The extension of the continental shelf as jurisdictional basis for the development of new regimes. Future challenges and problems in a legal contextual perspective.

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This paper addresses three issues in relation the extension of the continental shelf to a 350-mile maximum limit.

1.The scientification of legal norms or legislation by scientific concepts?

2.The creeping jurisdiction in relation to:

A.The extension of the continental shelf to the 350-mile limit?

B.The content of the new 350-mile continental shelf?

3.The new 350-mile regime and the law of naval armed conflict?

The purpose of this paper is to raise some future problems for discussion, not necessarily to give answers.

I. 'Scientification' of legal rules; or allocating legal effects to scientific norms

The term 'scientifaction' refers to the legislative approach by which purely scientific terms are inserted into legal regulation. By this technique the scientific terms are allocated legal effect. The main effect is that interpretation and application of a legal rule will depend on non-legal scientific criteria. The art 76 and the extension of the 350-mile limit is such a case. The legal right to extend to a 350-mile limit is made dependent on a set of geographical hydrographic criteria. In art 76 section such is.

Article 76
Definition of the continental shelf

1.The continental shelf of a coastal State comprises the 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 from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance

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2.The continental shelf of a coastal State shall not extend beyond the limits provided for in paragraphs 4 to 6.
3.The continental margin comprises the submerged prolongation of the land mass of the coastal State, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof
4. (a)For the purposes of this Convention, the coastal State shall establish the outer edge of the continental margin wherever the margin extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by either:
(a)(i) line delineated in accordance with paragraph 7 by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope; or
(ii) a line delineated in accordance with paragraph 7 by reference to fixed points not more than 60 nautical miles from the foot of the continental slope.
(b)In the absence of evidence to the contrary, the foot of the continental slope shall be determined as the point of maximum change in the gradient at its base.
5.The fixed points comprising the line of the outer limits of the continental shelf on the seabed, drawn in accordance with paragraph 4(a)(i) and(ii), either shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath, which is a line connecting the depth of 2,500 metres.
6.Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs.
7.The coastal State shall delineate the outer limits of its continental shelf, where that shelf extends beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, by straight lines not exceeding 60 nautical miles in length, connecting fixed points, defined by coordinates of latitude and longitude.
8.Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.
9.The coastal State shall deposit with the Secretary-General of the United Nations charts and relevant information, including geodetic data, permanently describing the outer limits of its continental shelf. The Secretary-General shall give due publicity thereto.
10.The provisions of this article are without prejudice to the question of delimitation of the continental shelf between States with opposite or adjacent coasts.'

Was is meant by scientification is easy seen when the text of article 76 is compared to the definition of the continental shelf in the 1958 United Nations Convention on the Continental Shelf 1958: [2]

‘Article 1

For the purpose of these articles, the term "continental shelf" is used as referring (a) to the 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 or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.’

The article 76 is introducing a series of terms in the legal structure, which only can be defined by reference to natural science especially in sections 3,4 and 6. The purpose of this technique is presumably to introduce objective criteria into a process, which could otherwise be highly subjective. By making the extension dependent on both substantive scientific norms and a procedure of ascertaining the existence of such criteria by an international scientific expertcommission the elements of discretionary powers of states are somewhat restricted. The extension made scientific operational instead of policy based. The presumed objective scientific criteria will lead to an open and rationalised process of extension in contrast to perhaps more subjective policy driven claims. This process of scientification is used in other controversial areas in 1982 UNCLOS where conflicts of interests are present such as the regulation of fisheries in 1982 UNCLOS, Part V. Important terms such as conservation is defined by reference to concepts made operational only through fishery biology and fishery economic norms. (Ex)

Article 61
Conservation of the living resources

1. The coastal State shall determine the allowable catch of the living resources in its exclusive economic zone.
2. The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive

[2] See the United Nations Convention on the Continental Shelf, done at Geneva 29 april 1958, see U.N.T.S. No. 7302, vol. 499, pp. 312-321.

economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether subregional, regional or global, shall cooperate to this end.
3. Such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global.
4. In taking such measures the coastal State shall take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened.
5. Available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular basis through competent International organizations, whether subregional, regional or global, where appropriate and with participation by all States concerned, including States whose nationals are allowed to fish in the exclusive economic zone.

The questions is now, will the objectivisation by scientific criteria fulfil the expectations of its legislative stabilising role? Will the scientific process be able to sustain the foreseeable pressure to deliver what the states want? When a growing number of states are allowed to extend to the 350-mile limit by the scientific process, will the rest of states accept that? Or will the pressure to bend science to fulfil states ambitions suspend or eradicate the scientific element? The extension from a 200-mile continental shelf to a 350-mile limit represents such a potential for exploitation of the various resources of the sea-bed. Will the remaining states resist the temptation to extend without fulfilling all or even any of the criteria in art 76? This is one of the future challenges for the interpretation and application of art 76.

It is of course difficult to see into the future. But again the development in legal regulation of fisheries can perhaps be drawn upon. In the regulation of the North Atlantic fisheries trends to give legal or policy definition to purely biological concepts have been seen. It has be seen as necessary in order to balance conflicting state interests in exploitation certain cod stocks to define regional or local stocks which have no biological existence as separate stocks. By this creation of legal stocks is has been possible to allocate quota on stocks which otherwise would have been treated more restrictive. The existence of scientific criteria is not necessary a guaranties for

non-interference by legal and policy considerations as seen in fisheries regulation. It remains a question to be seen what will happen in the case of art 76.

II. The extension and content of the new continental shelf regime?

The next questions to be addressed relate to the regime of the 350-mile continental shelf. The extension and content of 350-mile regime will be touched upon. The issue as to scientification raised the issue whether the science could resist pressure from the political legal environment. This question will raise issues related to the extent and content of the new developing regime of 350-mile continental shelf. First the question regards the maximum outer limit. Will the states conform to the restriction outlined in art 76? Or will the 350-mile limit by a step by step process develop into a general accepted maximum limit for the continental shelf independent of the criteria in art 76? The second question related to the legal content of the new 350-mile continental shelf regime. Will the states apply this new regime only as envisaged in 1982 UNCLOS Part VI, or will it be used as basis for regulation of other activities on the sea-bed?

A. The extension of the continental shelf to 350-mile limit?

In principle the state parties to the 1982 UNCLOS are bound by art 76. Any extension outside the 200-mile outerlimit will have to fulfil the specific geomorphologic criteria in art 76. Non-parties to the 1982 UNCLOS will be in a different position, but as most important continental shelf states are parties or in the process of becoming, this issue will be left out.

But again the great challenge will be if states can resist the temptation to reinterpret the criteria in such a way that their local conditions whatever they might be will be claimed to fulfil the criteria in art 76. Or if the crieria simply little by little are ignored. The crucial point will come when perhaps a growing number of states have gone through the process. The impact on states which does not fulfil the criteria or only some will that lead the states to bypass art 76 and simply extend their existing 200-mile continental shelf limit to the 350-mile limit?

Again the case of fisheries might give some guidance for what could happen when coastal interests puts pressure on international law. The development of the outer limit

of coastal state exclusive fishing rights furnishes interesting evidence of international law making.

During the drafting of the first law of the convention of 1958, the question of the outer limit of coastal state exclusive fisheries jurisdiction was a crucial point. Just as in the 1926 to 1930 Hague Codification conferences, the exact legal binding outer limits for the coastal state exclusive fisheries zones was not agreed upon. On one hand the wish of some major naval powers to codify the three-mile limit was not general agreed. On the other no agreement could be reached on any alternative that is any extension. The issue was left undecided. A 12-mile maximum limit for the coastal state contiguous zone was however agreed. The purpose of this zone was to enable the coastal state to enforce customs and sanitary regulations outside the territorial sea. Fishery regulation was not included. The proponents of the three-mile limit thought this was clear indication that coastal state exclusive fisheries jurisdiction could not extend outside the territorial sea and certainly not out to 12-mile. The three-mile limit whatever it status was still widely applied in treaties and supported by both USA and United Kingdom.

Two years later, however, in the Second Law of the Sea Conference in 1960 the 12-mile limit was put forward as an outer limit of coastal exclusive fisheries jurisdiction. A 6+6 formula was suggested as a compromise. The 6+6 formula consisted in a 6 mile exclusive fisheries zone where only the coastal state could fish and additional 6 mile zone where the coastal state exclusive right was balanced by other states historic rights. If no state had any traditional fish operations in the 6 mile the coastal state would have exclusive jurisdiction. If other states have had fishing operations then a shared exploitation regime should be established by treaty. Even by this modification, no agreement was reached as the traditional adherents of the three-mile limit opposed this.

Four years later in 1964 a number of European coastal state introduced this 6+6 regime by the European Fisheries Convention.of the 9. March 1964. Amongst the state parties was United Kingdom who had been perhaps the staunchest three-mile limit adherent. So six years after any application of the 12-mile limit to fisheries had be rejected, and four years since the 6+6 formula had been a unsuccessful

compromise suggestion, coastal state started to use a 12 mile limit based on a 6+6 formula.

In 1974 ten years later the International Court found that a 12-mile exclusive fisheries zone was part of customary law in the "Fisheries Jurisdiction Cases'. The 6+6 formula had within ten years developed into a full coastal state exclusive zone accepted by both USA and United Kingdom. An interesting development when seen on the background of the 1958 convention only 16 years earlier. But even when the Court was discussing the 12 mile limit it was know and alluded to by the Court that even further extension of coastal state exclusive fisheries jurisdiction was being negotiated.

The Third Law of the Sea Conference, which led to the 1982 UNCLOS, had started in 1974. Even more surprisingly in 1976, two years after the Fisheries Jurisdiction case, the 200-mile exclusive fisheries zone was introduced by a number of states including both USA and the United Kingdom. So eighteen years later than the 1958 Conventions where no agreement was possible, 16 years after the 6+6 formula was rejected and only two years after the 12-mile limit was seen by the Court as customary law, the 200 mile limit had been accepted. Moreover, the way this 200-mile zone was accepted could have implications for the question of the future development of the 350-mile continental shelf limit.

When a majority of state chose to extend their existing 12-mile exclusive fisheries zone to the new 200-mile limit the basis was the draft to what later became 1982 UNCLOS, Part V on the Exclusive Economic Zone. But in 1976 not even the basic rules were in a final stage. The new 200-mile was to be applied only on certain conditions including third states rights the extent of which were not in anyway clearly defined. What the states did were simply to use the emerging outer limit of 200-mile without taking into consideration what restrictions the final regime of EEZ could impose on the states. It is not possible to go into detail on the development of the EEZ and 200-mile exclusive fisheries zone, but it is evident that the states used even the slightest and only emerging basis and what was most positive for their own interests the formal 200-mile limit. And to a certain extent simply ignored the conditions or restrictions on the extension to 200-mile, which were in the process of being negotiated.

Is it not likely that states will react in a similar way when the new 350-mile limit start to emerge in state practice? And will states not be inclined to ignore unfavourable restrictions in the art. 76 as soon as the potential of the new extended 350-mile will appear? And should this development be seen an another case of the need to accommodate international law to actual interests? Or should a strict interpretation of art 76 be imposed? And how? As seen with the extension of fisheries zone from a three-mile to a 200 mile in its different step by step development the same structure is apparent. First an outer limit is extended but restricted by various conditions. But soon the limitations such as the 6+6 formula are fading out and what is left is the formal outer limit with coastal state exclusive jurisdiction. Will the 350-mile continental shelf limit conform to this pattern? These points it will be interesting to discuss in this session.

B. The content of the 350-mile regime?

The next question relates to the content of the new 350-mile continental shelf regime. Will the coastal states just extend the present continental shelf regime to the 350-mile limit? According to art. 82 in the 1982 UNCLOS the coastal state shall pay annually payments or contributions of the income of the exploitation of the sea-beds non-living resources. This surplus sharing is new compared to the 200-mile continental shelf regime. Although the maximum of income sharing will reach only a maximum 7% after 17 years period according to art. 82, section 2 this is a limitation of coastal state rights. On the other hand this is the only restriction compared to the 200-mile continental shelf regime.

The interesting question is now what has happened to the continental shelf regime since its first emergence? Is the present continental shelf still a purely natural resource exploitation regime? Or has is been developed into a jurisdictional basis for other related interests on the sea-bed?

The 200-mile continental shelf regime gives the coastal sovereign rights for exploitation of the natural resources of the sea-bed only. It was discussed during the drafting of the continental shelf regime whether wrecks should be included. This was disputed. Some states with wrecks of cultural interest, as Greece would like to have legal basis for protection of these wrecks against illegal treasure hunters who often

destroyed the archaeological important wrecks. Others states like United States feared this would lead to creeping jurisdiction and eroding of the freedoms of the high seas. In the end no article on wrecks was inserted in the articles on the continental shelf regime. As a compromise a special article on protection of cultural property on the seas-bed was inserted in art. 303 referring the coastal state jurisdiction to the 24-mile limit based of the contiguous zone. The wording of this article is, however, somewhat ambiguous. The negotiations showed that there was a need and wish to extend the continental shelf based jurisdiction to other issues.

So what has happened with the 200-mile continental shelf regime? Has it been used as jurisdiction basis for other issues concerning the sea-bed? Two issues shall be touched upon as cases of extended use of the continental shelf regime to other areas.
First, the interesting interaction between the continental shelf and the EEZ regime, where jurisdiction based on the EEZ regime has de facto if not de jure had effect on the sea-bed. Second, the question of historical wrecks, where some interesting developments have occurred.

A.The 200-mile continental shelf regime and nature conservation:

In the recent years the 200-mile EEZ(Exclusive Economic Zone) regime is used as basis for marine environmental regulation, especially but not only among EU-member states. On this areas of sea within the 200-mile EEZ can be made into nature conservation parks and even coral reefs have been declared conserved areas. From a pure legal point only the water column until the sea-bed can be conserved. But the legal effect is the sea-bed including coral reefs is de facto conserved. As the coastal in the 200-mile area from the baselines has both exclusive rights to the EEZ that is economic use of the water column according the Part V in the 1982 convention and to the sea bed according the conditions in the Part V on the continental shelf, there is a potential for creating which formally only have basis in the EEZ regime but de facto will have effect on the continental shelf. As more and more regulation are introduced the effect could easily be confused with the legal basis. The result of which is creating of an extended new continental shelf regime, which also comprise right to conserve area on the sea-bed.

This problem has been acknowledged amongst other in USA legislation.

The area of application of jurisdiction of 1988 Submerged Lands Act remains somewhat unclear. Does it apply only to the territorial sea or perhaps even to the continental shelf?

Based on the experience of fisheries regulation it is tempting to foresee an amalgamation of the two bases of jurisdiction. The EEZ environmental regulation and the continental shelf sea-bed jurisdiction will converge to a environmental jurisdiction based on sea-bed only with the aim of conserving important sea-bed formation such as coral reefs and other. A trend which is already emerging on the 200-mile zone.

B.The 200-mile continental shelf and historical wrecks:

As mentioned befire no reference to wrecks was included in the final text of the continental shelf regime in 1982 UNCLOS. In practice states have used art. 303 to introduced legislation on wrecks on the sea-bed to a 24-mile limit only. Conservation of wrecks outside that limit has been done by bilateral treaty such as the conservation of the Titanic just being concluded this month. Again it will be remain to be seen if this somewhat arbitrarily restriction to a 24 mile limit in art. 303 will be the final settlement of the question of rights to wrecks on the continental shelf, as art. 303 has a somewhat flexible wording.

If compared to what happened to the fisheries zone, where legislation based on the contiguous zone within a ten years period developed into a 200- mile zone, it is doubtful whether the 24-mile limit will survive for long. The interest in conserving wrecks are great. Not only to mention ‘soft values’ as cultural interests but also the economic values involved. Names like the Bismarck and the Titanic comes to the mind as cases of famous wrecks with great public and commercial interest. But they are only a fragments of the potential important wrecks on the sea-bed. Two cases shall be mentioned as illustrative of what interests and what values are involved.

In 1857 the SS ‘Central America’ went down somewhere outside the coast of North Carolina. It was found by a salvager in the 1990ties, and it turned out the SS ‘Central America’ had onboard 1 billion in gold dollars. Similar the case of the three missing Dutch frigates. In the later 16th century three Dutch frigates loaded with gold left Dutch East India. They were reported on entering European waters, but nothing was

heard afterwards. They did not enter Dutch port, and after a while any hope of seeing the frigates and their valuable cargo was given up. They final destiny was however wrapped in mystery. Had there been a mutiny, had the captain conspired with the crew and were now settled as rich landowners in Britain under false names? In the end they were forgotten. But in a small village on the coast on southern Norway, the mothers used to tell naughty children, that if the children didn't behave then the men from the ships would come and take them. This story had been told as long people could remember, and nothing was put into it. One day a young diver arrived and heard these stories. He started to dive among the coastal islands just for fun, but found nothing.

After a period he gave nearly gave up. But one day after a prolonged storm the sands had shifted and when he dived he saw to his amazement the hulls of three frigates nearly intact. The three Dutch frigates had been found. Apparently the frigates had wrecked just outside this small village, and what happen with the crew is unknown to this day. Had the crew been killed and robbed by the village as sometimes happened, had they all died and villagers fearing the severe penalties if the were seen as having killed the crew just kept this as a secret. What ever had had happened this story of frigates had never went outside this village, and had survived as fairy story. After a prolonged legal disputed the Dutch state got around 85 % of the gold which still was in the wrecks, the diver around 10% and the Norwegian state around 5% for museum purposes. The diver still became a rich man.

The two stories show that not only cultural values are involved but large sums of money. The coastal state faces a challenge to regulate these issues. Turkish authorities reckon that all wrecks on Turkish territorial sea had been the objects of illegal operation. [3] The Danish authorities estimated that in a distance of 24 nautical miles from the baselines ca 10,000 wrecks of historical interest and ca 40,000 registered wrecks were to be found.[4] In 1992 the British authorities estimated that ca 70,000

[3] See 'Preliminary Study on the Drafting of an International Instrument for the Protection of Underwater Cultural heritage', UNESCO Doc 28 C/39 p. 1, paragraph 4.

[4] See the preparaty works of the Danish statute in "Folketingstidende, 1983-84, Tillæg A, sp. 1000", København, 1984.

sports divers carried out about 1.5 million diving operations.[5] This had created illegal searches for treasures and other items of commercial value by amateur divers. A new booming black or grey market was emerging. The extensive use of explosives and even underwater battles between rival illegal treasure divers were reported.[6]

Something has to be done. A number of states have introduced legislation to protect wrecks, still keeping with the 24-mile limit. But will this arbitrary chosen limit suffice to regulate the growing conflicts of great commercial and cultural importance. Or will the states use the already existing legislation and just extend to the 200-mile continental shelf limit as seen in fisheries? And what will the consequences be for the new 350-mile continental shelf regime. Will the restriction in art. 82 be circumvented? Will the other uses of the continental shelf partly based on overlapping jurisdiction stemming from the EEZ regime be extended to the 350-mile continental shelf? And would this use of the continental shelf as jurisdictional basis for new regimes in any circumstance not just represent a natural reaction and the growing need for regulation, which should be accommodated? Or should this development be controlled by proper application of the 1982 UNCLOS treaty, which after all have been signed by a number of states?

3.Finally the question of naval armed conflict and the new 350-mile continental shelf regime will be raised?

This question will only be touched upon, as it could be the topic for a whole session. Rules of armed conflict have not been mentioned before in this conference. But it is however, important that issues arising from armed conflict on the 350-mile continental shelf should be raised.

The 1982 UNCLOS do not regulate questions arising from armed conflict on the continental shelf or in any other maritime zone. Naval armed conflict is still regulated by the 1907 Hague Conventions and subsequent customary law. Questions of armed conflict relating to humanitarian law (treatment of prisoners, hospital ships etc) are

[5] See the Royal Commission of Historical Monuments of England, 'The National Inventory of Maritime Archaeology for England', London 1996 and Droomgoole, p.181-82.

[6] See Dromgoole, 'Legal Protection of the Underwater Cultural Heritage', 1999, p. 182.

regulated by Geneva conventions of 1949 with later protocols. But the issues of the actual naval operations in armed conflict are in a somewhat legal void. The short-lived rules of U-boat warfare of the 1907 Hague Conventions have perhaps cautioned any attempt to legal regulation.

If more and more parts of the high sea are included under natural continental shelf jurisdiction, the area of high sea will be restricted and that will cause conflict. Parties to a conflict will inevitably have to use areas under coastal state sea-bed jurisdiction. This will cause conflict of interests and potential dangerous situations for amongst other fixed oilrigs etc? How should these issues be addressed? Can armed conflict at all be subjected to legal regulation in this case? Will Parties to an armed conflict in reality accept and respect any restriction to their manoeuvrability? And non-parties? Will the states introduce extended security zone to protect oilrigs? These and other questions remains unsettled in the present international law?

Conclusion:

A series of question have been raised regarding the scientification of legal norms, about the creeping jurisdiction of the new 350-mile continental shelf regime both as to extent and content, and finally the question of armed conflict and the 350-mile continental shelf. The questions have been based on trends in other related regimes such as the fisheries zone. The purpose is not to give any answers but to draw attention to these future challenges evolving out the new continental shelf regime. Hopeful our discussion could help to if not solve then draw attention to what could happen and create some consensus what should be done.