

The Crab Fishery

Two species of crab, Dungeness crab (*Cancer magister*) and red rock crab (*Cancer productus*), are commercially harvested throughout BC waters. Golden king crab (*Lithodes aequispinus*) and red king crab (*Paralithodes camtschaticus*) may also be fished in the North and Central Coasts under amended *Crab Conditions of Licence*. Commercial capture of graceful crab (*Cancer gracilis*) is no longer permitted; however, First Nations and recreational fishers may catch and utilise all species of crab.¹

Crabs are commercially harvested using traps or ring nets. Both traps and ring nets are baited with fish, squid, offal or pellets. Traps can be fished on single lines or ground lines with multiple traps, while ring nets are fished on single lines only.²

The crab fishery is managed by "Area" (A to J), of which A, B, G and portions of E and H are within PNCIMA. Licensed crab vessels must select an area of their choice to commercially fish for a three year period. The crab fishery areas are defined by Pacific Fishery Management Areas (PFMAs).

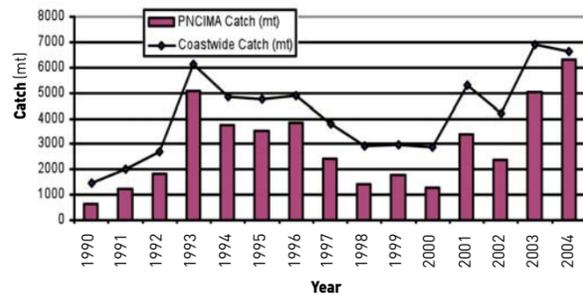
The crab fishery is managed under a precautionary regime, including limited entry licensing, area licensing, trap limits, soak limits, a minimum harvestable size limit, sex restrictions, soft-shell restrictions, seasonal closures and gear restrictions.² In addition, due to natural fluctuations in the crab populations, a spawner index is used. Soft-shell closures have been incorporated in crab fisheries in Hecate Strait and Haida Gwaii.¹

Notably high catches were recorded during the 2003 and 2004 fishing seasons, measuring more than 6,000 tonnes per year (see graph).²



Crab close up. Photo: DFO/ PBS/ Nanaimo

Dungeness Crab Catch in PNCIMA by Year



Fishery Effort

The crab fishery effort within PNCIMA is presented based on the number of days gear was in the water and considered to be actively fishing (soak time). The fishery effort map, using four by four km gridded data, represents 90.01 percent of the data available for PNCIMA after screening for confidentiality (minimum three vessels reporting per grid cell). The five data classes presented in 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).

Within PNCIMA, the majority of fishing effort appears to take place in the northern portion of Hecate Strait. High effort levels (soak days) in Area A dominated the total overall coastwide effort between 1996 and 2004.

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.

More recent and potentially accurate data from electronic monitoring exists for some Area fisheries. Exploratory crab fisheries in areas such as southern Haida Gwaii, northern Goose Island Bank and west of Milbanke Sound (Queen Charlotte Sound) are not represented on this map due to the confidentiality requirements outlined above.³

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 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.
 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 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).

