Undersea Features

Undersea features provide physical habitat. Their characteristics, for example their abundance, size and orientation relative to the surrounding marine environment, can influence marine biological productivity. Features are identified on the accompanying map based on a spatial inventory of large undersea features in the northeast Pacific Ocean created through the analysis of small scale bathymetric (ocean depth) data using Benthic Position Index (BPI) and slope surface analyses.

The analysis used Natural Resource Mapping (NRM) data at a scale of 1:250,000, and the Canadian Gazetteer of Undersea Feature Names for naming identified features. A bathymetric surface was created as a raster image file, which is the offshore bathymetry image used in the base map of this atlas. The undersea features analysis used a BPI to calculate how flat (plains, slopes), convex (ridge-like) or concave (valley-like) the seafloor is at a given point relative to the surrounding area. Values for BPI were established to identify the features based on relevant literature.

Within the geographic extent of the NRM data used for the analysis (which roughly corresponds to Canada's Exclusive

Undersea features provide habitat and influence biological productivity

Economic Zone), 175 seamount, hill and ridge features were identified, 39 of which were named in the gazetteer. Fifty-seven canyon and valley features (13 named) were also identified on the continental slope, as were 25 trough, basin and canyon features (ten named) on the continental shelf, and 48 trough, basin and canyon features (16 named) on the continental rise. Within PNCIMA there are 26 canyon, five valley and nine trough features.

Geographic Features

Islands and other geographic locations are labelled to provide the reader with the geographic context in which the remainder of the atlas is presented. Names used originate from multiple sources, including the Geographical Names Board of Canada (GNBC), local First Nations, names of nearby features on land or locally referenced names. While there has been no systematic effort to ensure names used for this atlas are those officially recognized by the GNBC, there has been an attempt to identify features and locations that are referenced in the text explaining the maps within this atlas, and those that might reasonably be expected to be referenced in planning discussions concerning PNCIMA.

Photo: Jacob Joslin

Legend

- Canyon
- Trough
- PNCIMA Boundary
- Exclusive Economic Zone Boundary

Source:
Fisheries and Oceans Canada, 1985
PNCIMA Basemap

Map projection: BC Albers
Datum: NAD 83

0   25   50   75   100
Kilometres