



The Permanent Service for Mean Sea Level: A review of recent updates

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The Permanent Service for Mean Sea Level (PSMSL) is the internationally recognised global sea level databank for long term sea level change information from tide gauges. Established in 1933, the PSMSL continues to be responsible for the collection, publication, analysis and interpretation of sea level data.

During 2011, PSMSL intends to join the recently formed ICSU World Data System (WDS), which replaces the Federation of Astronomical and Geophysical Data Analysis Services, which PSMSL was a member of for many years. Becoming a member of the WDS involves demonstrating capability in relation to evaluation criteria covering policies, organisational framework, management of data, metadata, and services, and technical infrastructure. In addition, the PSMSL continues to have close links with the Intergovernmental Oceanographic Commission's Global Sea Level Observing System (GLOSS). Currently the PSMSL databank holds around 60,000 station years of data from about 2,050 stations and in the region of 200 authorities worldwide. Data undergo careful quality control, including ensuring year to year continuity, before addition to the databank. Where possible, data is reduced to a common datum for time series analysis. In 2007 the PSMSL combined its monthly mean sea level activities with the higher frequency data collection from GLOSS station sites conducted by the British Oceanographic Data Centre (BODC).

Here, we present an analysis of the present state of the PSMSL data holdings, with particular attention given to 2000 – 2009. This decade has seen a continuing decrease in the number of reporting stations from the high point of the 1980s. This decline is seen across the globe, but is particularly severe in Central and South America, and is not apparent in Africa, partly due to the efforts of programmes such as ODINAFRICA.

In April 2010, the PSMSL launched its new website (www.psmsl.org), which aims to increase the quality and accessibility of data. Users can now access detailed metadata for each station. Various products, some currently under development, will allow the user to explore the PSMSL data set, examining record lengths and trends in sea level interactively. Future developments will enhance interoperability with providers of other data of interest to the sea level community.