STATUS OF THE IHO-IOC IBCM-II 0.1' BATHYMETRIC GRID FOR THE MEDITERRANEAN

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Abstract
This note gives the status of the effort by the IHO-IOC IBCM program (International Bathymetric Chart of the Mediterranean - and Black - Seas) to produce a new digital bathymetric and topographic grid at 0.1' spacing. The new compilation will consist of the 0.1' SRTM data on land, clipped at a coastline derived from navigational charts, and merged with shoal-biased hydrographic soundings on the shelves and slopes, and presumably with the multibeam data for the deeper basins already acquired for 45% of the Mediterranean.
Keywords : Bathymetry, Black Sea, Coastal Waters, Topography, Swath Mapping.

The International Bathymetric Chart of the Mediterranean (IBCM) is the oldest of the IHO-IOC regional bathymetric mapping projects. Over the past three decades it has produced charts at 1:1 million scale of the bathymetry of the Mediterranean and Black Seas as well as geological/geophysical overlay sheets of the Bouguer Gravity (IBCM-G), Seismicity (IBCM-S), Magnetics (IBCM-M), Plio-Quaternary isopachs and structural contours (IBCM-PQ), and Recent Unconsolidated Bottom Sediments (IBCM-SED). Each of these chart series now has a published explanatory brochure, available as pdf files. All the published maps, some 70 sheets at 1:1 million, and seven sheets at 1:5 million, have now been scanned and are available digitally at different resolutions.

Over the past decade, work has continued on a digital IBCM-II bathymetric compilation on a 0.1' grid. Data at 0.05' from the 2000 Shuttle Radar Topographic Mission (SRTM) is available for the land areas around and in the Mediterranean and Black Seas. Well over a million soundings have been extracted from more than 1500 navigational charts for the Mediterranean and Black Seas. In recent years multibeam swath surveys have been carried out in the deep basins and on some of the slopes and shelves, and now cover some 45% of the Mediterranean, and a smaller percentage of the Black Sea.

The task now is to clip the terrestrial SRTM data with digitized coastlines for the 46,000 km of coast in the Mediterranean, and merge these onshore grids with grids to be built up from the shoal-biased soundings of the inshore navigational charts, together with digitized shelf contours. Existing spot soundings and contoured 'postage stamp surveys' will be used to extend out to areas covered by seamless multibeam coverage. The grids from earlier piecemeal coverage will be replaced with multibeam grids wherever it becomes avalable.

This Sisyphysian work has been ongoing in Israel since the Seventh IBCM Editorial Board meeting in Kaliningrad in 1999, and it will continue in parallel with the recent efforts to have 100% multibeam coverage for the Mediterranean and Red Sea areas offshore of Israel, and in the Dead Sea.

Postcards are available from the first author, printed with the various bathymetric, geological, and geophysical compilations.

Reference
IBCM printed sheets at scales of 1:1 million and 1:5 million are available for purchase from: GeoPubs, 4 Summerdale, Billericay, Essex, CM12 9EL, England, Phone +44 1277 632454, Fax +44 1277 632454, and E-mail: sales@geopubs.co.uk.