Shipping & Transport – Fishing Vessel Density Summer 2007

description

This atlas page illustrates the relative density of fishing vessels in transit in the summer months (May to September) of 2007. It is based on ship monitoring data from the Canadian Coast Guard's Marine Communications and Traffic Services (MCTS). Fishing vessels include those catching, processing or transporting fish. These vessels are estimated to account for 3% of the annual vessel movements in Canada's Pacific waters (BC Ministry of Environment et al. 2006), although that is likely to be below the actual percent of annual vessel movements since vessels less than 24 metres and 150 tons gross are not required to report their position to the VTS.

All ships operating in Canadian waters must obtain Vessel Traffic Services (VTS) clearance before beginning a voyage from a Canadian location or before entering Canadian waters. The Coast Guard monitors ship traffic using radio communication, radar detection and an Automatic Identification System. The Coast Guard documents ship position, direction and speed approximately every 4 minutes with ship-identification (Lloyd's Register name and number), flag-state (country of registry), type of ship and size. All ships over 20 metres in length, and ships engaged in towing or pushing any vessel or object more than 20 metres in length (other than fishing gear) that had a combined length of more than 45 metres are required to report their position to the VTS. Vessels towing or pushing inside a log booming ground, pleasure yachts less than 30 metres, or fishing vessels less than 24 metres and 150 tons gross are not required to report their position to the VTS.

Vessel observations were reduced to one uniquely identifiable vessel observation per hour per 5 kilometre by 5 kilometre grid cell. For each grid cell, data were summarised by calculating total number of uniquely identifiable ship observations per hour that either moved into or out of the focal cell (i.e., ensuring ships were moving).

The data is displayed on the main map using equal interval categories, meaning that the data is divided into nine equally spaced classes where each class may contain a different number of grid cells. The inset map shows the same information as nine quantiles, meaning each classification contains the same number of grid cells.

PHOTO: DAN BLONDAL

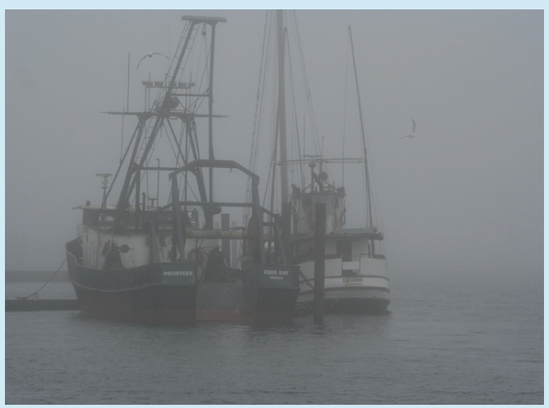

PHOTO: CHARLIE SHORT

data sources

- Canadian Coast Guard - Marine Communications and Traffic Services vessel tracking database.
- Analysis of Canadian Coast Guard data by Patrick O'Hara (Canadian Wildlife Service).

data resolution

- 5 kilometre by 5 kilometre grid cells

date collected

- Summer 2007

reviewers

- Brian Simms and Captain Phillip Nelson, Council of Marine Carriers

reviewer comments

- None provided.

caveats of use

- This map shows only the relative density of fishing vessel movements for the summer of 2007. Other maps from the vessel density series showing the same vessel type in a different season or different vessel types cannot be compared directly to this map since the range in number of vessel movements will vary from season to season and vessel type to vessel type.
- The information used to create this map does not include vessels transiting the portion of the Juan de Fuca Strait which is the responsibility of the US Coast Guard. The information also underestimates vessel traffic west of Haida Gwaii for two reasons: 1) there is no Coast Guard radar coverage of this area and 2) many of the vessels transiting the area are not bound for Canadian destinations and therefore not required to report to the Coast Guard. Furthermore many fishing vessels are less than 20 metres in length or under 150 tons gross, thus the map provides minimum estimates of vessel traffic densities for the various traffic types included here; actual densities are likely to be higher and may highlight different areas of the coast.
- Recommended date of expiry for use of these data in a marine planning context: Data should be refreshed every 4 to 5 years.

map, feature data and metadata access

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

references

- BC Ministry of Environment, Fisheries and Oceans Canada, University of Victoria, University of British Columbia, and Environment Canada. *Alive and Inseparable: British Columbia's Coastal Environment.* 2006. *www.env.gov.bc.ca/soe/bcce/*

BCMCA Atlas

Shipping & Transport
Fishing Vessel Density
Summer 2007

Legend

Fishing Vessel Density
(# of vessel movements)

- zero density
- low
- high

Notes:
- The number of vessel movements in a 5 km x 5 km grid cell ranges from 0 to 639.
- The main map shows the data classified in 9 equal intervals.
- The inset map shows the same data classified in 9 quantiles.

Data Sources:
Canadian Coast Guard

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

0 25 50 75 100 125 150
Kilometres

0 25 50 75
Nautical Miles

1:4,250,000 *

* Written scales are approximate and are based on a 11 x 17 inch paper size.

Prepared for:

BC Marine Conservation Analysis

Map template by Caslys Consulting Ltd.

January 27, 2011

Quantile Classification 1:9,000,000*