Marine Mammals – Feature Count

description

One of the goals of BC Marine Conservation Analysis (BCMCA) is to collaboratively identify areas of high conservation value and areas important to human use in Canada's Pacific Ocean. The BCMCA project has been designed to make these products available for use in marine planning. In order to identify areas of high conservation value, the BCMCA ran Marxan analyses using a wide range of ecological data, recommended by subject matter experts, as conservation features. These and other data are illustrated in the BCMCA Atlas.

Marine mammals are an important component of marine ecosystems because some species play an integral role as top predators, are sensitive to anthropogenic disturbance (i.e., many are endangered and/or threatened) and/or are commonly used as indicators for the health and condition of the marine environment. Marine mammals are also an important focal taxonomic group whose presence may be indicative of productive, functioning ecosystems. The marine mammals presented on the BCMCA Atlas include many species that are highly mobile and in many cases migrate for stages of their lifecycle.

Discussions with experts who attended the BCMCA marine mammals expert workshop (BCMCA 2008) led the BCMCA to omit cetacean features in general from the Marxan analysis. Workshop experts noted that datasets to inform cetacean distribution do not cover the entire study area and there was neither a consensus on how to prepare cetacean data for inclusion in Marxan analyses, nor on targeting such data.

This map was generated by overlaying marine mammal data that the BCMCA collated for inclusion in the Marxan analysis. The map illustrates the number of different mammal features that inform each 2 kilometre by 2 kilometre planning unit. There were a total of five different mammal features used in the Marxan analysis and, as the facing map shows, up to three of them overlapped in some of the planning units. Feature count values were classified for illustration using quantiles. (A quantile is established by dividing the frequency distribution of a variable into equal groups: that is, each quantile contains the same fraction of the total number of values being measured.)

Five marine mammal features were included in this tally:

- California Sea Lion Haulouts
- Harbour Seal Haulouts
- Sea Otter Habitat
- Steller Sea Lion Haulouts
- Steller Sea Lion Rookeries

PHOTO: DALE SANDERS

PHOTO: ROLF HICKER

data sources

- Fisheries and Oceans Canada,
- Province of British Columbia,
- University of British Columbia,
- Wendy Szaniszlo

(Note: Please see individual feature atlas pages and/or metadata for feature specific data sources.)

data resolution

- Features were tallied by their presence in 2 kilometre by 2 kilometre planning units.

date compiled

- 2010

reviewers

- Not reviewed.

reviewer comments

- None provided.

caveats of use

- This should not be interpreted as representing the spatial extents of marine habitat for marine mammals in the Canadian Pacific. It does represent the spatial extents of best-available data for a small number of marine mammals that inhabit the Canadian Pacific.
- Survey effort for marine mammals has not been equally distributed across the Canadian Pacific and this map is not standardized for effort. Areas with no data may not have been surveyed and these data gaps are not necessarily indicative of an absence of marine mammals.
- Marine mammals, especially cetaceans, are wide ranging species and the extents of their use of the marine environment have either not been mapped reliably and/or data that has been collected was not made available to the BCMCA. Thus there are likely many areas important to marine mammals that are not illustrated on this map.
- Please see individual feature atlas pages and metadata for feature or species specific caveats.
- 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

- For a copy of the BCMCA Marine Mammals Expert Workshop Report (May 2008) see: *www.bcmca.net/downloads/BCMCA_Marine_Mammals_workshop_report_final_working.pdf*

BCMCA Atlas

Marine Mammals

Feature Count

Legend

Feature count
(by planning unit)

- 1
- 2
- 3

Note:
- Classification based on 3 quantiles.

Data Sources:
Fisheries and Oceans Canada,
Province of British Columbia,
University of British Columbia,
Wendy Szaniszlo

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.

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Alaska

Haida Gwaii

British Columbia

Vancouver Island

Washington

PACIFIC OCEAN

Nass River

Skeena River

Fraser River

142°W 140°W 138°W 136°W 134°W 132°W 130°W 128°W 126°W 124°W 122°W

54°N 52°N 50°N 48°N 46°N

54°N 52°N 50°N 48°N

Inset Map 1:500,000*

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.