

Finfish Aquaculture in BC

Finfish is one of three types of aquaculture activities in BC. The other two are shellfish and marine plant aquaculture. Finfish aquaculture is the production of farmed fish in either freshwater or the marine environment for commercial or enhancement purposes. Freshwater operations occur primarily on private land and encompass commercial enterprises such as salmon and trout hatcheries, trout farms and fee-fishing operations. Marine sites are currently situated in foreshore areas; future offshore development may be under the sole jurisdiction of Fisheries and Oceans Canada (DFO).¹ Finfish aquaculture production is dominated by Atlantic salmon (*Salmo salar*), followed by chinook salmon (*Oncorhynchus tshawytscha*); however, research continues in relation to other species.^{1,2}

Management

The federal government is responsible for regulating and licensing finfish aquaculture operations in BC, although the province of BC administers the tenures for land occupation and use. Marine plant aquaculture is under provincial jurisdiction.³ DFO will be developing Integrated Management of Aquaculture Plans to align with its Sustainable Fisheries Framework.⁴

Locations and Tenures

PNCIMA contains almost half of the finfish aquaculture sites in BC, accounting for 42 of the 89 tenured sites in the province as of November 2010. At that time, an additional 49 tenure applications were in process within PNCIMA and 62 throughout BC. The majority of the finfish farms in PNCIMA are located in

its southern portion.⁵ There has been a provincial moratorium on new salmon farming operations in northern BC since 2008 due to concerns about potential effects on wild salmon stocks.⁶

Finfish aquaculture tenures can contain multiple areas which are not always adjacent. The accompanying map displays tenures and multi-part tenures as points located in the centre of individual areas; therefore, the number of points on the map will be greater than the total number of tenures. Tenures which were still in the application phase as of November 2010 are not illustrated.

The map of tenure locations should not be used for navigation or to determine lease boundaries or tenure sizes. It should also be noted that tenures are both offered and expire over time; the BC Land and Resource Data Warehouse should have the most up to date information.⁷ Not all finfish farms are necessarily active at any given time.⁸

Finfish aquaculture production in PNCIMA is dominated by Atlantic salmon

Material presented is drawn from the following literature reviews, which include primary references:

- 1 MacConnachie, S., Hillier, J. and Butterfield, S. 2007. Marine use analysis of the Pacific North Coast Integrated Management Area. Can. Tech. Rep. Fish. Aquat. Sci. 2677: viii + 188p.
- 2 Johannessen, D.I., Macdonald, J.S., Harris, K.A. and Ross, P.S. 2007. Marine environmental quality in the Pacific North Coast Integrated Management Area (PNCIMA), British Columbia, Canada: A summary of contaminant sources, types and risks. Can. Tech. Rep. Fish. Aquat. Sci. 2716: xi + 53 p.
- 3 Government of Canada. 2010. Pacific aquaculture regulations. Canada Gazette 144(28), July 10.
- 4 March Klaver, Aquaculture Management Division, Fisheries and Oceans Canada. Personal communication, January 5, 2011.
- 5 Province of BC. 2010. Tantalus - Crown Tenures - November, 2010. Geographic Data Discovery Service. <https://apps.gov.bc.ca/pub/geometadata/metadataDetail.do?recordUID=54099&recordSet=ISO19115> (Accessed January 2011).
- 6 Johannessen, D.I., Harris, K.A., Macdonald, J.S. and Ross, P.S. 2007. Marine environmental quality in the North Coast and Queen Charlotte Islands, British Columbia, Canada: A review of contaminant sources, types, and risks. Can. Tech. Rep. Fish. Aquat. Sci. 2717: xii + 87 p.
- 7 British Columbia Marine Conservation Analysis Project Team. 2011. Marine atlas of Pacific Canada: a product of the British Columbia Marine Conservation Analysis. Available from www.bcmca.ca (Accessed March 2011).
- 8 BC Ministry of Agriculture and Lands. The facts on B.C. aquaculture. www.gov.bc.ca/fortherecord/aquaculture/qa_environment.html?src=/environment/qa_environment.html (Accessed April 2010).



Fish farms. Photos: Mueller

