



SEMINAR ON MARINE MINERAL RESOURCES OF THE SOUTH AND EQUATORIAL ATLANTIC OCEAN

26 to 28 NOVEMBER 2008

PRESENTATION

The last decades of the twentieth century were marked by intense activities related to the development of mineral resources located within and beyond the limits of national jurisdiction.

Within national jurisdiction, the offshore oil and gas industry has been growing at a remarkable pace. In recent years, due to increasing world demand for oil and gas, offshore exploration and development have shifted to new frontiers where little research and discovery had taken place in the past. As a result, offshore Brazil and West Africa, together with the Gulf of Mexico, the North Sea, and South-East Asia have become the focus of exploration and development activity.

Beyond the traditional sources of oil and gas, the oceans hold the promise of new and potentially enormous sources of energy. The recovery of frozen compounds of methane gas (i.e. methane hydrates), of which huge deposits can be found below the ocean floor on continental margins throughout the world, is a particularly promising area of research.

Polymetallic nodules and cobalt-rich crusts, as sources of copper, nickel, cobalt, manganese and other metals, represent a good prospect for deep sea exploration. Density and metal content of nodules and crusts vary greatly depending on the area's location, geological setting and water depth. Both nodules and crusts are found in the zones of national jurisdiction of coastal states and in the international seabed area.

Discoveries during the last decades of marine mineral occurrences of massive sulphide deposits have significantly advanced geologic concepts about the origin of ore deposits containing zinc, copper, iron, cobalt, manganese and traces of silver and gold. This occurs both on the middle ocean seafloor within the international seabed area and also within the limits of the national jurisdiction of some coastal states,.

Considerable quantities of sand and gravel are taken from inner continental shelves for coastal protection and building roads and houses. Calcareous shells, algae and other organisms are dredged as raw material for calcium carbonate. Placer concentrations of heavy minerals and ore particles are mined for metals like titanium, platinum, thorium, zirconium and other important resources such as diamonds and gold. Phosphorite, widely used for fertilizers and as a source of phosphorous in the chemical industry, also occurs on the outer continental and upper slope.

The Convention on the Law of the Sea designated marine minerals on the seabed beyond national jurisdiction as the common heritage of mankind, to be explored and exploited for the benefit of humanity as a whole. These mineral resources are administered by the International Seabed Authority, an international organization established on the basis of the Convention, which allows public and private enterprises, as well as collective mining consortiums, to apply for permission to mine the seabed.

Today, twenty-six years after the adoption of the Convention, contracts for exploration of polymetallic nodules have been signed by the Authority and eight mining entities. Consideration is being given to allowing the exploration and exploitation of polymetallic sulphides and cobalt-rich crusts. In this context, the International Seabed Authority is taking into consideration the environmental concerns arising from the growing interest in developing marine mineral resources in the international seabed area.

The Convention on the Law of the Sea assigns the fundamental obligation and responsibility for protecting and preserving the marine environment to States, and requires them to adopt and enforce national laws and international standards to prevent, reduce and control ocean pollution.

A growing number of detailed international agreements on the protection of the marine environment, as well as the utilization, conservation and management of marine resources, have been adopted under the unifying framework of the Convention. One of the most significant is Chapter 17 of Agenda 21, negotiated during the 1992 United Nations Conference on Environment and Development (Earth Summit) as a complement to the Convention. This agreement contains a programme of action for "the protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources".

Both the Convention on the Law of the Sea and Agenda 21 embody a new understanding, recognizing that the problems facing the marine environment are closely interrelated and cannot be tackled in isolation, but must be resolved through integrated management of resources and environmentally sound economic development.

Article 256 of the United Nations Convention on the Law of the Sea states that all States and competent international organizations have the right, in conformity with the provision of Part XI of the Convention, to conduct marine scientific research in the "Area". Article 143, paragraph 2 of the Convention states that the International Seabed

Authority shall promote and encourage the conduct of marine scientific research in the “Area”.

The high cost of deep sea activities recommends that interested countries develop a convenient cooperative structure to carry out this type of work. A well trained regional team is needed for this new perspective of research.

The interest of developing countries is to know the real potential of their continental shelf and the adjacent international area.

Among all oceans, the South and Equatorial (Figure 1) is the least known. Available data are dispersed throughout various countries. Density of information varies depending on the sampling effort and scales worked on by different research groups.

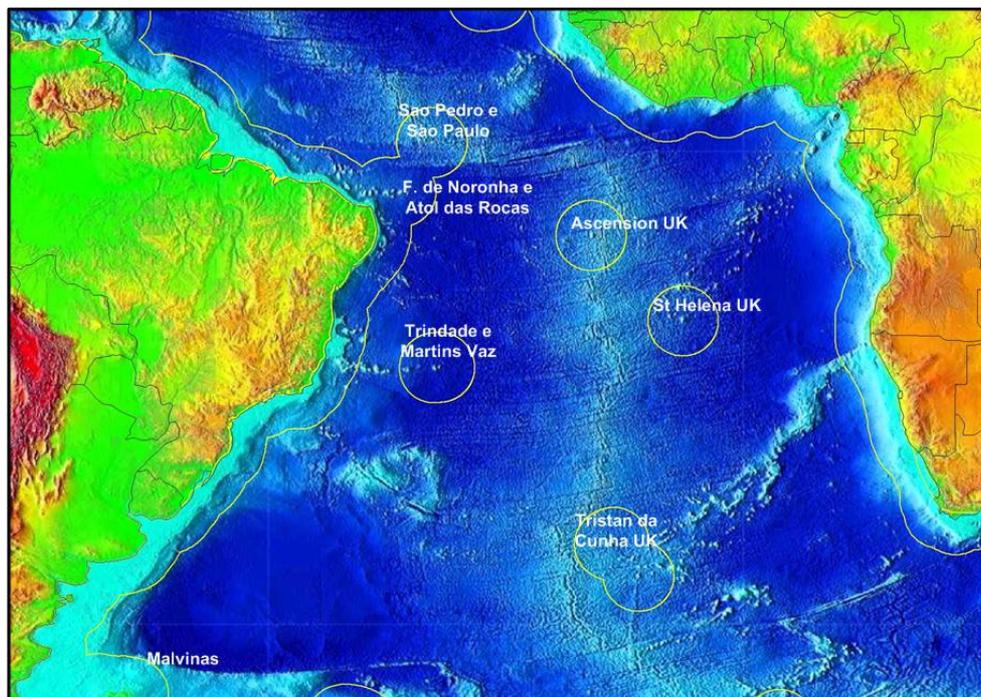


Figure 1.- Map showing the location of the South and Equatorial Atlantic Ocean.

In recent decades Brazil has been the leader of several regional initiatives to study the South West Atlantic, such as the regional component (Brazil, Uruguay and Argentina) of the Programme on Ocean Science in relation to Non Living Resources – OSNLR, a global study shared by the Intergovernmental Oceanographic Commission – IOC (UNESCO) and the Division of Ocean Affairs and Law of the Sea – DOALOS (UN).

The published results of the Programme show that Brazil, in cooperation with international organizations and other States, fulfills all the necessary conditions to conduct deep-water scientific research with regard to the exploration of marine minerals.

OBJECTIVES

The Seminar on **Marine Mineral Resources of the South and Equatorial Atlantic Ocean** is organized jointly by the Government of Brazil and the Secretariat of the International Seabed Authority to address the challenges related to the development of marine mineral resources of the South and Equatorial Atlantic Oceans.

The main objectives of the seminar are:

- 1) to bring together the international legal and scientific community to present and discuss the state of scientific research on marine minerals of the South and Equatorial Atlantic Ocean or comparable areas in other oceans, and
- 2) to discuss and propose topics and mechanisms for international and regional cooperation on marine scientific research of the seabed in the South and Equatorial Atlantic Ocean.

EXPECTED OUTPUTS

The main outputs expected from the workshop are:

- a) Recommendations of topics for scientific and technical cooperation
- b) Proposal for mechanisms for international and regional cooperation
- c) Proceedings of the workshop including the full papers from the oral presentations
- d) DVD containing all presentations and discussions of the seminar