

Shellfish Aquaculture in BC

Shellfish is one of three types of aquaculture activity in BC. The others are finfish and marine plant aquaculture. Shellfish aquaculture is the production of farmed marine invertebrates in an aquatic environment or human-made container of water for commercial purposes, including the cultivation of shellfish on, in or under the foreshore or in open water.¹

In BC, the most common commercially cultured shellfish species include Pacific oyster (*Crassostrea gigas*), Manila clam (*Venerupis philippinarum*) and Japanese scallop (*Patinopecten yessoensis*).² Littleneck clam (*Protothaca staminea*), blue and Gallo mussel (*Mytilus spp.*), and geoduck (*Panopea abrupta*), are also farmed in BC. Spot prawn (*Pandalus platyceros*), giant rock scallop (*Crassadoma gigantea*), abalone (*Haliotis kamtschatkana*), giant Californian sea cucumber (*Parastichopus californicus*) and sea urchins (*Strongylocentrotus spp.*) are being cultured on an experimental basis. Three freshwater licence farms are experimenting with cultivating crayfish (*Cherax quadricarinatus*).¹



Pulling long lines – oyster aquaculture.

Photo: BC Shellfish Grower's Association

Management

The federal government is responsible for regulating most shellfish aquaculture operations in BC, although the Province of BC administers the tenures for land occupation and use. The Province of BC retains authority over wild oyster and marine plant aquaculture with respect to harvest and regulation.³ Fisheries and Oceans Canada, the Canadian Food Inspection Agency and Environment Canada administer the Canadian Shellfish Sanitation Program.¹

In 2010, 6% of BC's shellfish aquaculture sites were in PNCIMA

Locations and Tenures

Along coastal BC, most shellfish aquaculture takes place south of PNCIMA, where overall conditions are more suitable. In 2010, 27 of the 480 shellfish aquaculture sites in BC (approximately six percent) were located within PNCIMA.⁴ In comparison, in 2005 there were 11 shellfish farms located within PNCIMA, representing approximately two and a half percent of the provincial total. In 2005, there were an additional 15 pilot projects under way on the North Coast and Haida Gwaii.¹ As of November 2010 there were 12 applications for shellfish aquaculture tenures in process within PNCIMA.

Shellfish 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.

It should 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.⁵

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 Lucas, B.G., Verrin, S. and Brown, R. (Editors). 2007. Ecosystem overview: Pacific North Coast Integrated Management Area (PNCIMA). Can. Tech. Rep. Fish. Aquat. Sci. 2667: xiii + 104p.
- 3 Ministry of Agriculture. 2010. Provincial aquaculture and commercial fisheries program. <http://www.al.gov.bc.ca/fisheries/index.htm> (Accessed April 2011).
- 4 Province of BC. 2010. Saltwater Finfish Tenures - Coastal Resource Information Management System. BC Government Crown Registry and Geographic Base Branch. <https://apps.gov.bc.ca/pub/geometadata/metadataDetail.do?recordUID=4025> (Accessed January 2011).
- 5 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).

