

The Project for the Extension of the Continental Shelf - the Portuguese experience

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Under the United Nations Convention on the Law of the Sea (UNCLOS), the continental shelf is a juridical term used to define a submarine area that extends throughout the natural prolongation of a land territory, where the coastal State exercises sovereign rights for the purpose of exploring it and exploiting its natural resources. Article 76 provides a methodology for determining the outer edge of the continental margin and to delineate the outer limits of the continental shelf. The task of preparing the Portuguese submission to the Commission on the Limits of the Continental Shelf was committed to the Task Group for the Extension of the Continental Shelf (EMEPC), which formally began its activity in January 2005. At that time, the existing national capacity to conduct such a task was very limited in its hydrographic, geological and geophysical components. A great effort has been made by Portugal to overcome these weaknesses and develop a strategy to submit the proposal for the extension of the continental shelf beyond 200 nautical miles on 11th May of 2009.

The execution of the project involved the implementation of several complementary strategies including: 1) intensive bathymetric, geophysical and, locally, geological data acquisition; 2) acquisition/development of new stand-alone and ship mounted equipment; 3) interactions with universities and research institutes, with emphasis in R&D initiatives; 4) creation of critical mass in deep-sea research by promoting advanced studies on: International Law, Geophysics, Geology, Hydrography, Biology, amongst others; 5) promotion of the sea as a major national goal, coupled with an outreach strategy. Until now, more than 1050 days of surveying have resulted in a large scale seafloor mapping using two EM120 and one EM710 multibeam echosounders from Kongsberg mounted on two hydrographic vessels. The surveys follow IHO Order 2 Standard (SP44, 5th Edition) and cover an area over 2.6 million km². A multichannel reflection and wide angle refraction seismic survey provided 2600 km of high quality MCS data, allowing an accurate imaging of the sediment cover. Also, the data collected under the project has been used to foster the collaboration with universities and research institutes and to support research projects and post graduate studies on the deep-sea. An educational strategy has been emplaced in order to promote Ocean Literacy among children and youngsters. Since 2008, EMEPC is responsible for the operation and maintenance of Luso, a work class ROV rated to 6,000 metres depth. More than 170 ROV dives allowed the direct observation of the deep-sea for almost 800 hours of video footages, which also provided key information on biodiversity and deep sea ecosystems, which stand as the base for the creation of a database on biological data and to develop a strategy to protect the marine environment.

Portugal has now the capacity to access its entire maritime areas, reinforcing the knowledge on the natural processes that shape the deep-sea. Some views on the Portuguese interpretation and application of article 76 will be discussed based on the data gathered within the scope of the project, which is still ongoing.