

# Introduction to PBSmapping

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October 7, 2008

## 1 What is PBSmapping?

**PBSmapping** contains software designed to facilitate the compilation and analysis of fishery data, particularly data referenced by spatial coordinates. Our research stems from experiences with information on Canada's Pacific ground-fish fisheries compiled at the Pacific Biological Station (PBS). Despite its origins in fishery data analysis, our software has broad applicability. The package **PBSmapping** extends the R language to include two-dimensional plotting features similar to those commonly available in a Geographic Information System (GIS). Embedded C code speeds algorithms from computational geometry, such as finding polygons that contain specified point events or converting between longitude-latitude and Universal Transverse Mercator (UTM) coordinates. Recent versions of **PBSmapping** take advantage of features in other R packages, such as `mapproj` and `deldir`.

## 2 What is PBS?

The initials **PBS** refer to the Pacific Biological Station, a major fisheries laboratory operated by Fisheries and Oceans Canada on the Pacific coast in Nanaimo, British Columbia, Canada. For more information, see: <http://www.pac.dfo-mpo.gc.ca/sci/pbs/>.

## 3 Where is the User's Guide?

The R directory `.../library/PBSmapping/doc` includes a complete User's Guide `PBSmapping-UG.pdf`. To use this package effectively, please consult the Guide.

## 4 Demos

**PBSmapping** includes ten demos that appear as figures in the User's Guide. To see them, run the function `.PBSfigs()`. More generally, a user can view all demos available from locally installed packages with the function `runDemos()` in our related (and recommended) package `PBSmodelling`.

## Reference

Schnute, J.T., Boers, N.M., Haigh, R., and Couture-Beil, A. 2008. PBS Mapping 2.57: User's Guide – revised from *Canadian Technical Report of Fisheries and Aquatic Sciences* **2549**: vi + 118 p.