

Commercial Fisheries – Halibut

description

The Pacific halibut, *Hippoglossus stenolepis*, is one of the largest species of fish in the world. Individuals may grow to over 2 metres in length and weigh more than 200 kilograms. The Pacific halibut commercial fishery began along the coasts of Washington and Vancouver Island during the late 1880s and expanded to southeastern Alaskan waters by 1910. Following industry petitioning to reduce the amount of fishing and length of the season, in 1923 the Convention for the Preservation of the Halibut Fishery of the Northern Pacific Ocean (also known as the Pacific Halibut Treaty) was signed by Canada and the United States. The Convention addressed conservation for the deep-sea halibut fishery and created an International Fisheries Commission (known today as the International Pacific Halibut Commission (IPHC)) to study halibut and recommend regulations for the preservation of the resource and development of the fishery (Kong et al. 2004). In addition, the IPHC annually conducts numerous projects to support both its major mandates: stock assessment and basic halibut biology.

In 1991 the Canadian government adopted individual vessel quotas (IVQs) to manage the fishery, while the U.S. followed in 1995 with their individual fishing quota (IFQ) system. The commercial halibut fishery is managed with set annual total allowable catch (TAC) for an approximate nine-month opening. Since 2003, Fisheries and Oceans Canada (DFO) has focused on working with the commercial groundfish harvesters and others to address management and sustainability issues in the commercial groundfish fisheries. In 2006, a three year pilot was introduced to integrate the management of all seven commercial groundfish sector groups, consistent with the objectives of improving stock management through improved bycatch monitoring, reducing discarded catch, and requiring harvesters to be accountable and responsible for all species harvested.

Up until 2006, a halibut category “L” licence (limited entry and vessel based) or a communal commercial category “FL” licence (party based - issued to a person or company) was required to commercially harvest halibut. Vessels authorized to fish under the authority of a halibut licence were also permitted to retain species as bycatch described in Schedule II, Part 2 of the Pacific Fishery Regulations, transport fish caught by other vessels and be designated to fish under the authority of a “Z” licence. Species retained in this fishery included halibut (*Hippoglossus stenolepis*), rockfish (*Sebastes spp.* and *Sebastolobus spp.*) and lingcod (*Ophiodon elongatus*). Since 2006 halibut vessel licences are now authorized to catch all species of groundfish, subject to management rules.

Under the “L” licence, halibut catch is permitted by hook and line gear only, which includes longlines, handlines, rod, reel and troll. The majority of halibut is caught by longline fishing, which is accomplished by setting a long ground-line containing hundreds of baited hooks along the ocean floor. Longline gear is fished directly on the bottom and is held in position by anchors attached to one or both ends of the mainline. Following a suitable “soak” time, the line is then hauled back onto the vessel, the fish are removed from the hooks and gear rebaited and reset. Small vessels typically use handline gear (rods and reels). Trollers are easily recognized, and move slowly through the water while deploying six to eight stainless steel fishing lines with numerous lures attached. Each line is attached to a pole by way of a pulley and may have up to 80 lures attached to it. The type and arrangement of lines and lures vary according to each fishery.

This map displays estimated catch (pounds) by hook and line for halibut provided by the IPHC from 1991-2010, tallied and mapped according to IPHC statistical areas, which are the highest level of resolution at which information is released to the public. Catch data are assigned to statistical areas using (in order of priority): commercial logbook data (collected by the IPHC); validation logs/fish tickets; or, the landing port data. Landings with less than three vessels are not released due to confidentiality requirements.

The data are displayed using equal interval categories, meaning that the data are divided into 5 equally spaced classes where each class may contain a different number of halibut statistical areas. The percent of statistical areas that fall in a given category is shown in the legend.

Permanent, year-round closures for the halibut (by hook and line) fishery were compiled based on the Amended Integrated Fisheries Management Plan (IFMP) for Groundfish dated March 8, 2008 – February 20, 2009 and 2008 Fisheries Notices (up to Oct. 2, 2008). Areas identified as closures may also include areas not licensed for this fishery. (Please read caveats of use for more information on closures.)



PHOTO: MAX FX

data sources

- Fishery data: International Pacific Halibut Commission (IPHC)
- Year-round commercial fishing closures: Living Oceans Society (see Robb *et al.*, 2010)

data resolution

- IPHC Statistical Areas (created from base points 60 nautical miles apart, with some areas further subdivided)

date compiled

- Fishery data: 1991 - 2010
- Year-round commercial fishing closures: 2008

reviewers

- An earlier version of this atlas page was reviewed by:
 - Commercial fishing industry representatives (who may or may not be experts for this specific fishery), assembled with the support of the commercial fisheries representatives on the BC Marine Conservation Analysis (BCMCA) Human Use Data Working Group.
 - Fisheries and Oceans Canada data providers.

reviewer comments

- Generally, reviewers wanted to see catch for longer time periods and closures that matched the time periods shown for the fishery.
- Groundfish integration in 2006 resulted in a fundamental shift for specific fisheries such as dogfish, lingcod and rockfish. The move to IVQs and creation of Rockfish Conservation Areas also created fundamental shifts in people’s behaviour. These management actions will likely have had a significant impact on fishing patterns. It is important to note that the data shown on the map are pre-IVQ, pre-groundfish integration, and pre-RCA closures so are unlikely to represent current catch or catch locations.
- Methods of recording directed catch and non-directed catch became more accurate after integration in 1996.
- Whenever “landed weights” are mentioned, it should be noted that they are “net weight pounds” (head-off, dressed, ice & slime deducted).

caveats of use

- The catch information is based on IPHC statistical areas. These areas often do not correspond to DFO sub areas. IPHC cannot supply information on any finer scale.
- The halibut resource is assessed as a coastwide spawning stock. Surveys are conducted for stock assessment in each of the IPHC major areas but because halibut undertake extensive spawning migrations annually, the local catch is not generated locally. (Most BC halibut spawn in the Gulf of Alaska and southeast Alaska; similarly many Washington and Oregon halibut probably spawn in BC.)
- In the case of discrepancies, catch information from IPHC takes precedence over commercial fisheries information portrayed by BCMCA.
- This map should be interpreted as showing only where fishing has taken place; it does not represent economic valuations or biological trends. Neither should it be inferred that species are more abundant where fished and less abundant in areas closed to commercial harvest.
- Data displayed should not be assumed to match current or future conditions due to ongoing changes in the environment and management.
- The effort expended to capture targeted species differs among fisheries. Therefore it is difficult to compare weight caught for a low volume fishery versus a high volume fishery.
- Closures illustrated are permanent, year-round closures. Seasonal, temporary and voluntary closures were not included, all of which may impact catch. Areas identified as closures may also include areas not licensed for this fishery.
- Due to a lack of available spatial data regarding fisheries closures, the time period for closures does not match the time period for catch illustrated on the map. Many of the closures were implemented after the period for which catch is shown. As a result, the map may show harvesting in the closed areas, while in reality they did not overlap in time. Because the closure data are compiled in irregular polygons, closures may overlap the square grid cells delineating areas of commercial harvesting. Harvesting does not occur consistently throughout each grid cell and may not have occurred within the closure.
- Recommended date of expiry for use of these data in a marine planning context: None provided.

map, feature data and metadata access

- Visit www.bcmca.ca/data for more information.

references

- BC Marine Conservation Analysis. *Workshop Report on Commercial Fisheries Data Review*. March 2010. www.bcmca.ca/document-library
- Fisheries and Oceans Canada. *Annual Integrated Fisheries Management Plans*. www-ops2.pac.dfo-mpo.gc.ca/xnet/content/MPLANS/MPlans.htm?&lang=en
- Kong, T., Gilroy, H. & Leickly, R. “Definition of IPHC Statistical Areas in IPHC Technical Report No. 49.” *International Pacific Halibut Commission (IPHC)*. 2004. www.iphc.washington.edu/halcom/pubs/techrep/tech0049.pdf
- Robb C.K., K.M. Bodtker, K. Wright and J. Lash. “Commercial fisheries closures in marine protected areas on Canada’s Pacific coast: The exception, not the rule.” *Marine Policy* (2010), doi:10.1016/j.marpol.2010.10.010
- The 2008 Amended IFMP for groundfish is available at: www-ops2.pac.dfo-mpo.gc.ca/xnet/content/MPLANS/plans08/2008_Groundfish_IFMP_Complete_Amendment_12.pdf

BCMCA Atlas
Commercial Fisheries
Halibut 1991 - 2010

Legend

Pounds of Halibut Caught

- 598,608 - 5,000,000 (41%)
- 5,000,001 - 10,000,000 (27%)
- 10,000,001 - 15,000,000 (14%)
- 15,000,001 - 20,000,000 (5%)
- 20,000,001 - 25,000,000 (0%)
- 25,000,001 - 30,000,000 (14%)
- Year-round Halibut Closures

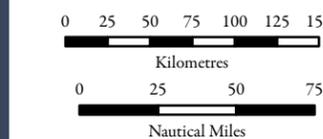
Notes:
 - The number in brackets in the legend above is the percent of polygons that fell into the given category.
 - Halibut closures obtained from the Mar. 8, 2008 p Feb. 20, 2009 Groundfish Integrated Fisheries Management Plan and from the 2008 Fisheries Notices to Oct. 2, 2008.

Data Sources:
 International Pacific Halibut Commission
 Living Oceans Society

Base Data:
 ESRI Base Data, GeoBase, GeoBC, NOAA, Natural Resources Canada, USGS, Washington State Government

Thematic Data:
 For more information on data sources and methods please refer to the facing page to this map

Projection: BC Albers NAD83

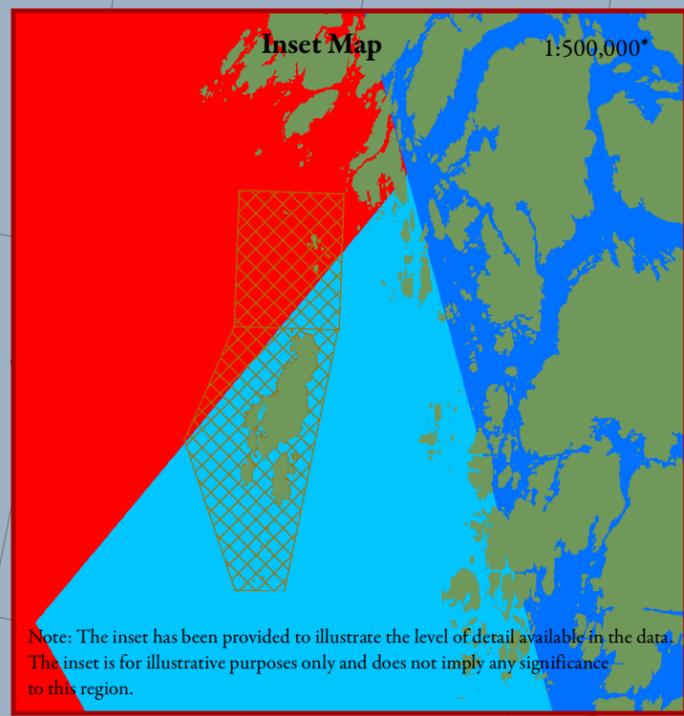
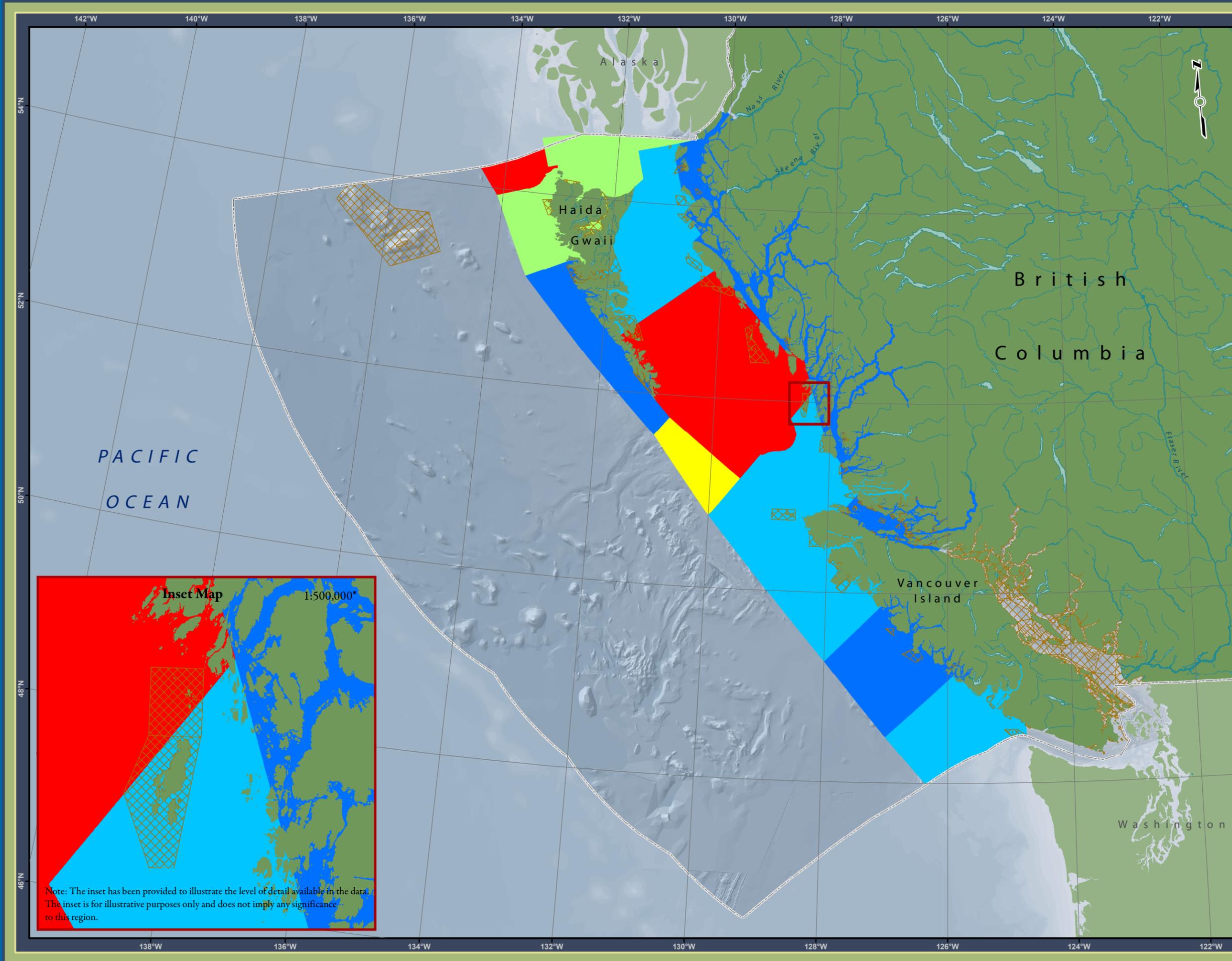


1:4,250,000 *
 * Written scales are approximate and are based on a 11 x 17 inch paper size.

Prepared for:



Map template by Caslys Consulting Ltd.
 December 10, 2012



Note: The inset has been provided to illustrate the level of detail available in the data. The inset is for illustrative purposes only and does not imply any significance to this region.