Book Review

Continental Shelf Limits: The Scientific and Legal Interface

P.J. Cook and C.M. Carleton (eds.). Oxford University Press, New York, 2000. xiv and 363 pages. ISBN 0-19-511782-4. (£74)

The concept of *Continental Shelf Limits* was brilliant, it's execution excellent and it's timing well nigh perfect. It was conceived by the UN Working Group on Article 76 which asked the Intergovernmental Oceanographic Commission (IOC) to prepare a volume on scientific aspects of Article 76 which would assist Coastal States in it's implementation. The Project was placed in the hands of a seven- strong editorial board with Peter Cook (Chair of the IOC Programme on Ocean Sciences in Relation to Non-Living Resources or OSNLR) and Chris Carleton (Vice-Chair of IHO's Advisory Board on the Law of the Sea or ABLOS) as co-editors. It was a good choice; the editing of this complex volume is impeccable. A team of 45 world-class contributors were mobilised from 10 countries to write this exceptionally valuable volume. Unfortunately they are too numerous to name in a brief review.

The UN Convention on the Law of the Sea (UNCLOS) came into force on 16 November 1994 for those states that had already signed it. Article 76 permits coastal states to claim continental shelf beyond 200 nautical miles. Up to 54 states may be eligible to make such claims to areas which together may amount to five per cent of the world's oceans. Claims must be submitted to the Commission on the Limits of Continental the Shelf whose members were elected in March 1998. States which had acceded to UNCLOS by November 1994 have until November 2004 to submit their claims. We are thus entering a period of intense and urgent activity among states proposing to claim continental shelf beyond 200 miles, most of whom are clamouring for the kind of scientific information and guidance so admirably packed into this book. Used in conjunction with the Scientific and Technical Guidelines lately published by the Commission setting out the technical data required for submission, coastal states now have a clear picture of what is involved. Preparing a submission is an enormous task, but the message of Continental Shelf Limits is nevertheless encouraging. Data collection, assessment, and presentation is not impossible, although many states may have to import technology and expertise to do the job properly. The task is greatly complicated by the need for boundary delimitation between competing states, as discussed by Victor Prescott (Chapter 5) and Chris Carleton (Chapter 20). There are two or more claimants to at least 21 continental margins; in over half there are four or more claimant states.

The bulk of the text is by experts primarily for experts, and in certain sections the

science will be inaccessible except to specialists. The methods necessary to prepare a convincing submission are covered in admirable detail. Geodetic techniques for positioning and distance measurements are tackled by Alan Dodson and Terry Moore, who also outline the method of transforming coordinates from one geodetic datum to another. The mathematics may persuade most readers to leave the matter to the geodesists. John Clarke's chapter on modern depth measurement is informative because bathymetric data are essential to definition of base of slope and the 2,500 metre isobath. Chapters 12. 13 and 14 are devoted to methods for establishing the thickness of the sediment beneath the ocean floor. including seismic reflection and refraction, gravity and magnetic methods and geological survey. Unfortunately they are unlikely to be alternatives; most locations will require development of various methods to achieve accuracy. Chapter 18 raises the vexed question of submarine and oceanic ridges. It is one of the most valuable in the volume, because the issues have rarely been set out so clearly. The authors admit that it was very difficult to write because the subject is so contentious. Ridge-like features are clearly formed by a more complex range of processes than envisaged when Article 76 was drafted. Even the expert authors of chapter 18 do not give an opinion as to how Article 76 should be interpreted in relation to ridges. The Commission may be obliged to defer discussions until more scientific investigation is undertaken.

There is a great deal more, much of which will be of considerable interest to law of the sea scholars and others. There are copious illustrations, a ten-page glossary and annexes from UNCLOS 1982. Excellent background chapters on historic methods of positioning at sea by Adam Kerr and water depth management by Steve Shipman and Anthony Laughton are included. Overall this is a masterly introduction to the continental margins which are now attracting so much attention. Inevitably, there are a few regrets. The type face is rather small. Several of the illustrations would be clearer in colour, and a consolidated bibliography would be helpful. On the other hand, such economies have no doubt enabled the publisher to keep the price to £47 so it should become widely available. *Continental Shelf Limits* can be expected to make a substantial practical contribution to the complex process of establishing continental shelf claims. It might even encourage the first state to make its submission to the commission. What will happen thereafter, not even the authors of this authoritative volume could predict.

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The International Hydrographic Organization

The International Hydrographic Organization is an intergovernmental organization which was established in 1921. The Organization provides a forum and develops standards for the improvement of services to marine navigation, through the discussion and resolution of sea surveys and nautical charting issues at the international level, and assists member governments in developing and delivering these services in the most cost effective way.

As of January 2001, 69 States had ratified the Convention which governs the IHO. It is registered with the United Nations in accordance with Article 102, Chapter XVI of the Charter of the United Nations. IHO cooperates with UN, IAPH, IMO, IOC, ISO, FAO, WMO, European Union, IALA, FIG, ICA and many other organizations.

In its Article II, the IHO Convention states:

The Organisation shall have a consultative and purely technical nature. It shall be the object of the Organization to bring about:

- a) the co-ordination of the activities of national hydrographic offices;
- b) the greatest possible uniformity in nautical charts and documents;
- c) the adoption of reliable and efficient methods of carrying out and exploiting hydrographic surveys;
- d) the development of the sciences in the field of hydrography and the techniques employed in descriptive oceanography.