

# Employment in B.C.'s marine fisheries and aquaculture declining

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## What's happening?

British Columbia's seafood industries provide thousands of full-time and part-time jobs each year. In 2011, industries including the capture fishery, aquaculture, seafood processing and saltwater sport fishing employed about 10,100 British Columbians, 46 percent of whom worked in establishments associated with the saltwater sport fishing industry. The total for 2011 is the lowest value reported since 1984 (Figure 1).<sup>1</sup> Unfortunately, employment data for all four industries combined for more recent years are unavailable.

Not surprisingly, the number of commercial fishing licenses and fishing vessels involved in the commercial fishery are both on the decline as well. Data are available through 2015 for these indicators.



Photo: Jenn Burt.

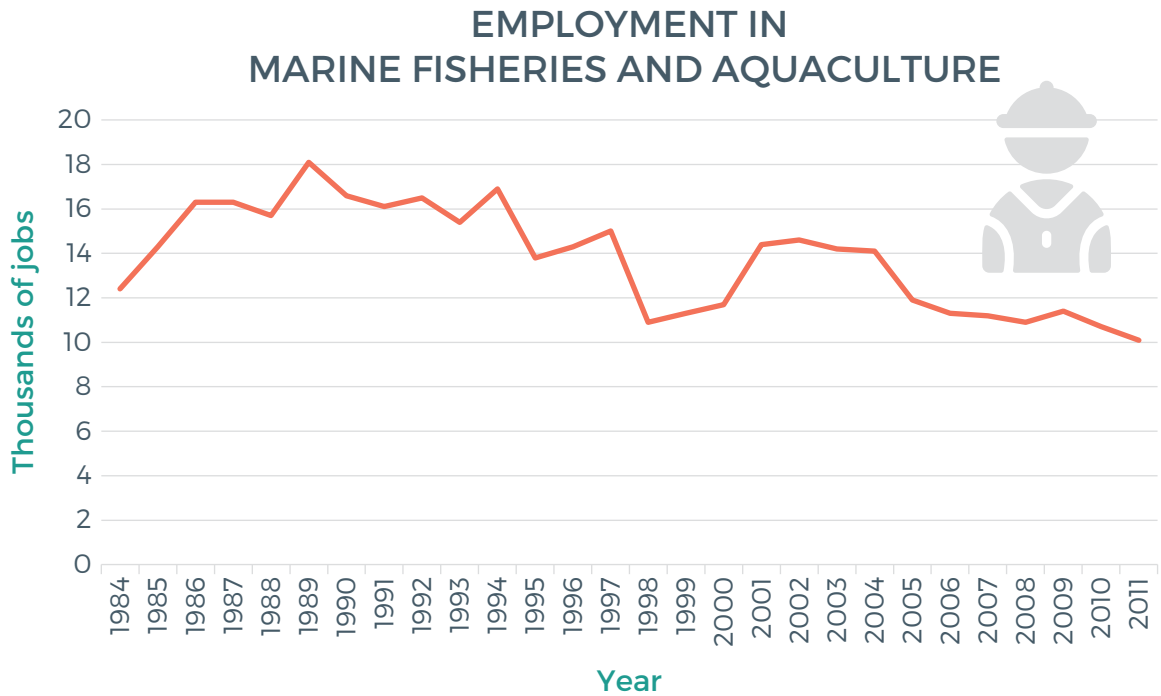


Figure 1. Total employment in seafood-related industries including the capture fishery, aquaculture, seafood processing and saltwater sport fishing. Source: BC Stats and Statistics Canada

## Why is it important?

Coastal communities and First Nations depend significantly upon seafood-related industries for their livelihood, employment, diet, and identity. Employment numbers reported here include seasonal and part-time jobs, but do not take into account the economic and cultural ripples that direct employment has on other businesses, community structures, and industries. Sector summary reports assembled by the province include economic multipliers that estimate the total impact of the sector on B.C.’s economy and tangential employment. For example, based on 2008 data, every \$1-million increase in seafood-sector output sup-

ports about 3.5 additional jobs in industries that supply goods and services to the sector and those supported by the spending of seafood industry employees.<sup>2</sup>

What these reports do not examine is the seafood-related industries’ impact on social wellbeing, culture, or the environment. A recent in-depth, non-government study reported that wild capture commercial fisheries contribute significantly to the social capital, wellbeing, and resilience of coastal communities.<sup>3</sup> Overwhelmingly, participants in the study felt that employment in the commercial fishing industry led



Photo: Jenn Burt.

to intangible benefits including a lifestyle that connected people to each other, to their communities and to the physical environment they occupy. The actual employment is just one part of the overall benefit.<sup>4</sup> Shrinking employment opportunities in the fishing industry can therefore have consequences that go beyond livelihoods. It can also be difficult to fill opportunities that do emerge, as working conditions are tough and the work is physical and requires employees to be away from home.

That being said, in order to provide a steady and ongoing source of jobs, fisheries, and seafood produc-

tion more broadly, needs to be ecologically sustainable. The relationship between seafood production, employment, and long-term sustainable harvesting is not a simple one – especially as technology increases efficiency in harvesting, processing, and aquaculture. Our seafood production article (in the Seafood theme) reports that overall seafood production (wild-caught and aquaculture combined) and exports have increased since 2000, despite changes in the management and structure of B.C.'s commercial fisheries that were driven in part by conservation concerns. At the same time, overall employment in seafood-related industries has declined.

# Is there a particular importance or connection to First Nations?

Going back millennia, First Nations have used seafood, in particular Pacific salmon and shellfish, as a source of food, trade, culture, and spiritual sustenance. First Nations also participate in the activities and economies related to commercial fisheries, aquaculture, seafood processing, and saltwater sport fishing. We located data relevant to First Nations for the commercial fishing industry only.

Data from Fisheries and Oceans Canada (DFO) reports that the number of commercial fishing licences issued to First Nations has fluctuated between about 1,000 and 1,300 since 1985. However, the number has climbed in the last decade from 1,050 in 2007 to over 1,300 in 2015 (Figure 2).<sup>5</sup> Licences issued to First Nations fall under different categories, including communal – which allow for the harvest of fish for food, social or ceremonial (FSC) purposes and related activ-

ities<sup>6</sup> – reduced fee,<sup>7</sup> and licences issued to the Northern Native Fishing Corporation (NNFC). Over the same period, the total number of commercial fishing licences issued rose to a peak in 1989 and has been falling since then. As a result, First Nations are holding an increasing percentage of the total licences issued (Figure 2). Recent changes can be partially attributed to the Allocated Transfer Program of the Pacific Integrated Commercial Fisheries Initiative launched in 2007 by DFO.<sup>8,9</sup> The number of licences may be a proxy for fishing activity but is not directly related to First Nations employment in the industry, nor to economic benefit from fishing. For example, licences can be leased to non-First Nations, some reduced fee licenses are held in control agreements by non-native enterprises, and value by species varies considerably from year-to-year.<sup>10</sup>

## What is the current status?

The number of jobs fluctuates greatly in any industry that relies on natural resource production. Examination of labour survey data estimating employment in four industries related to seafood production confirms this volatility (Figure 3).<sup>11</sup> Since 1984, the capture fishery is the only industry to see a significant decline in the number of jobs, although a smaller overall decrease is evident in seafood processing jobs. The number of aquaculture jobs, stable compared to the other industries, doubled between 1984 and 2005

to reach 2,100 jobs and has subsequently dropped to 1,100 in 2015. Employment in the saltwater sport fishing industry is perhaps the anomaly, as it increased by about 30 percent between 2000 and 2011 (Figure 3).

The Labour Force Survey, which provides the data used to track employment for three of the four industries reported here, is a monthly survey that uses the North American Industry Classification System (NAICS). Capture fishery employment figures were adjusted

## PACIFIC REGION COMMERCIAL FISHING LICENCES

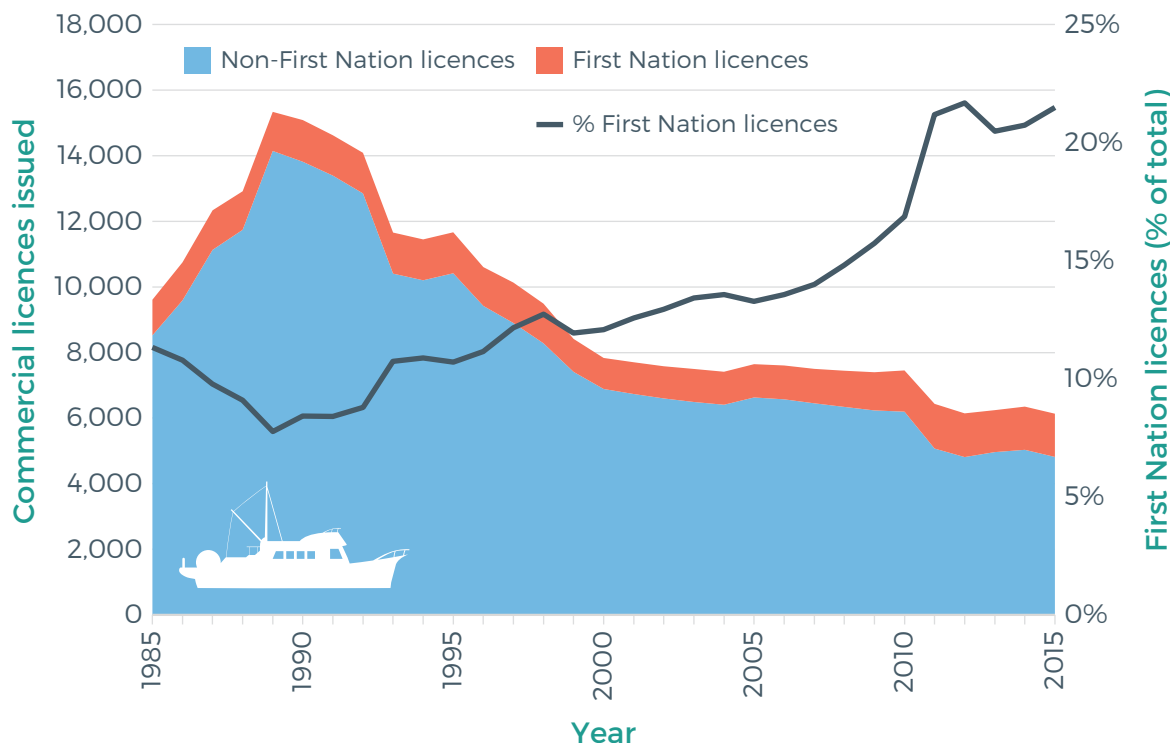


Figure 2. The number of First Nations' (FN) and non-FN commercial fishing licences issued in the Pacific Region. FN licences include communal, reduced fee, and licences issued to the Northern Native Fishing Corporation (NNFC). Source: Fisheries and Oceans Canada, Pacific Region Operations Branch.

by BC Stats from a class that includes fishing, hunting and trapping. Aquaculture employment comprises establishments primarily engaged in farm-raising aquatic animals and plants. Seafood processing includes seafood product preparation and packaging (even shipboard processing). Sport fishing is not a defined industry in the NAICS,<sup>13</sup> so data to inform the saltwater sport fishing industry are based on tourism employment figures from the survey of Employment, Earnings and Hours,<sup>14</sup> which means these numbers are generous compared to the other three industries.

The size and structure of B.C.'s commercial fisheries has diminished since the 1980s, as evidenced by decline in employment (Figure 3), licences, and registered fishing vessels (Figure 4).<sup>15</sup> The number of jobs in the capture industry has decreased by 67 per cent since its peak in 1989, while the total number of commercial fishing licences has fallen by 75 per cent and commercial vessels by 64 per cent. These changes have been linked to significant shifts in coastal communities in B.C.<sup>16</sup> (See also the Seafood Production article in the Seafood theme and our article on fishing as it relates to sense of place and wellbeing.)

## EMPLOYMENT IN SEAFOOD HARVESTING AND PROCESSING

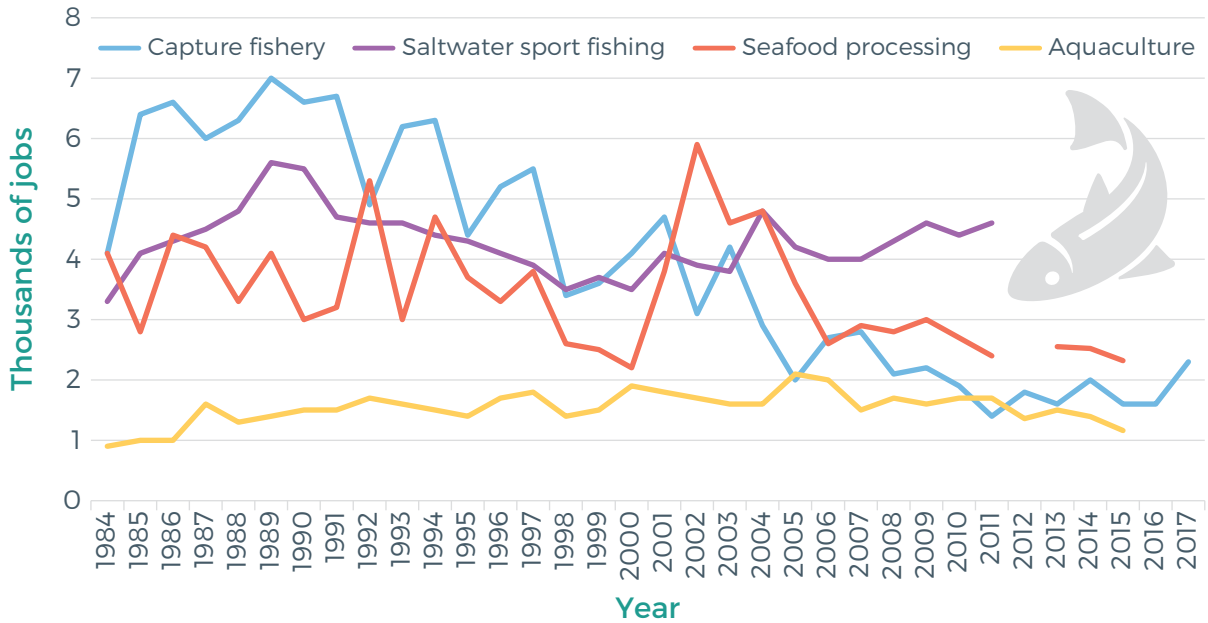


Figure 3. Annual employment estimates for the seafood harvesting and processing sector since 1984. Sources: BC Stats and Statistics Canada. (Seafood processing data for 2013-2015 are estimated.<sup>12</sup> The saltwater sport fishing industry numbers are based on tourism employment figures from the survey of Employment, Earnings and Hours, which differs in method from the Labour Force Survey.)

These changes may look dire when reported in isolation; however, they are due to efforts to rationalize B.C.’s commercial fisheries and increase the returns on investment on one hand, and to improve sustainability and increase the number of year-round jobs on the other hand. Competitive-style fishing of the 1980s (i.e., when the fishery season was only open until the total allowable catch was caught, – sometimes only a few hours, days, weeks or months – resulting in competitive and dangerous harvesting practices) is not an easily managed harvesting strategy today, given the need to protect small stocks and improve monitoring of fishing activities. In addition, while salmon and herring fisheries once made up the majority of B.C.’s

wild-caught species, the industry has diversified significantly over the past decades, with crab, prawns, sablefish, halibut, geoduck, groundfish, and shellfish comprising a higher proportion.<sup>17</sup>

The coming decades will demonstrate whether the seafood harvesting and processing industries can continue to provide secure livelihoods, while improving sustainability, keeping up with environmental and technological changes and meeting a growing human demand for seafood.



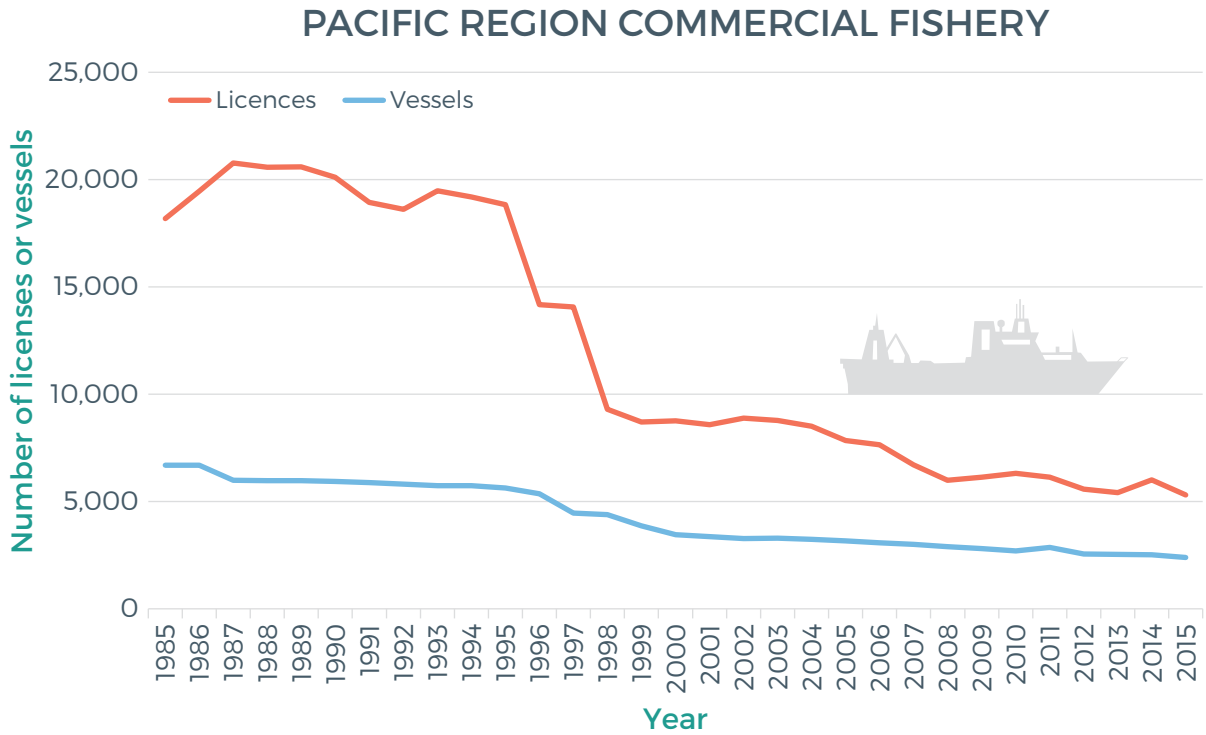


Figure 4. The number of commercial fishing licenses valid for each year and the number of registered commercial fishing vessels in the Pacific Region. Vessels include all size classes from less than 10 metres (35 feet) to larger than 38 metres (125 feet). Source: Fisheries and Oceans Canada, Pacific Region Operations Branch.

## What is being done?

There are myriad formal and informal community-based fisheries management strategies emerging along B.C.’s coast. One such strategy is a formal license bank, which aims to serve small-boat fleets, rural fishermen, and support sustainable harvest techniques by collectively managing licences and quotas (i.e., the amount of harvest allowed for a particular licence) using fair-trade prices. Many Indigenous communities as well as non-Indigenous groups, such as the Pacific Coast Fishermen’s Conservation

Company based out of Ucluelet,<sup>18</sup> have adopted this approach. In addition to formal license banks, informal community initiatives are increasingly emerging along the coast as fishermen create alliances of trading networks in order to coordinate the fisheries market in a co-operative manner.

# What can you do?



## Individual and Organization Actions:

- Choose seafood options that support local fishermen and sustainable harvesting.
- Support B.C.'s buy local program: <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs/market-development-programs/bc-buy-local-program>
- Purchase and eat sustainable seafood. Learn more at:
  - Ocean Wise Seafood Program: <http://seafood.ocean.org/>
  - Seafood Watch: <http://www.seafoodwatch.org/seafood-recommendations/consumer-guides>
  - Marine Stewardship Council: <https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific>
- Demand improvements to seafood labelling and traceability requirements: [SeaChoice](#), [ThisFish](#)
- Participate in citizen science efforts that support oceanic monitoring (e.g., Pacific Salmon Foundation's Salish Sea Marine Survival Project Citizen Science Program<sup>19</sup> and while on the ocean use the OceanSmart app to report interesting ecosystem events).





## Government Actions and Policy:

- Support management strategies that allow more fishermen to actively participate in decision-making.
- Support investment in research for fisheries, sustainable aquaculture techniques and institutions.

## Resources

### First Nations Fisheries Council

<http://www.fnfisheriescouncil.ca/>

## Footnotes

<sup>1</sup> Data Sources: Labour Force Survey and Survey of Employment, Earnings and Hours as reported in: BC Stats. 2007. British Columbia's Fisheries and Aquaculture Sector. Prepared for the BC Ministry of Environment. 108 pp. Accessed January 23, 2018. [http://www.eaa-europe.org/files/bc-fisheries-aquaculture-sector-2007\\_7927.pdf](http://www.eaa-europe.org/files/bc-fisheries-aquaculture-sector-2007_7927.pdf); BC Stats. 2013. British Columbia's Fisheries and Aquaculture Sector, 2012 Edition. Prepared for the Department of Fisheries and Oceans Canada. 98 pp. Accessed January 23, 2018. <https://www2.gov.bc.ca/gov/content/data/statistics/business-industry-trade/industry/fisheries-aquaculture>; FastFacts 2015. Accessed January 23, 2018. <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/statistics/industry-and-sector-profiles>; Fisheries and Oceans Canada. 2017a. Fisheries and the Canadian Economy. Accessed January 23, 2018. <http://www.dfo-mpo.gc.ca/stats/cfs-spc/tab/cfs-spc-tab2-eng.htm>; Statistics Canada. Table 282-0008 – Labour Force Survey estimates (LFS). Accessed January 11, 2018.

<sup>2</sup> In economic terms, these multipliers are known as indirect and induced effects. E.g., see BC Stats 2013.

<sup>3</sup> O'Donnell, K., Hesselgrave, T., Mackdonald, E., McIsaac, J., Nobles, D., Sutcliffe, T., Fernandes, D., and B. Reid-Kuecks. 2013. Understanding Values in Canada's North Pacific: Capturing Values From Commercial Fisheries. T Buck Suzuki Foundation and Ecotrust Canada.

<sup>4</sup> O'Donnell et al. 2013

<sup>5</sup> Fisheries and Oceans Canada. 2017b. Pacific Region Licences. Data sourced from tables in "number of commercial fishing licences issued, by species." Accessed February 2, 2018. <http://www.dfo-mpo.gc.ca/stats/commercial/licences-permis/licences-permis-pac-eng.htm>

<sup>6</sup> Fisheries and Oceans Canada. 2013. Communal Fishing Licences. Accessed February 2, 2018. <http://www.pac.dfo-mpo.gc.ca/abor-autoc/licences-permis-eng.html>

<sup>7</sup> Prior to 2003, these were called "Indian" licences. See data tables, Fisheries and Oceans Canada, 2017b, Pacific Region Licences.

<sup>8</sup> Fisheries and Oceans Canada. 2017c. Pacific Integrated Commercial Fisheries Initiative. Accessed February 2, 2018. <http://www.pac.dfo-mpo.gc.ca/fm-gp/picfi-ipcip/index-eng.html>

<sup>9</sup> First Nations Fisheries Council. 2016. *First Nations participation in commercial fisheries: opportunities and challenges for CFES*. FNFC Annual Assembly. Retrieved from: <http://www.fnfisheriescouncil.ca/wp-content/uploads/2015/09/11-N.Philcox-FN-Commercial-Fishing-Enterprises.pdf>.

<sup>10</sup> First Nations Fisheries Council 2016.

<sup>11</sup> Data Source: Labour Force Survey and Survey of Employment, Earnings and Hours. (See footnote 1 for details).

<sup>12</sup> Fisheries and Oceans Canada 2017a.

<sup>13</sup> Province of British Columbia. About the Labour Force Survey. Accessed February 2, 2018. <https://www2.gov.bc.ca/gov/content/data/>



Photo: Jenn Burt

<sup>14</sup> Pacific Salmon Foundation 2017. Salmon Sea-Change Survival Project, Citizen Science Program. Retrieved from [http://marinesurvivalproject.com/research\\_activity/list/citizen-science-program/](http://marinesurvivalproject.com/research_activity/list/citizen-science-program/).