



UiT The Arctic University of Norway

The Law-Science Interface in the Continental Shelf Regime: an Intertemporal Analysis

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ABLOS X (8-9 October 2019)

IHO, Monaco

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Overview

- ‘Legal abstraction’ of the continental shelf
- Development of the continental shelf regime:
 - pre-UNCLOS
 - during UNCLOS III
 - post-UNCLOS
- Observations and questions

‘Legal Abstraction’ of the Continental Shelf

- Definition and limits of the continental shelf: interface between law and science
 - (non-)alignment
 - Article 76: legal provision, but based upon geology, geomorphology and other scientific elements
 - Legal continental shelf different from scientific continental shelf → ‘false friends’
 - Non-alignment between law and science?
- Where does this non-alignment come from? How has the law-science interface, as observed in the definition and limits of the continental shelf, developed over time?

Development of the Continental Shelf Regime

Pre-UNCLOS

- 1910/1920s: first reference to 'continental shelf' in a legal context
 - Resource oriented (fisheries and later oil)
- League of Nations Committee of Experts (1924)
 - Identified continental shelf as 'region extending from [**a great step, almost abrupt**] to the coast-line' → focus on edibility of fish species
- 1942: Gulf of Paria Treaty & Annexation Order
 - No reference to 'continental shelf' as such, but did delimit the **seabed and subsoil** of Gulf of Paria → facilitation of hydrocarbons

Development of the Continental Shelf Regime

Pre-UNCLOS (cont'd)

- 1945: Truman Proclamation
 - ‘natural resources of the subsoil and sea bed of the continental shelf beneath the high seas but **contiguous** to the coasts’ of the US subject to jurisdiction and control
 - No formal definition, but ‘generally’ understood as ‘submerged land which is **contiguous** to the continent and which is covered by no more than **100 fathoms** (600 feet [or roughly 200 metres]) of water’
 - ‘reasonable and just’ → continental shelf ‘regarded as an **extension of the land-mass** of the coastal nation and thus **naturally appurtenant** to it,’; ‘since these resources frequently form a seaward extension of a pool or deposit lying within the territory’
 - recognized some kind of connection (‘extension’) to ‘contiguous’ land territory
- Subsequent State practice

Development of the Continental Shelf Regime

Pre-UNCLOS (cont'd)

- International Law Commission (1949-1956)
 - Used term ‘continental shelf’, rather than ‘submarine areas’, etc.
 - Early definition by Special Rapporteur: ‘underwater **extension of the land territory**’
 - Considerations of ‘fairness’ or ‘justice’ → with respect to those States not possessing a ‘scientific’ continental shelf
 - Jurisdiction of State did not depend on existence of ‘scientific’ shelf
 - Possible outer limits:
 - Depth of 200 metres
 - Distance? → rejected
 - Exploitability
 - ‘seabed and subsoil of the submarine areas **adjacent** to the coast but outside the area of the territorial sea, to **a depth of 200 metres** (approximately 100 fathoms) or, beyond that limit, to where the depth of the superjacent waters admits of the **exploitation of the natural resources** of the said areas’

Development of the Continental Shelf Regime

Pre-UNCLOS (cont'd)

- 1958 UNCLOS I
 - UNESCO Study
 - Same definition as 1956 ILC definition, but added applicability to islands
 - **Adjacency, depth, exploitation**
- North Sea Continental Shelf cases (1969):
 - Germany: **geographical-geological connection** of seabed with coast
 - NL + DK: **adjacency, distance**
 - Reoccurring theme: natural continuation of land territory
 - ICJ: continental shelf '**natural prolongation** of its land territory', an 'extension of something already possessed', dismissed 'proximity'
 - Reintroduced importance of scientific aspects

Development of the Continental Shelf Regime during UNCLOS III

- Sea-Bed Committee: considered various bases for definition: depth, distance, geomorphological and geological criteria
- UNCLOS III:
 - Introduced concept of EEZ → relationship between EEZ and CS
 - Retained the term ‘continental shelf’
 - Proposals for distance, natural prolongation
 - Introduced concept of continental margin, but uncertainty about scientific extent
 - Original proposals by the US and by the Evensen Group: CS defined by reference to outer edge of the continental margin, or 200 nm
 - Irish proposal: Irish formula, Hedberg formula
 - Key issue: definition of continental margin
 - Introduced Continental Shelf Boundary Commission/CLCS
 - Sri Lanka/Bay of Bengal
 - Ridges

Article 76 UNCLOS

- ‘Seabed and subsoil of the submarine areas **that extend beyond its territorial sea** throughout the **natural prolongation** of its land territory **to the outer edge of the continental margin**, or to **a distance of 200 nautical miles** from the baselines [...] where the outer edge of the continental margin does not extend up to that distance.’
- 2 different formulas (based on the foot of the slope)
- 2 different restraint lines
- Most ‘science-based’ definition we have seen so far
 - However: inner limit of CS is outer limit of TS → natural prolongation to the outer edge of the continental margin starting at 12 nautical miles from the coast?
 - Natural prolongation only applicable to ‘outer edge of the continental margin’ way of defining the CS? Not applicable to CS within 200 nm?
 - Continental *shelf* defined by reference to continental *margin* (including *shelf*, slope and rise)

Development of the Continental Shelf Regime Post-UNCLOS

e.g.:

- Case law developments
- Work of the CLCS

Case Law Developments Post-UNCLOS

- Maintained difference from scientific reality, whilst acknowledging link to scientific shelf
- Yet Courts and Tribunals have been hesitant to engage with science too much (only what is required for application of international law)
- Meaning of natural prolongation
 - Disagreement between Parties, scientific fact or legal concept?
- Legal relevance for natural prolongation
 - Natural prolongation only relevant beyond 200 nm?
- What proves entitlement?
 - Deviation from the text of Article 76? (Article 76 requires full procedure, case law now seems to be satisfied with halfway procedure)
- Relationship between entitlement and outer limits
 - 'Existence of entitlement does not depend on establishment of outer limits'

Work of the CLCS

- Scientific and Technical Guidelines
- CLCS Recommendations
- ‘Pick and choose’
- Test of appurtenance to establish entitlement
 - Use of the formula lines to determine whether entitlement goes beyond 200 nm
- Bridging lines
- *Either* 200 nautical miles *or* natural prolongation (so not natural prolongation up to 200 nm); also implicit in case law
- Foot of the slope by ‘means of evidence to the contrary’
- Ridges

Observations and Questions

- Various ways of defining the continental shelf:
 - Adjacency, contiguity, extension of the land territory, natural prolongation of the land territory, distance, depth, exploitability.
- Development over time?
- Why non-alignment?
 - Scientific uncertainty?
 - The need for predictability/legal certainty?
 - State interests?

Or is it perhaps due to:

- ‘Incommensurability’? → structural coupling



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Thank you!

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