



## **The future for the Global Sea Level Observing System (GLOSS) Sea Level Data Rescue**

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Historical sea level data are rare and unrepeatable measurements with a number of applications in climate studies (sea level rise), oceanography (ocean currents, tides, surges), geodesy (national datum), geophysics and geology (coastal land movements) and other disciplines. However, long-term time series are concentrated in the northern hemisphere and there are no records at the Permanent Service for Mean Sea Level (PSMSL) global data bank longer than 100 years in the Arctic, Africa, South America or Antarctica. Data archaeology activities will help fill in the gaps in the global dataset and improve global sea level reconstruction.

The Global Sea Level Observing System (GLOSS) is an international programme conducted under the auspices of the WMO-IOC Joint Technical Commission for Oceanography and Marine Meteorology. It was set up in 1985 to collect long-term tide gauge observations and to develop systems and standards "for ocean monitoring and flood warning purposes".

At the GLOSS-GE-XIV Meeting in 2015, GLOSS agreed on a number of action items to be developed in the next two years. These were:

1. To explore mareogram digitisation applications, including NUNIEAU (more information available at: <http://www.mediterranee.cerema.fr/logiciel-de-numerisation-des-enregistrements-r57.html>) and other recent developments in scanning/digitisation software, such as IEDRO's Weather Wizards program, to see if they could be used via a browser.
2. To publicise sea level data archaeology and rescue by:
  - maintaining and regularly updating the Sea Level Data Archaeology page on the GLOSS website
  - strengthening links to the GLOSS data centres and data rescue organisations e.g. linking to IEDRO, ACRE, RDA
  - restarting the sea level data rescue blog with monthly posts.
3. Investigate sources of funding for data archaeology and rescue projects.
4. Propose "Guidelines" for rescuing sea level data.

These action items will aid the discovery, scanning, digitising and quality control of analogue tide gauge charts and sea level ledgers and improve the quality, quantity and availability of long-term sea level data series.