United Nations
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Intergovernmental
Oceanographic
Commission

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Commission
océanographique
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Organización
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Progress Report for GLOSS

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What is GLOSS?

- Established by IOC in mid-1980s to improve quantity and quality of sea level data sent to PSMSL and other sea level centres.
- Original aim: Develop GLOSS Core Network of 300 sea level stations for practical and ocean/climate science applications. Now: Additional strong operational dimension (Altimeter cal/val; GCM val; tsunami monitoring, ..)
- Global array of gauges spaced 500-1000 km apart. Geographically balanced. Open ocean locations. Best technology.

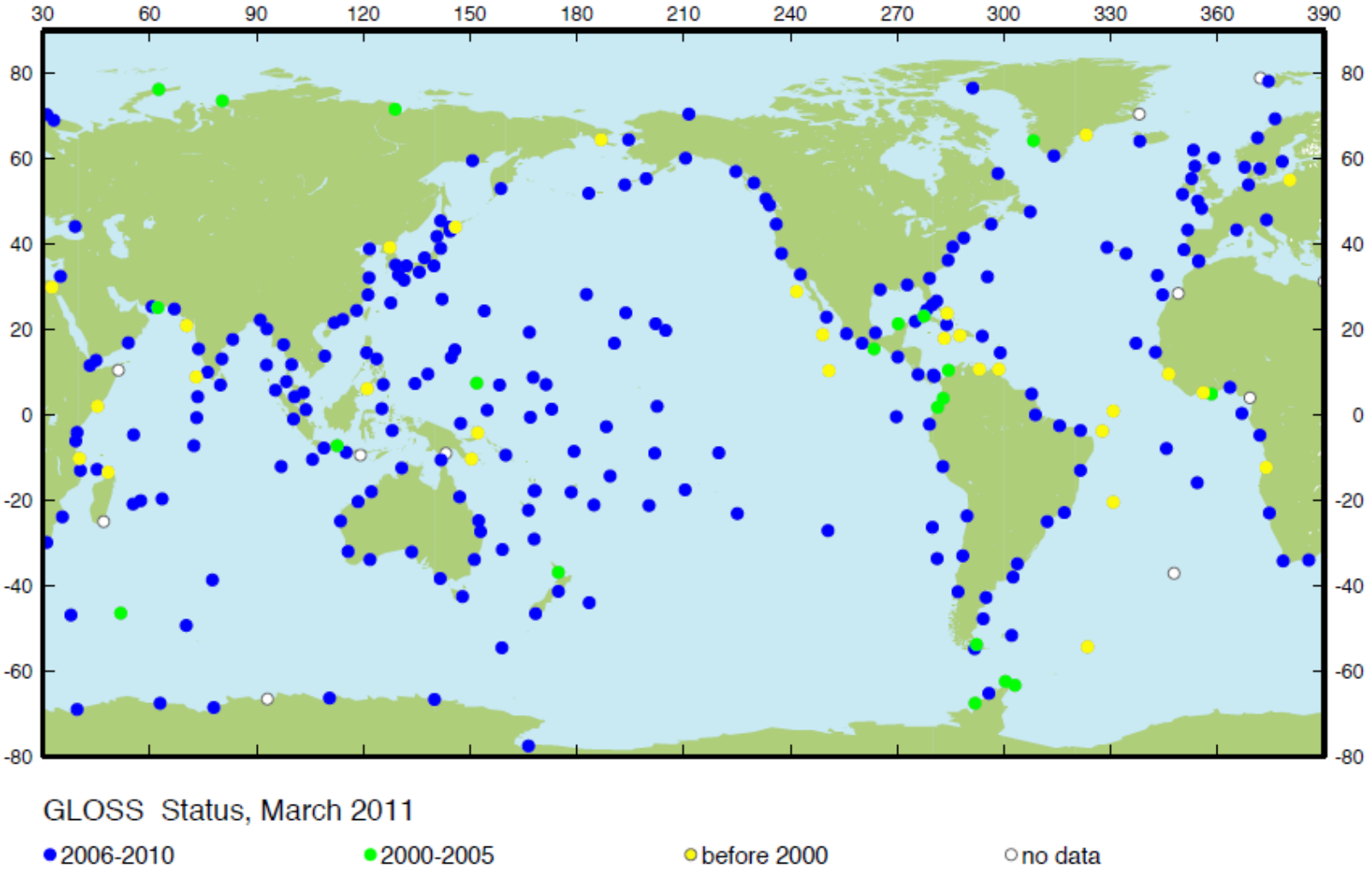
What Data Streams Does GLOSS Generate?

1. **Delayed mode: QC'd mean sea levels to Permanent Service for Mean Sea Level (PSMSL)**
2. **Delayed mode: QC'd higher-frequency data (e.g. hourly) to GLOSS Data Centre (PSMSL, Univ of Hawaii Sea Level Centre)**
3. **Fast data: High frequency data to UHSLC altimeter/model cal/val**
4. **Real time data: Flanders Marine Institute and International Tsunami Warning Centers**
5. **GPS data to TIGA Centre at Potsdam (Germany) & University of La Rochelle**

What does GLOSS provide?

1. Coordination mechanism for global sea level observations (e.g. GLOSS Group of Experts & GLOSS Core Network of ~ 300 stations)
2. Global data standards and archiving facilities, QC of data
3. Technical manuals and training material
4. Technical advice and special workshops on technical issues
5. Training courses on analysis and uses of sea level observations
6. Limited provision of hardware (e.g. tide gauges, GPS, transmitters)

GLOSS Network Status

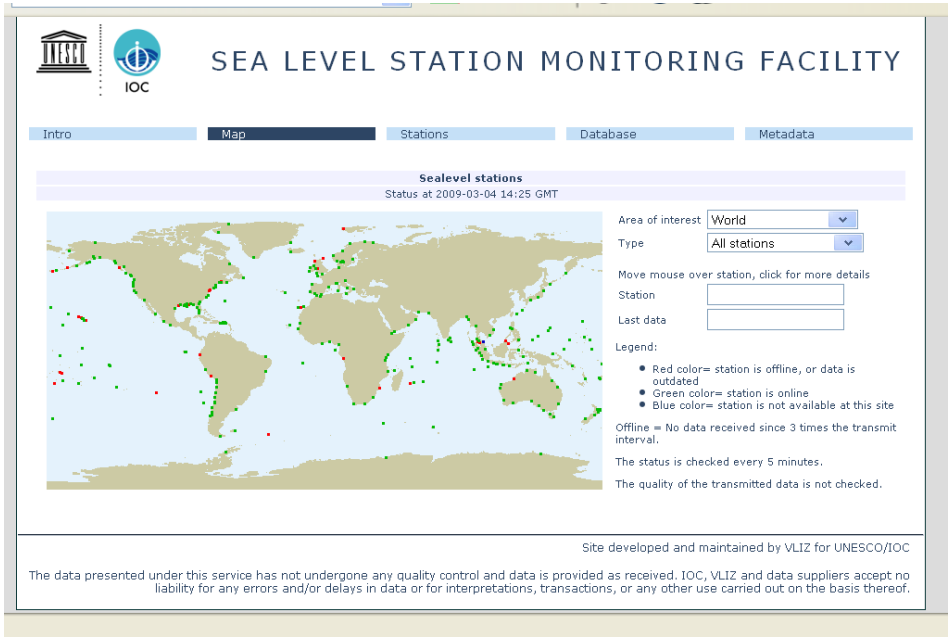


GLOSS – Selected progress highlights

- 11th GLOSS GE Report available at http://www.ioc-goos.org/index.php?option=com_oe&task=viewDocumentRecord&docID=4973&lang=en with defined actions for bienium

- GLOSS continues coordination efforts to enhance sea level networks in support of tsunami monitoring (via concerted actions by member states or directly)
  - Encouraging developments in Mediterranean where more gauges are starting to deliver real time data, but still no stations available in North Africa
  - Efforts are currently underway to strengthen sea level network in Caribbean (NOAA and IOC/GLOSS)

Sea Level Station Monitoring Web-service



• Used extensively during tsunami events [Japan tsunami: Close to 440,000 web-hits on 11 March 2011, and 2,902,000 web-hits on 12 March].

More information at:
www.ioc-sealevelmonitoring.org

• Web-based global sea level station monitoring service for viewing sea level data received in real time from different network operators through a number of different communications channels.

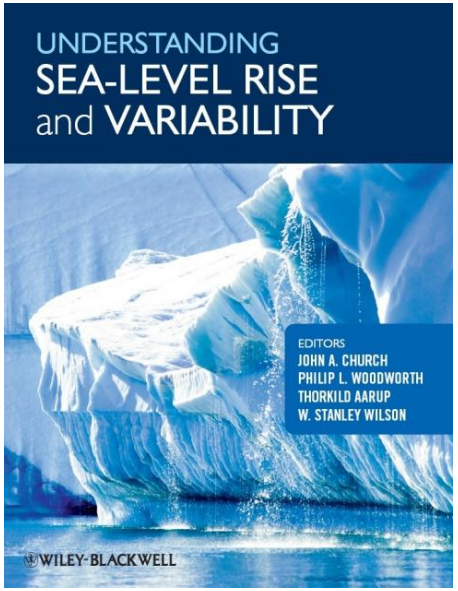
• Aims

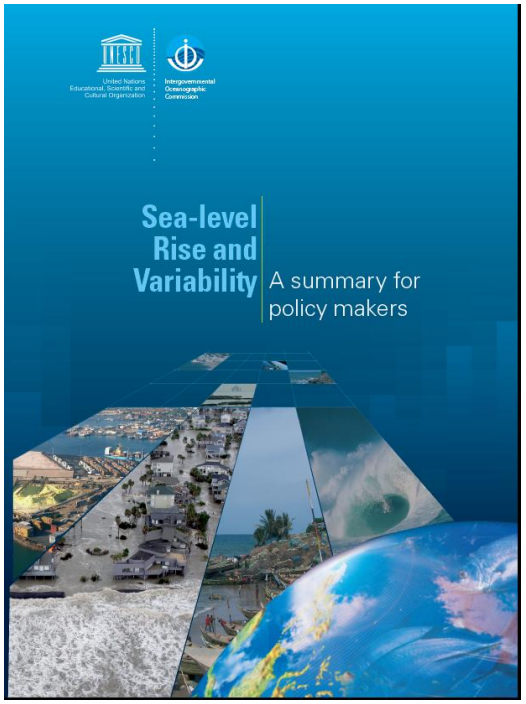
- to provide information about the operational status of global and regional networks of real time sea level stations;
- to provide a display service for quick inspection of the raw data stream from individual stations.

• 431 real time stations are presently included on the web-site (16% growth in number of stations over last year)

•100 national agencies provide data to the web-site.

- WCRP Conference on Understanding Sea-Level Rise and Variability. 6-9 June, 2006 Paris.
- Book published September 2010 (http://www.wiley.com/WileyCDA/WileyTitle/productCd-1444334514,descCd-description.html)





Available at:

http://unesdoc.unesco.org/images/0018/001893/189369e.pdf (English) ;
http://unesdoc.unesco.org/images/0018/001893/189369f.pdf (French)
http://unesdoc.unesco.org/images/0018/001893/189369s.pdf (Spanish).

Mutual Collaboration Issues

- GLOSS appreciates efforts by IHO and TWLWG to advocate for continuation of long time series stations.
- Recommend that IHO member agencies continue to contribute actively to the development and/or sustaining GLOSS Core Network stations and other stations with long records. These stations are of particular importance for the study of both historical and the forecast of future sea-level rise.
- Strengthen efforts to rescue historical paper based sea level data (Further advice “how to” can be obtained from GLOSS)

- Any input to GLOSS GE? Next meeting 7-11 Nov 2011

www.gloss-sealevel.org

Thank you!