

The ocean floor: the past, pardo and present

by

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The Ocean Floor: Past, Pardo and Present

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We know less about the
ocean's bottom than the
moon's behind

- Roger Revelle (1909-1991)

Overview

- The Continental Shelf - Seabed within national jurisdiction (roughly 20% of the seabed) and its resources
- The International Seabed Area – Seabed beyond national jurisdiction (roughly 80% of the seabed) and its resources

The Seabed - History

- Includes continental margin and the deep ocean floor
- No clear legal characterisation nor any economic interest
- Freedom of the (high) seas was the prevalent doctrine
- *Res communis* (available to all states)
- *Res nullius* (subject to national claim by occupation)
- Resource exploitation was deemed difficult, if not impossible
- Significant interest after WW II (particularly in minerals)

The Seabed - Resources

- Energy – oil and natural gas, range of renewables (eg. wind), methane hydrates
- Minerals – aggregates (sands and gravels), oil and natural gas, placer deposits of heavy minerals, pools of brine rich in minerals, hydrothermal sulphide deposits, slow release phosphorite, copper and cobalt rich crusts, manganese nodules
- Fisheries – ‘sedentary’ species such as oysters and clams, and lobsters and crabs, mussels and barnacles, corals and sponges
- Marine Genetic Resources

The Continental Shelf – Definition

- Gradual slope from low water mark to a depth of about 130m beyond which the inclination increases markedly – Shelf
- The steeper inclination bordering the Shelf and reaching a depth of 1200 to 3500m – Slope
- Beyond the Slope, composed of sediments from the continent, descending to 3500 to 5500m – Rise
- Together, the Shelf, the Slope and the Rise constitute the Continental Margin
- League of the Nations – Committee of Experts for the progressive codification of international law - 1924

The Continental Shelf - Origins

- The Hague Codification Conference 1930
- Truman Proclamation of 28 September 1945
- Recognised the need of ‘petroleum and other minerals’
- Natural and contiguous appurtenance of land
- The Latin American ‘patrimonial seas’ concept
- Work of the International Law Commission from 1951
- 1958 Convention on the Continental Shelf

The Continental Shelf – 1958 Geneva Convention

- This was defined as
 - 200m isobath (favoured by the International Law Commission)
 - ‘limits of exploitability’, a rather vague criteria (not favoured by the International Law Commission)
- The ILC’s argument was that the exploitability criterion ‘unjustifiably and dangerously impaired the stability of the limit’
- ILC was also keen to clarify of ‘sovereign rights’ rather than ‘sovereignty’ (especially in the light of the Truman Proclamation and Latin American States)

Continental Shelf – major changes

- March of marine technology rendered obsolete the concept of ‘limits of exploitability’
- The International Court of Justice in the North Sea Continental Shelf Cases (1969) adopted the *ipso jure* position on the notion of ‘natural prolongation’
- 1970 UN General Assembly Resolution 2749 (XXV): Declaration of Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction
- Thus it became imperative to define ‘national jurisdiction’

The Continental Shelf – UNCLOS III

- Part VI of the Convention (§76 through §85)
- 200nm or upto 350nm but with a proviso that payments/contributions are made for exploitation beyond 200nm §82
- Submarine cables and pipelines §79; Artificial islands, installations and structures §80; Drilling §81; Tunnelling §85
- Obligation to prepare charts and lists of geographical coordinates §84
- Delimitation between opposite and adjacent states §83

The Continental Shelf – CLCS

- A technical body in a political system: experts in geology, geophysics and hydrology
- Established pursuant to article 76, paragraph 8, and under Annex II to UNCLOS, on the basis of equitable geographic representation with the following functions
 - a) to consider the data and other material submitted by coastal States concerning the outer limits of the continental shelf in areas where those limits extend beyond 200 nautical miles and to make recommendations
 - b) to provide scientific and technical advice if requested by the coastal State concerned during the preparation of the data referred to above

The Deep Seabed – Background

- Historically subject to the ‘freedom of the seas’ and therefore open to exploration and exploitation by all states
- Status quo was largely unchallenged as there was little knowledge, let alone prospects
- HMS Challenger Expedition (1872-1876) by Sir Charles Wyville Thompson identified polymetallic nodules
- John L Mero *Mineral Resources of the Sea* 1965
- Other mineral resources of interest are ferromanganese crusts and polymetallic sulphides

The Deep Seabed – Polymetallic Nodules

- Found in depths of 4000-6000m in an area of the seabed known as abyssal plains
- Potato like rock concretions 0.5 to 25cm in diameter strewn all over the abyssal plains
- Manganese and Iron in the main but of interest due to the significant presence of Copper, Nickel and Cobalt
- Cut off grade: 10kg/m²; cumulative assay value of 2.0%
- Three main regions identified: the Clarion-Clipperton Zone, the Peru Basin and the Central Indian Ocean Basin

The Deep Seabed – Common Heritage of Mankind

- 1 November 1967 – Ambassador Arvid Pardo of Malta called on the United Nations General Assembly (UNGA) to designate the seabed and its resources as the Common Heritage of Mankind
- Led to the establishment of the Seabed Committee to study the Peaceful Uses of the Seabed and the Ocean Floor Beyond the Limits of National Jurisdiction
- Proposals largely and overwhelmingly supported by the G77 countries and less than welcome by the developed industrial countries

The Deep Seabed – The Area or the ISBA

- As enshrined in the United Nations Convention on the Law of the Sea of 10 December 1982
- Defined by §1(1) of the Convention to mean ‘the seabed and the ocean floor and subsoil thereof, beyond the limits of national jurisdiction’
- Part XI of the Convention (§133 through to §191) which deals with the Area proved to be rather controversial
- Mr Javier Perez de Cuellar and Mr Boutros Boutros Ghali are largely credited with the Agreement Relating to the Implementation of Part XI on 29 July 1994

United Nations Convention on the Law of the Sea

- 1958 – UNCLOS I (also known in literature as the Geneva Conventions
 - Territorial Sea and Contiguous Zone
 - Continental Shelf
 - High Seas
 - Conservation of the Living Resources of the High Seas
- 1960 – UNCLOS II
- 1982 – UNCLOS III
- 1994 – Agreement Relating to the Implementation of Part XI

United Nations Convention on the Law of the Sea

- International Seabed Authority (ISA) – based in Kingston, Jamaica
- International Tribunal for the Law of the Sea (ITLOS) – based in Hamburg, Germany
- Commission on the Limits of Continental Shelf (CLCF) – based in New York, USA
- ITLOS Trust Fund – New York
- UN-ICP-OLOS – New York
- DOALOS – New York

Thank You!

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