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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.
The PSMSL is in the process of joining the recently formed ICSU World Data System (WDS), the successor to the Federation of Astronomical and Geophysical Data Analysis Services, of which the PSMSL was a member for many years. Membership of the WDS requires the PSMSL to meet criteria covering policies, organisational framework, management of data, metadata, services and technical infrastructure.
The PSMSL continues to have close links with the Intergovernmental Oceanographic Commission's Global Sea Level Observing System (GLOSS). Currently the PSMSL databank of monthly and annual mean sea level data holds around 61,500 station years from over 2100 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.
Here, we present an analysis of the present state of the PSMSL and GLOSS data holdings, describing some of the recent improvements in the catalogue and highlighting some of the geographic regions where data coverage remains poor.
We also describe recent efforts to improve interoperability with providers of other data of interest to the sea level community. The PSMSL have worked to link our stations with those of the Système d'Observation du Niveau des Eaux Littorales (SONEL), the University of Hawaii Sea Level Center (UHSLC) and the Vlaams Instituut voor de Zee (VLIZ). This will enable users of the PSMSL website to discover high frequency sea level and GPS records at or near PSMSL stations.
Finally, we introduce some products planned to be added to the PSMSL website in the near future. These will allow visitors to the website to explore and download data from the PSMSL catalogue using the Google Maps Javascript API.