The Role of Bathymetry in International Maritime Law and in the Provisions of the UN Convention on the Law of the Sea.

Neil Guy

GEBCO
GENERAL BATHYMETRIC CHART OF THE OCEANS



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION

COMMISSION OCEANOGRAPHIQUE INTERGOUVERNEMENTALE

PARIS



CENTENARY 1903-2003



INTERNATIONAL HYDROGRAPHIC ORGANIZATION

ORGANISATION HYDROGRAPHIQUE INTERNATIONALE

MONACO







What is Bathymetry

The Science of Measuring
Depths (usually in the Ocean) to
Determine Bottom Topography
Bowditch

Content







- Data Acquisition
- Data Processing
- Compliance with Standards
- Relationship to Datum
- Depiction, Format and Metadata
- Distribution and Maintenance
- Examples
- Responsibilities Legal or Otherwise
- Conclusion







Acquisition and Processing

Historical Data

Acceptance - Quality Assurance?

National and International Responsibility

New Data

Methods of Survey - Latest Affordable?

Data Processing and Maintenance

Duty of Care







Compliance with Standards

• International or National

Equipment

Personnel

Methodology

Products







Relationship to Datum

Local

Regional

• WGS 84 (GPS?)







Depiction, Format and Metadata

• User Requirements for Depiction and Format Mariner

Paper Charts and Publications

Electronic Products

UNCLOS

Baselines - Normal and Straight

Foot of the Slope

Resources - Exploration and Exploitation

• Metadata







Distribution and Maintenance

• Mariner

Latest Information
Widest Distribution
Safest Means









Examples

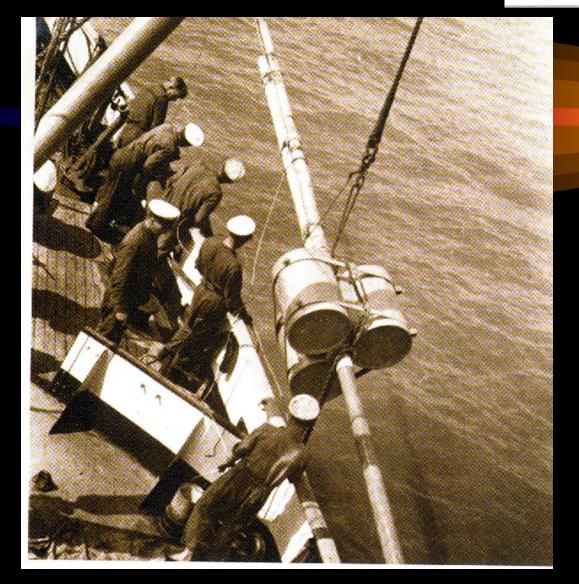
Surveying
 Old Surveys
 Early Swathe
 Modern Equipment

Usage Charting UNCLOS







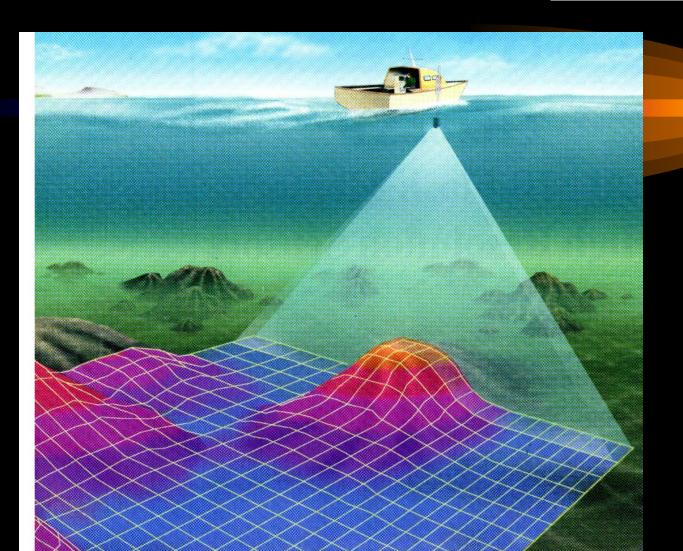










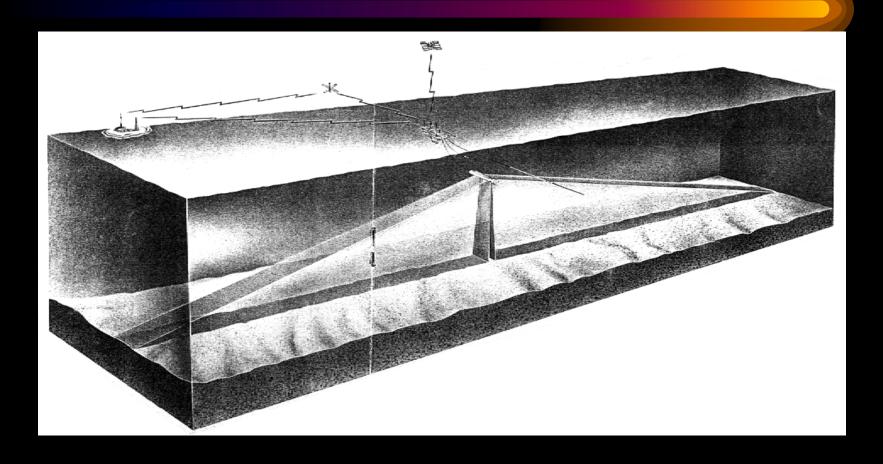








GLORIA

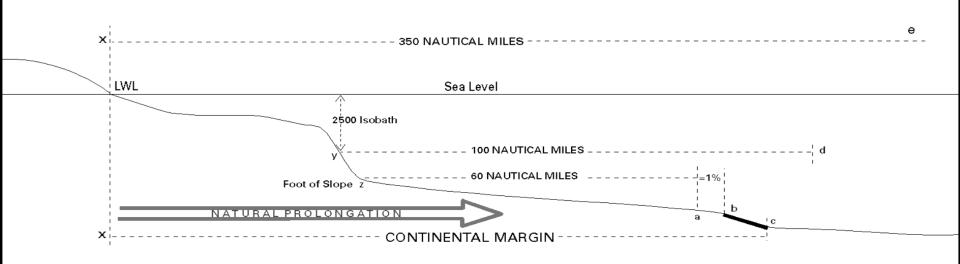








UNCLOS

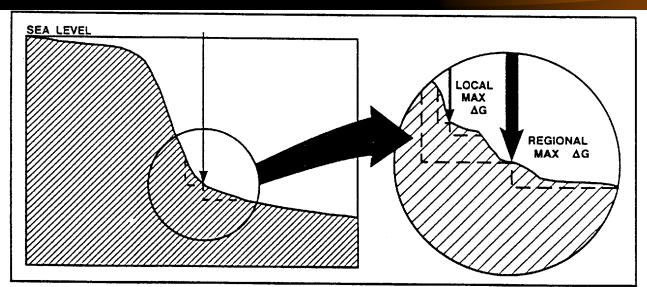








Foot of the Slope



The foot of the continental slope is defined as the location of the maximum change on bottom gradient. As shown in the enlarged section, this location may vary according to the range over which the gradient is calculated, i.e. the feature may be determined on a local basis (thin arrow) or a regional basis (thick arrow).







Responsibilities

 Complying with Internationally Accepted Standards

Duty of Care

Liability in Delict or Tort

Ensuring National Interests

Maximising Claims

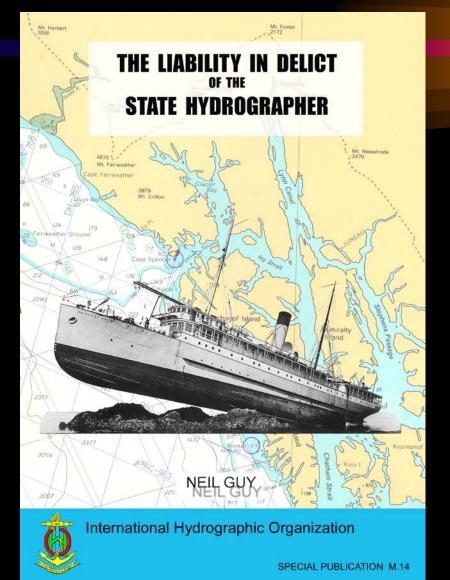
Providing Data for Resources Exploitation







The Hydrographers Nightmare









Conclusions

Accurate bathymetry is essential to the production of nautical charts and publications and the legal responsibilities related to this service and accurate bathymetry is essential to the substantiation of the UNCLOS claims of a coastal State to maritime territory and marine resources.



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THANK YOU