



IHB File No. S3/2636

**CIRCULAR LETTER 36/2006
28 March 2006**

REQUEST FOR SHALLOW WATER BATHYMETRIC DATA

Dear Hydrographer,

The importance of ocean bathymetry is being increasingly recognized as essential for many existing and emergent uses. Some of these uses, which are in addition to that of safe navigation, include:

- Habitat management
- Coastal management and defence
- Renewable energy development
- Offshore exploration and aggregates extraction
- Insurance
- Disaster management/ emergency response
- Sovereignty and defence
- Estates management
- Ocean research
- Recreation and tourism
- Freshwater resource management
- Marine engineering works and services
- Fisheries

The 2004 Indian Ocean (Boxing Day) tsunami focused world attention on the important role that hydrographic organizations play in charting and mapping the oceans and coastal zones. It also highlighted the need for improved ocean mapping both at global and regional scales.

At the 21st IHO-IOC GEBCO Sub Committee on Digital Bathymetry (SCDB) meeting which took place at Aguascalientes, MEXICO last year, concern was expressed that the existing IHO-IOC GEBCO Digital Atlas (GDA) did not adequately represent the sea floor topography in shallow water areas. It was noted that the existing grid needs to be improved in order to respond to many requests from the user community.

While the original intention of the IHO-IOC GEBCO Project was to bring together deep ocean soundings data and to create maps of the deep ocean floor up to the continental shelf break, the advent of the IHO-IOC GEBCO Digital Atlas and the flexibility that this provides have given rise to the need to also include data for the continental margins.

IHO Member States collectively hold vast amounts of shallow water bathymetric data that could make a significant improvement to the IHO-IOC GEBCO product and other similar products such as the International Bathymetric Chart (IBC) series. In order for this data to be useful for gridding purposes, however, it needs to be in a digital format, and must be consistent in structure and content, (e.g data format, projection and density).

An investigation into the use of bathymetric data from navigational products such as ENC's and digital paper chart files was presented by the IHB at the Aguascalientes SCDB meeting and it was concluded that soundings and contours from ENC usage bands 2 (General) and 3 (Coastal) could be used to greatly enhance the IHO-IOC GEBCO grid. The IHB and the British Oceanographic Data Centre (BODC) (on behalf of the IOC), have therefore developed an S-57 / ENC data harvesting tool that extracts relevant S-57 features and converts them into a text format that can be directly used by the IHO-IOC GEBCO gridding software under the auspices of the SCDB Gridding Group. These features include the coastline (COALNE), depth contour (DEPCNT) and sounding (SOUNDG) geo features as well as vertical datum (M_VDAT), sounding datum (M_SDAT) and quality of data (M_QUAL) metadata features.

The harvesting tool is included on the CD ROM attached hereto. It should be noted that the contents of the files generated by the harvesting application are in a text format and can be viewed using a text editor (e.g. Notepad or Wordpad). Further instructions on the installation and use of the application are contained on the attached CD ROM. This application can be freely distributed. Member States are requested to extract the required data from their ENC's, using the harvesting software on the enclosed CD ROM.

For those areas where no ENC coverage exists, Member States are requested to provide the above mentioned features from their paper chart production system files. The relevant coastal series charts extending to the 200 meter contour would be most suitable for this purpose. Similarly this also applies to the digital data from bathymetric maps that could also be made available.

Member States are invited to forward all data to the IHB (for the attention of Tony PHARAOH) via email attachment (pad@ihb.mc) or on CD ROM **by the end of June 2006**. Depending on available resources, the IHB may also be able to carry out the extraction task, on behalf of those Member States who do not have the necessary resources to do this. This will, however, require these Member States to send their ENC base (.000) files to the IHB with a letter granting permission for the above mentioned features to be extracted on their behalf, and used in the production of the next IHO-IOC GEBCO grid.

The new IHO-IOC GEBCO grid will be made freely available and an expected benefit for the scientific and maritime communities of contributing Member States will be greatly improved gridded bathymetry covering their national waters.

Member States are also requested to indicate whether the data supplied may be incorporated into the IHO Data Center for Digital Bathymetry (DCDB) data bank after the gridding process has been completed.

On behalf of the Directing Committee
Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Hugo Gorziglia', written over a faint circular stamp.

Captain Hugo GORZIGLIA
Director

Encl: CD-ROM