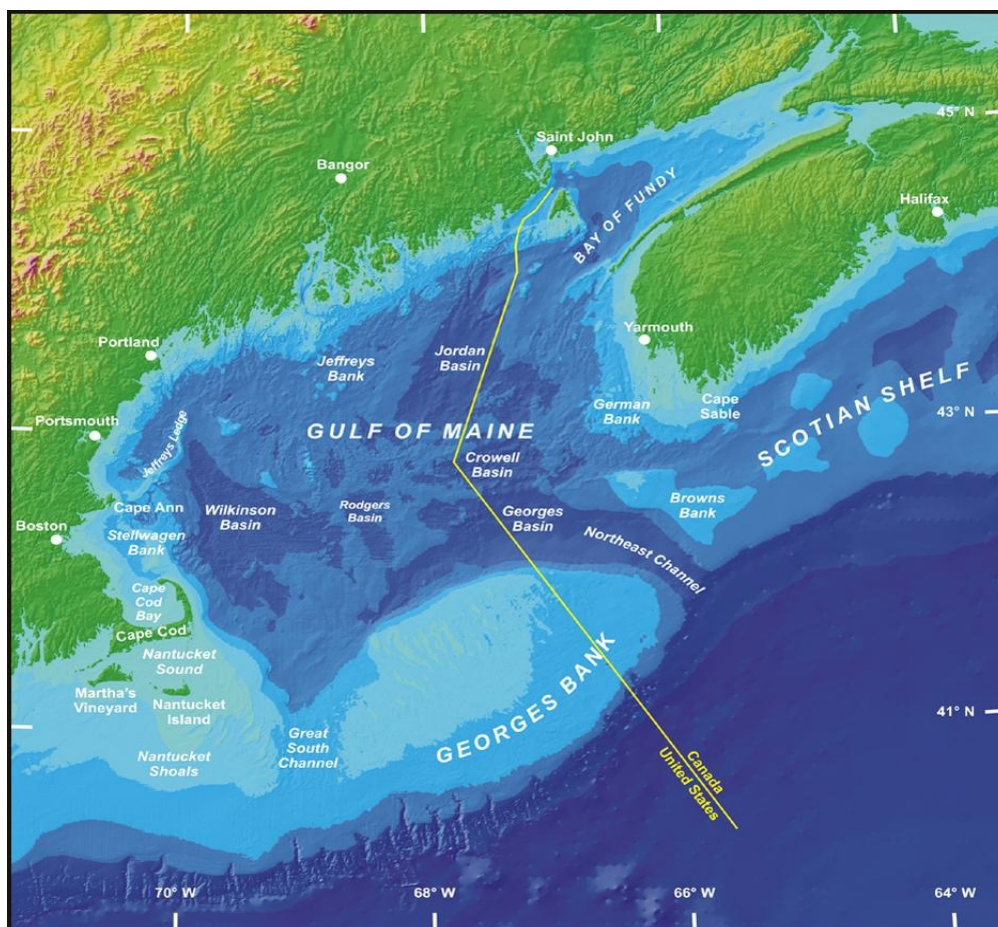
US and Canada are still each others' biggest lobster trade partners. In 2018, Canada exported 58 million pounds to the US, while the US exported 67 million pounds to Canada. But the increase in US lobster exports to Canada could indicate that Maine lobster gets diverted to the domestic market, as a result freeing up Canadian lobster for export to China.

Geoff Irvine, executive director of Lobster Council of Canada, doesn't believe that Canadian dealers buy live Maine lobster only to sell it to China.

"If lobster is live it is a product of the USA," Irvine says regarding Canada's sale of American lobster to China. "When it's processed into tail meat or canned meat, an American lobster can be sold as a product of Canada."

According to Irvine, the tariff that Chinese importers would be paying for American lobster sold by Canada is 42 percent. That's 25 percent US punitive tariffs, 7 percent Canadian tariffs, and 10 percent additional tariffs. Therefore, it makes more sense for Canada to be selling its own lobster overseas while making up for the domestic market with the American lobster.

But since the crustacean that both countries sell comes from the Gulf of Maine and is the same species, it is possible to pass an American lobster as a product of Canada.



*The yellow line marks each country's jurisdiction. Courtesy of United States Geological Survey*



“Are there people playing games, maybe,” Irvine says. But overall, industry experts including Irvine believe that these instances happen at an insignificant level.

China's commercial gains have resulted in a loss of jobs in Maine. Dealers like the Lobster Co., of Arundel, laid off half of the wholesale staff while others like Maine Coast of York had to find new customers to make up for a revenue loss of nearly 10 million dollars.

“The industry really feels like a casualty in a trade war over which it has no control over,” Tselikis says. But even before the China tariffs hit, there was another trade factor that worried Tselikis.



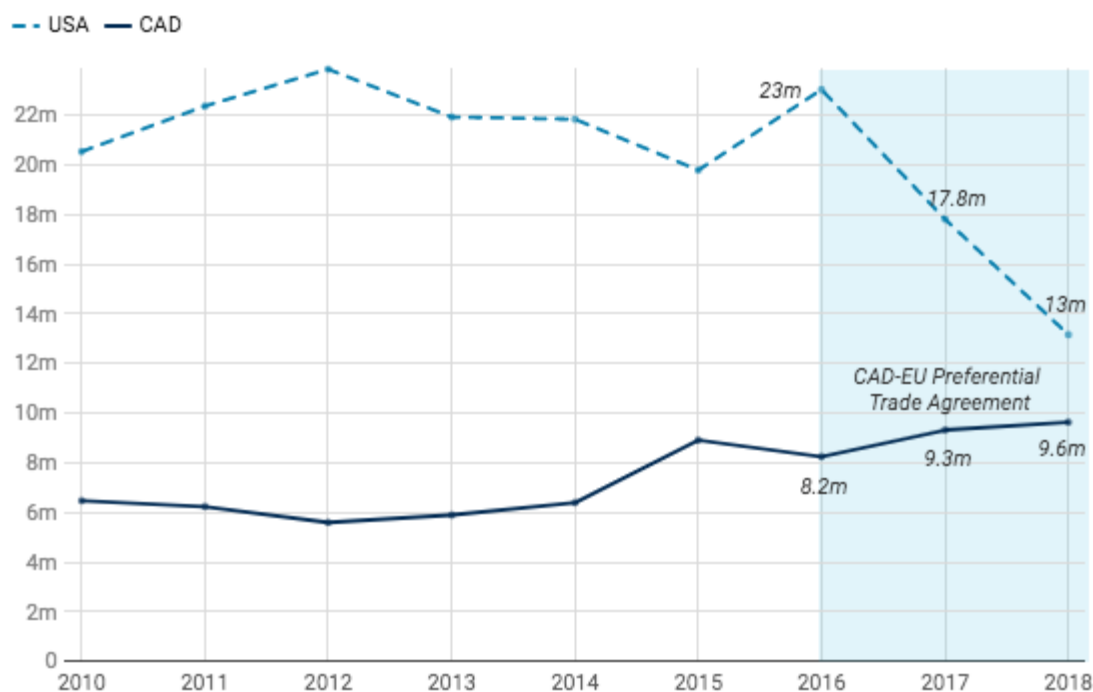
*Working waterfront in Digby, Nova Scotia. Photo by Aliya Uteuova*

In October 2016, Canada and the European Union signed a trade deal that gave preferential treatment to goods coming from Canada. Under the agreement, the EU is in the process of eliminating tariffs on all lobsters and lobster products originating in Canada by 2022.

By comparison, the EU imposes an 8 percent tariff on live Maine lobster and 16 to 20 percent tariff on processed lobster, making it tough to compete with Canada.

“Not only our trade with China is suffering, our trade with Europe is also down,” Tselikis says.

## Sales of Lobster to EU, in pounds



*Graphic by Aliya Uteuova. Source: UN Comtrade*

Indeed, since the EU-Canada preferential trade agreement, US lobster exports to the EU went down from 23 million pounds in 2016 to 13 million pounds in 2018. In that same time period, Canadian sales to EU went up by 15.5 percent.

“The timing of China tariffs on top of dealing with market access issues with the EU just feels like an insult to injury,” Tselikis says.

When dealers thought that sales to China couldn’t get much worse, a global pandemic hit. Since the December 2019 outbreak and subsequent shutdown of huge areas of China, the rapid spread of the virus is exposing the vulnerability of global trade systems. And while tariffs stalled US trade with China, the virus closed the border both for US and Canada.

“When you have a disruption in China such as an outbreak, that changes consumer habits and also the movement of people,” says Josh Stoll, assistant professor of marine policy at the University of Maine. Stoll studies how distant markets are impacting local communities with the increase of trade.

Measures to prevent the spread of the virus resulted in total suspension of flights into China. In early February, regularly operated cargo flights out of the Halifax Stanfield Airport in Nova Scotia transporting seafood to China, and more recently to South Korea, have been canceled.

“Consumers probably aren't going to be engaged in the same high-end type consumption,” Stoll says. “My guess is that it has the potential to have a bigger impact than tariffs.”

The largest seafood expo in North America Seafood in Boston, among other trade missions, were postponed and canceled due to coronavirus.

On March 6, the US Commerce Department announced the trade deficit dropped 6.7 percent to \$45.3 billion as exports fell. A similar drop is happening in Canada, as the nation's overall exports to China decreased by 7.8 percent.

“Nobody in the industry was prepared for your best market to change almost overnight,” says Geoff Irvine, executive director of Lobster Council of Canada. “People had to sell the lobster and lose money and nobody's happy about it.”

While some lobster stocks are being frozen, sold to processing for cheap and going to alternative international markets, thousands of pounds of unsold lobster are flooding North American markets.

But a sharp decline of lobster prices is not yet felt commercially, as price per pound remains steady at \$11.99 across supermarkets in Maine. “Canadian lobsters have been flooding the market, but they haven't pushed the prices down yet,” says Michael Bellinger, a seafood department employee at Maine's chain supermarket Hannaford.

The abundance of domestic lobster does not yet seem to affect Canadian domestic prices either. Price per pound saw a two dollar drop to 13.99 CAD (10.16 USD) in New Brunswick's Sobeys, the second-largest food retailer in Canada.

But it remains unclear how much the potential market depression will damage the Maine industry already hurt by tariffs.

On Jan. 15, President Trump's administration negotiated a trade agreement that included China's commitment to buy more US lobster, with China announcing its plans to lower lobster tariffs by five percent.

But a five percent tariff reduction is an insignificant change for the lobster industry in the US, according to Annie Tselikis, executive director of the Maine Lobster Dealers' Association. She notes that it is unclear how this change is going to play out in the market given the latest coronavirus developments.

With 80 percent of Maine's total commercial fishery, the lobster industry contributes an estimated \$1.4 billion into the state's economy. Efforts to protect the lobster population, like the practice of not harvesting female egg-bearing lobsters and those larger than 3 1/4 inches have ensured a strong lobster fishery. But the warm waters that brought a favorable condition for lobster reproduction is now getting too hot.

In the past three decades, the Gulf of Maine has warmed by 0.06°C (0.11°F) per year – three times faster than the global average. As temperatures increase, the favorable conditions of 12-18 °C for lobster reproduction have shifted northeast.



*Rick Wahle, director of the Lobster Institute, holding an egg-bearing female lobster.  
Photo by Aliya Uteuova*



“In southern New England, high summer temperatures and shell disease have elevated the mortality rates for lobsters, and as a result their birth rates suffered,” says Rick Wahle, director of the Lobster Institute and lead scientist behind the American Lobster Settlement Index that surveys the population of juvenile lobsters.

Wahle says that juvenile lobsters are settling in areas that were historically too cold, and in the past several years, populations have been established in places where there were none before, like Eastern Maine and more abundantly, in Southeast Nova Scotia and New Brunswick. It is seemingly Canada’s turn to experience the same lobster boom that Maine has been going through since the early 2000’s.

The warming temperature trend is worrisome for Perley Frazier, a fisherman from Stonington, ME. While tariffs and coronavirus affect lobster sales, the warming climate affects Frazier’s catch.

“Our lobsters are headed to Canada, the water’s cooler up there,” Frazier says. He once hauled seabass – a species not native to North Atlantic waters. In addition to lobster, Frazier, who comes from a long line of fishermen, sells flounder, monkfish, mussels, and is thinking of getting an oyster aquaculture lease. Not wanting to depend entirely on one species, many in the industry are diversifying their catch to sustainably farmed fish, sea vegetables, and shellfish. But more prevalent cases of algae blooms and shell disease are affecting aquaculture too.

Frazier recognizes the devastation that tariffs and Coronavirus are bringing to the industry. And having witnessed plenty of uncertainties that come with the job, the future of the lobster industry seems more fragile than ever to him.

“It’s going downhill,” Frazier says about the lobster industry. “But this is who I am, and whatever comes next, I can live with it.”

**Source list:**

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Perley Frazier | Lobsterman from Stonington | 207-460-8466  
Joshua Stoll | University of Maine Associate Professor | 207-581-4307  
Michael Bellinger | Hannaford Supermarket Seafood Dept. Employee | 207-563-8131  
Judy Hosein | Chief of Statistical Services, Fisheries and Oceans Canada | 613-993-2264  
Curtis Brown | Marine Biologist at Ready Seafood Company | 207-352-5565  
Hattie Train | Marine Biologist and a Lobsterwoman | 207-712-1866

**Postscript/Methodology:**

To find out annual export data, I acquired, cleaned and analyzed the United Nations Trade Datasets (UN Comtrade) of sales of lobster between US-China, Canada-China, and US-Canada. Through interviews with industry stakeholders, the story led me to add an additional analysis of US-EU and Canada-EU trade. Since each individual country is listed on its own, I had to manually create an EU category in my data analysis and group them using Python. The larger datasets were acquired using UN Comtrade's API.

Once the data was cleaned, I did a statistical analysis of the annual trade data to find the percentage decline or rise of lobster sales prior and after the tariffs took place, as well as prior and after the EU preferential trade agreement kicked in.

In order to do an analysis of domestic and foreign sales, I needed to find the data of annual landings for both Maine and Canada for the period of 2010-2018. Maine data was acquired through the Maine Department of Marine Fisheries website, while the most recent Canadian landings data had to be requested from the Department of Fisheries and Oceans Canada (DFO). I then called the DFO and spoke to

I scraped the database of licensed Canadian lobster dealers to identify which dealers in New Brunswick and Nova Scotia (provinces that have the largest lobster catch) sell to China. However, I didn't end up pursuing the further avenue of focusing on Canadian dealers. I made another attempt at scraping, using Selenium I wanted to see the prices of lobster per pound right after the

Coronavirus started impacting trade. However, both of the supermarket websites (Walmart and Hannaford) did not archive their prices in the HTML, therefore I couldn't successfully scrape supermarket prices. I ended up calling Maine's Hannaford's locations and Canadian chain supermarket Sobey's to inquire from seafood department workers whether they saw significant drops in prices.

When I've completed my data analysis, I asked numerous industry experts to take a look at my data and confirm some of the findings. I did that over phone interviews and in person at the annual Canada-US Lobster Town Meeting in New Brunswick in January. There I learned more about what fishermen and lobster dealers are facing, their pressing concerns. Attending the meeting helped me grasp the subject better, as well as giving me a chance to meet and interview sources.