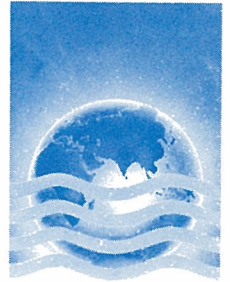


MDV/SLR/ST/1



**SMALL STATES  
CONFERENCE ON  
SEA LEVEL RISE**  
MALE, 14 - 18 NOVEMBER 1989

UNIVERSITY OF NEWCASTLE UPON TYNE  
CENTRE FOR TROPICAL COASTAL  
MANAGEMENT STUDIES

**Statement by Dr. David Pugh  
Chairman of the Group of Experts for the  
Global Sea Level Observing System of the IOC**

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**Theme: Measuring Sea Level Changes**

The Global Sea Level Observing System is based on an international network of sea level measuring stations coordinated by the IOC. It provides high quality standardized data from which valuable sea level products are produced for international and regional research programmes as well as for practical applications at a national level.

The Global Sea Level Observing System has to serve many purposes. It has to cover the entire spectrum in time and space from short-lived tsunami to the changes related to tectonic processes. Characteristics of the network must include permanence, high vertical precision and stability, and the flexibility to develop as the requirements evolve.

Many of these gauges are already operating, but many need upgrading in terms of leveling accuracy, documentation, telemetry and time taken before the data become available for analysis. About 100 new sites are proposed, many on ocean islands which are best place for ocean monitoring.

As data products are made available and analyzed, the correlation of mean sea level to climatic phenomena will become clearer. This, along with advancement of technology, should result in the eventual upgrade of all stations to near-real-time delivery of data.

The elements of GLOSS are:

- (i) the global network of permanent sea level stations for obtaining standardized sea level observations; this forms the primary framework to which regional and national sea level networks may be related.
- (ii) data collection for international exchange with unified procedures which may include near-real-time data collection;
- (iii) data analysis and product preparation required for scientific and/or practical applications;
- (iv) assistance and training for establishing and maintaining sea level stations as part of GLOSS and improving national sea level networks;
- (v) a selected set of GLOSS tide gauge bench marks shall be accurately connected to a global geodetic reference system.

Development of a co-ordinated observing system will take time even though many of the component parts existed previously at a national level. It will also need resources beyond the modest sums which the IOC can make available. Further support either through donation to the Trust Fund, or in kind will allow key activities to proceed.

- 1) establishment of further gauges through supply of equipment and expert assistance;
- 2) upgrading and continuing operations of existing gauges.
- 3) development of co-ordination through publication of regular newsletters, brochures and technical reports.
- 4) setting-up further training courses in measurement, analysis and interpretation.
- 5) operation of small team of sea level coordinators each operating at a regional level as part of a global team.

It is a pleasure to record the appreciation of the IOC and its Group of Experts for GLOSS for the enthusiastic support given by States in the initial stages of the Network development.

It is essential that this support continues if we are to measure future changes of sea level at a global, regional and national level. Resources must be made available to sustain a strong permanent system. Without these measurements, planning for the impacts of sea level rise will be speculative and potentially misdirected.

MAP OF GLOSS SEA LEVEL STATIONS

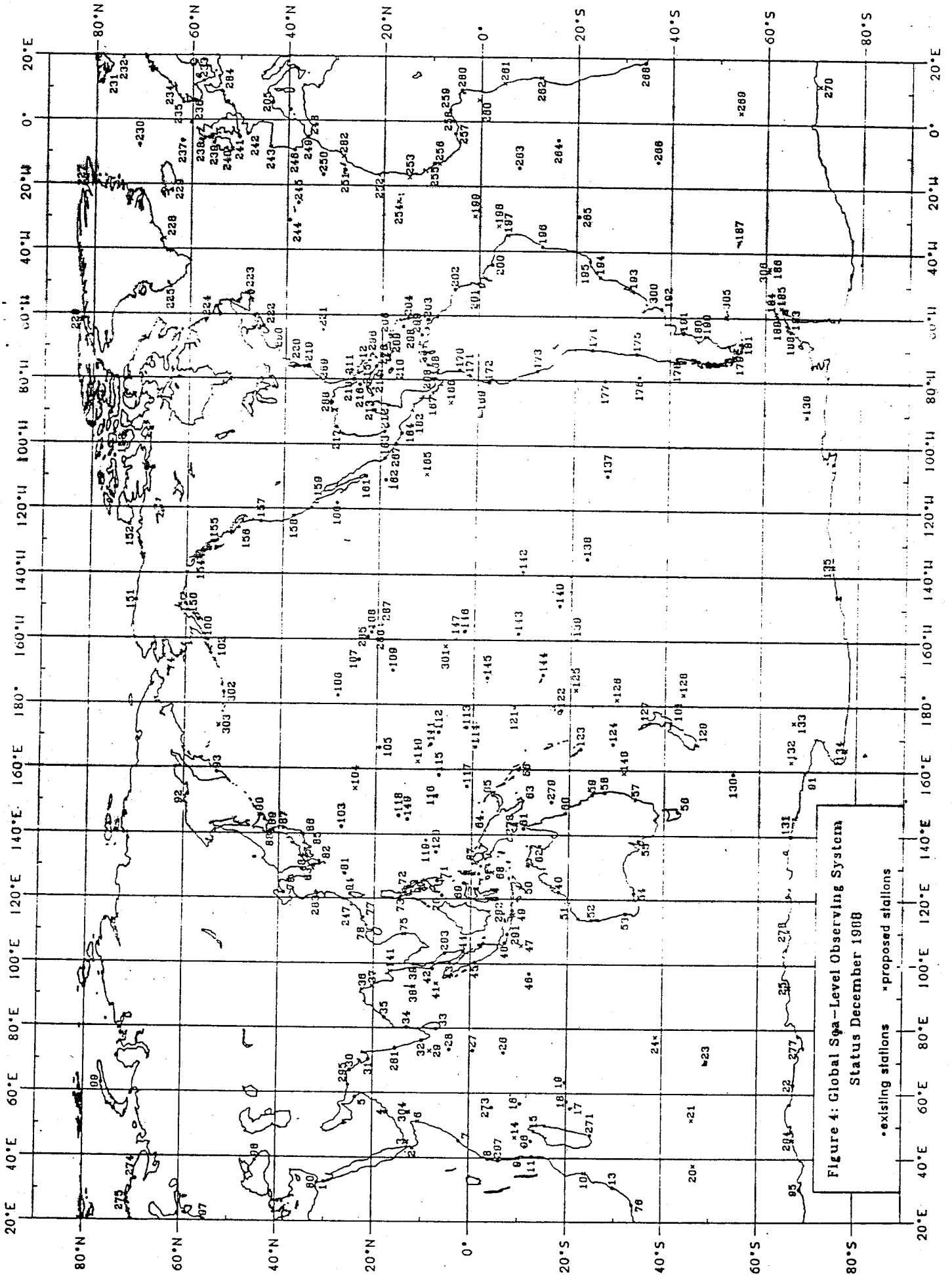


Figure 4: Global Sea-Level Observing System  
 Status December 1980  
 \*existing stations \*proposed stations