

Shrimp

Seven species of shrimp are commercially harvested in BC:¹ smooth pink (ocean) shrimp (*Pandalus jordani*), northern (spiny) pink shrimp (*Pandalus borealis eous*), flexed shrimp (*Pandalus goniurus*), sidestripe shrimp (*Pandalopsis dispar*), humpback shrimp (*Pandalus hypsinotus*), coonstripe (dock) shrimp (*Pandalus danae*) and spot prawn (*Pandalus platyceros*).² Shrimp species occupy various habitats and ecological niches.³

The Shrimp Trawl Fishery

Shrimp trawl landings are a mix of pink shrimp (more than 90 percent, including smooth pink and northern pink) and sidestripe shrimp. To a lesser extent, humpback, coonstripe and flexed pink shrimp are caught along with a small permitted incidental catch of prawns.³

Shrimp are harvested in the Pacific region by two fisheries, trawl and trap. The shrimp trawl fishery uses towed nets including "beam trawl" whereby the net is held open by a beam or pole, and "otter trawl" whereby the net is held open by wood or metal "otter" boards or doors.⁴ Beam trawlers comprise more than 75 percent of the commercial fleet.³

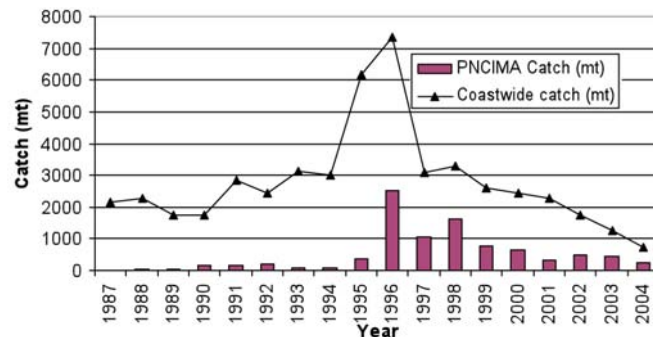
Historically, shrimp catches occurred in the inshore waters of the Strait of Georgia, the coastal areas off the north coast inlets and the waters off the lower west coast of Vancouver Island. Shrimp catches increased significantly in 1996 as fishing expanded to previously unexploited areas, including offshore areas of the central coast (see graph).²

Management measures include catch monitoring, stock assessment, and the use of Shrimp Management Areas to manage opening times, closing times and the Total Allowable Catch ceiling.² Of the 36 Shrimp Management Areas along the BC coast, 15 are located entirely within PNCIMA, and five are partially located within PNCIMA.⁵



Shrimp trawl. Photo: Juanita Rogers

PNCIMA Shrimp by Trawl Catch



Fishery Effort

The fishery effort map, using four by four km gridded data, represents 93.39 percent of the data available for PNCIMA after screening for confidentiality (minimum three vessels reporting per grid cell).² The five data classes presented on the map are based on natural groupings inherent in the data such that similar values are grouped and differences between classes are maximized (Natural Break or Jenks statistical method).

In PNCIMA, cumulative shrimp trawl fishery effort is measured in the number of hours trawl gear was towed and actively fishing. Similar to other invertebrate fisheries, fishing grounds are predominantly located along the inner coast where access, transport and shipping are more readily available. Highly productive areas include the Prince Rupert Shrimp Management Area (Chatham Sound) and the near-shore waters of Queen Charlotte Sound (QCSND).² Shrimp trawl fishing was closed in QCSND in 1999 because of concerns for potential by-catch of Central Coast eulachon stocks.⁴ Map data in QCSND, therefore, represent fishing between 1996 and 1999.⁶

The proximity of fishing to the coast makes the gridded data appear to overlap land, an artifact of applying the data to a standard grid. The fishing data were layered above the land only to make the data more visible.

Map data are viewable online through DFO Mapster at www-heb.pac.dfo-mpo.gc.ca/maps/maps-data_e.htm
 Material presented is drawn from the following literature reviews, which include primary references:
 1 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.
 2 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.
 3 Hillier, C.J., Gueret, D., Butterfield, S. and Pellegrin, N. 2007. Fish harvesting activities within the proposed Gwaii Haanas National Marine Conservation Area. Can. Manuscr. Rep. Fish. Aquat. Sci. 2803: vi + 65p.
 4 DFO. 2008/2009. Shrimp trawl integrated fisheries management plan, 102 pp.
 5 Please note that the Haida Gwaii area may be referred to as either "HG" or "QCI" in relevant databases.
 6 S. MacConnachie, Personal communication, February 2011.

