61 Fishing Industry Vessel Traffic Density (Summer)

Fishing Vessels in PNCIMA

Many commercial fisheries take place in PNCIMA year round.[1] These include: geoduck by dive; dungeness crab by trap; rockfish by hook and line; sablefish by longline and trap; salmon by troll, seine and gillnet; and groundfish trawl.[2] Other commercial fisheries take place at particular times of year. Commercial prawn by trap is one example of a fishery that is conducted primarily in the summer months.

Fishing vessel traffic in PNCIMA is greater in the summer than in the winter

Fishing Vessel Traffic Density (Summer)

A study of ship movements on the BC coast was conducted using the Canadian Coast Guard's Marine Communication and Traffic Services (MCTS) program's data from 2003 and 2005 to 2008 to determine seasonal trends by ship type. Mean daily vessel movements were summarized using two different grids: one of ten by ten km cells for offshore waters and another of three by three km cells for inshore waters. This was necessary to show differences in data quality for different parts of the BC coast, specifically differences in the frequency with which vessel positions were recorded. More detailed and accurate information could be obtained from vessels monitored inshore (from 200 to 1,000 m between recorded vessel locations), compared to vessels monitored offshore (from two to ten km between recorded vessel locations). Seasonal estimates of vessel movements were calculated by multiplying mean daily estimates by 182.5 days (six months). Vessel traffic data in most fjords is not available because vessels are not usually tracked in those locations.[3]

The estimates of fishing vessel movements only include fishing vessels over 24 m in length and not actively fishing. Smaller fishing vessels less than 24 m in length that may or may not be actively fishing are not accounted for in the calculation of yearly means for this map.[3] Data displayed on this map only denote fishing vessels in transit, travelling from one port to another, or from fishing grounds to port.

The data indicate extensive and significant vessel traffic near the ports of Prince Rupert, Port Hardy, Port McNeill and Campbell River, where fish are brought in for processing and vessels are refuelled, serviced or moored until the next fishery opening. Transit routes can also be seen through Hecate Strait.[2]

Large commercial fishing vessels can be found throughout PNCIMA year round, although the total number of fishing vessel movements appears to be significantly greater in the summer (April to September) than in the winter (October to March).[3,4]

When MCTS data were processed, efforts were made to remove duplicate entries and data suggesting unusual numbers of ship movements; however, no further analyses were carried out to eliminate or fix anomalous vessel paths. Therefore, grid cells of the lowest value class (cells representing one to 25 vessels in the accompanying map) should be interpreted with caution.

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 + 65 p.
2 MacConnachie, S., Hillier, J. and Butterfield, S. 2007. Marine use analysis for the Pacific North Coast Integrated Management Area. Can. Tech. Rep. Fish. Aquat. Sci 2677: viii + 188p.
3 Serra-Sogas, N. 2010. Modelling risk of chronic oil pollution from vessel operations in Canada's west coast (Masters thesis). Department of Geography, University of Victoria, Victoria, BC.
4 When the data are queried, they show that the total number of vessel movements in summer are 15,000 in offshore waters and 111,000 in inshore waters, while in the winter the total number of vessel movements are 11,000 in offshore waters and 105,000 in inshore waters. These differences are not apparent from the map, which does not present these totals.

Fish boat. *Photo: DFO/ PBS/ Nanaimo*

Photo: Steve Diggon

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