



## The Permanent Service for Mean Sea Level (PSMSL)

web: [www.pol.ac.uk](http://www.pol.ac.uk)

Director: **Dr. P.L. Woodworth** (UK)

### Development

Since 1933, the Permanent Service for Mean Sea Level (PSMSL) has been responsible for the collection, publication, analysis and interpretation of sea level data from the global network of tide gauges. It is based at the Proudman Oceanographic Laboratory (POL) which is a component of the UK Natural Environment Research Council (NERC). The PSMSL is a member of the Federation of Astronomical and Geophysical Data Analysis Services (FAGS) established by the International Council of Scientific Unions (ICSU). It is supported by FAGS, the Intergovernmental Oceanographic Commission (IOC) and NERC.

### Mission/Objectives

The mission of the PSMSL is to provide the community with a full Service for the acquisition, analysis and interpretation of sea level data. Aside from its central role of operation of the global sea level data bank, the PSMSL provides advice to tide gauge operators and analysts. It occupies a central management role in the development of the Global Sea Level Observing System (GLOSS) and hosts important international study groups and meetings on relevant themes.

### Products

The database of the PSMSL contains approximately 50,000 station-years of monthly and annual mean values of sea level from over 1800 tide gauge stations around the world received from almost 200 national authorities. On average, approximately 2000 station-years of data are entered into the database each year. This database is used extensively throughout the sciences of climate change, oceanography, geodesy and geology, and is the main source of information for international study groups such as the Intergovernmental Panel on Climate Change (IPCC).

Data for all stations are included in the PSMSL METRIC (or total) data set. The METRIC monthly and annual

means for any one station-year are necessarily required to be measured to a common datum, although, at this stage, datum continuity between years is not essential. The year-to-year datum checks become essential, however, if the data are subsequently to be included in the PSMSL 'Revised Local Reference (RLR)' component of the data set.

The 'Revised Local Reference (RLR)' dataset of the PSMSL contains records for which time series analysis of sea level changes can be performed. Long records from this dataset have been the basis of all analyses of secular changes in global sea level during the last century. The geographical distribution of longer RLR records contains significant geographical bias towards the northern hemisphere, a situation that is being rectified by the establishment of GLOSS.

### Structure/Governing Board Members

The PSMSL reports formally to the International Association for the Physical Sciences of the Ocean (IAPSO) Commission on Mean Sea Level and Tides. It is also served by an Advisory Group, which at present consists of Dr.R.Neilan (JPL, USA), Dr.G.Mitchum (University of South Florida, USA), Prof.B.Douglas (University of Maryland, USA), Dr.R.Warrick (University of Waikato, New Zealand), Dr.D.Pugh (Southampton Oceanography Centre, UK) and Dr.Martine Feissel (IGN, Paris, France).

### Point of Contact

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