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COMMITTEE ON THE PEACEFUL USES OF THE SEA-BED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION

LIST OF MAPS

Note by the Secretariat

At its 60th meeting on 26 March 1971, the Committee requested the Secretariat to prepare a list of maps which might be of interest to members, together with an indication of where they could be obtained. The attached short list has been drawn up in response to this request. This note gives a brief description of the nature of bathymetric and marine geology maps which may be taken into account in the study and use of such maps.

In general a bathymetric chart is prepared and published as a base map, indicating topography, which can then be used to produce maps of the sea-bed showing its geological and geophysical characteristics. At present bathymetric charts are used to revise and produce nautical charts for navigation purposes, and as a basis for other types of special charts showing the distribution of living resources, the structure of the sea-bed, sediment transport etc. Even present bathymetric charts are based on limited data and more is required for the production of maps detailing sea-bed topography in a fully reliable manner.[1/] The recent

1/ A United Nations Ad Hoc Group of Experts on Hydrographic Surveying and Bathymetric Charting met during March 1970 and in their report stressed the insufficiency of adequate hydrographic charts covering the oceans, although the report does state that for the present the available charts are considered sufficient for navigation.

development of new instruments and vehicles usable for the exploration of the sea-bed may be expected to produce a larger flow of data for the mapping of the sea-bed.

The basis for preparing mineral resource maps, or geological maps in general, of land areas is essentially that of bringing together data obtained by various means, such as plotting of rock strata or formations, mining, drilling, sampling, seismic surveys and aerial surveys employing a variety of techniques. Techniques for obtaining data on marine geological deposits and formations are more limited, and the main sources at present are coring (including gravity and piston cores as well as drill cores) and surficial sampling, combined with the results of seismic profiling and magnetometric surveying. Bottom observation, whether direct or by remote means, is much more limited than observation on land as a means of securing data. There is, accordingly, a far greater degree of extrapolation in marine geological mapping than in such mapping on land, and a far more restricted data base.

A fairly comprehensive description of requirements for topographic and geological mapping of the sea bottom was given in the statement of the representative of the United States on 19 March 1969 in the Economic and Technical Sub-Committee of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction.

The International Hydrographic Bureau (IHB), through its membership, has been able to maintain a data bank on the characteristics of the sea-bed. It is also the responsible agent for the production of the General Bathymetric Chart of the Ocean (GEBCO). Sixteen of these charts are issued on the scale of 1:10,000,000, while another eight, covering the polar areas, are published on the scale of 1/3,100,000. These charts are in colour and the intervals of the isobaths are at 200 metres, 500 metres, 1,000 metres and every 1,000 metres thereafter.

Since 1960 the members of the IHB have agreed to prepare plotting sheets on the scale of 1:1,000,000 to be used as the base material in the production and revision of GEBCO sheets. These plotting sheets normally contain most of the data of former GEBCO editions, as well as data made available from hydrographic offices, national and international oceanographic institutions and other public and private organizations. In all, 603 different plotting sheets cover the ocean areas of the world. Each member of IHB has accepted the responsibility of compiling a given number of plotting sheets for a specified ocean area.

In 1970, Japan announced plans to produce submarine structural charts, total magnetic intensity charts and gravity charts.

The United States reported that it had already undertaken a project to produce bathymetric charts indicating both isobaths and geographical information of the continental shelves and slopes of the United States, to a depth of 2,500 metres, with the intended scale to be 1:250,000.

The following list provides examples of the types of materials and information available through the sources specified:

MAPS

General Bathymetric Chart of the Oceans (GEBCO) scale 1:10,000,000 (16 sheets) and 1:3,100,000 (8 sheets covering polar areas), International Hydrographic Bureau, Monaco.

GEBCO plotting sheets, scale 1:1,000,000, International Hydrographic Bureau, Monaco

Preliminary maps showing World Subsea Mineral Resources, scale 1:60,000,000: United States Geological Survey

United Nations Conference on the Law of the Sea, 1958: Official Records, Vol.I: Preparatory Documents, pages 145-164.

PUBLICATIONS

International Hydrographic Review, International Hydrographic Bureau Monaco, Annual Publications

International Hydrographic Bulletin, Supplement to the Review

Ninth International Hydrographic Conference - 18 April-3 May 1967, Monaco Report of the Proceedings

National Hydrographic (Nautical) Chart catalogues are published periodically by national hydrographic offices.
