

# Economic, scientific and cultural development



## Introduction

The **ECONOMIC, SCIENTIFIC AND CULTURAL DEVELOPMENT** role covers a widely diversified range of tasks, namely:

- ✧ Economic leverage;
- ✧ Scientific investigation;
- ✧ Maritime culture.

## Economic leverage

The primary contribution of the Navy regarding economic leverage is an indirect one, resulting from the production of security and safety at sea. Indeed, without security and safety there can be no economic activity or development. To a country such as Portugal, security begins at sea, as it is more difficult to keep law and order on land if there is no control over illegal activities at sea. Among the economic activities that benefit the most from a secure and safe environment, maintained on sovereign and jurisdictional waters, one should emphasize tourism, as approximately 90% of all the tourists that visit Portugal search the coastline and the sea. In this particular sector, the intervention of the Navy in the beaches and seaside areas is essential to the recognition of Portugal as a safe and high-quality tourist destination.

Besides this, the Navy also contributes directly to the economic development of the country, in three main areas:

- ✧ As a value generator in industry and services sectors;
- ✧ By qualifying people;
- ✧ By partnering in projects with a strong economic impact.

The Navy carries out a relevant role in the economic development of industry and services sectors directly connected to naval logistics, stimulating a structural activity of the country. In fact, the fleet's modernization, as well as its maintenance and supply, contribute to the development of a national capacity in terms of naval construction and repairs. In a recent past, there are several examples of the economic leverage derived from the construction of warships in Portugal, namely the High Speed Vessels at the shipyards of *Figueira da Foz*, *Vila Real de Santo António* and *Alfeite*, and the Oceanic Patrol Vessels and the Coastal Patrol Boats, at *Viana do Castelo* shipyard.



Construction of two Oceanic Patrol Vessels at Viana do Castelo shipyard.



Naval Academy.

There was no strong captain, who was not also erudite and cognizant.  
*Luís de Camões*

The professional development of the Navy's human resources is conducted mainly at the *Naval Academy (Escola Naval)*, at the schools and centres of the Navy's *System of Professional Formation (Sistema de Formação Profissional da Marinha)* and at the *Long-Distance Teaching Naval Centre (Centro Naval de Ensino a Distância)*. Through all the qualification activities developed at these schools and centres, the Navy makes a strong contribution to the individual development of

its personnel, providing them with the necessary tools to become more knowledgeable and participating citizens, thus contributing to the country's development.

The Navy also makes its capabilities available to carry out projects in partnership with national enterprises. The following are examples of that fruitful partnership: the development of the Communications Integrated System with EID; various Information Technologies projects carried out with EDISOFT; the implementation of submarine cables with Marconi; and the development of environmental studies to support the installation of wave farms.



Wave-energy power plant.

## Scientific investigation

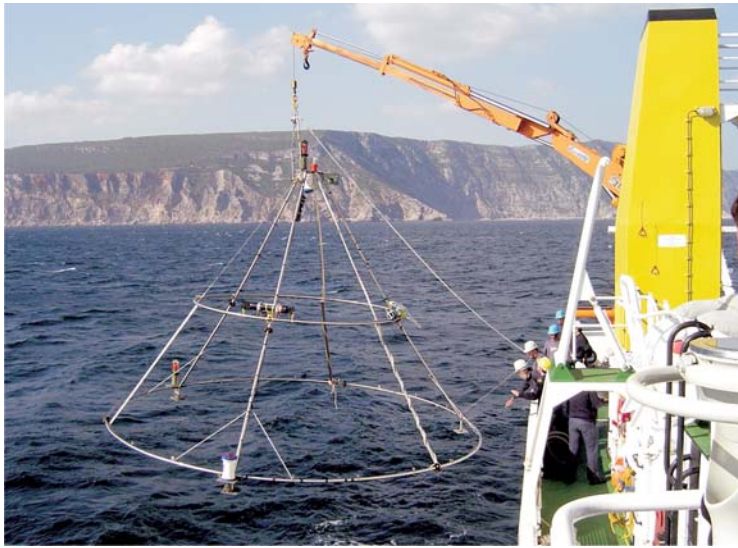
The Portuguese waters are a patrimony and a wealth that need protection. As you can only protect what you know, the Navy is in the forefront of nautical sciences, through the *Hydrographic Institute (Instituto Hidrográfico)*, which focuses on hydrography, nautical cartography, safety of navigation, oceanography and protection of marine environment.

The *Hydrographic Institute* is a State Laboratory that participates in three research and development consortia: OCEANOS, which intends to promote national and international scientific cooperation in the area of oceanography; RISCOS, acting in the area of prediction and prevention of natural and environmental hazards; and SEGURANÇA, which coordinates the participation of Portugal in the EU's security investigation and development policy.

The *Hydrographic Institute* is also responsible for the production of the official nautical cartography, keeping a folio of 85 paper charts and 76 electronic navigational charts that cover all the area under national responsibility. In average, 12 paper charts and 15 electronic navigational charts are published, each year.

Keeping all those charts updated requires a permanent effort of hydrographic surveying, as well as the continuous diffusion of Navigational Warnings and the monthly edition of Notice to Mariners. Furthermore, the *Hydrographic Institute* issues periodically several publications destined to contribute to the safety of navigation.

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Hydrographic ship conducting hydro-oceanographic works.

Finally, it is important to mention that the hydrographic ships have undertaken a significant operational effort in the scope of the establishment of the outer limits of the Portuguese Continental Shelf, surveying a maritime area of approximately 1,7 million square kilometres (around 18 times the territorial area of Portugal). The *Hydrographic Institute* has, also, a fundamental role in the technical support of data acquisition and processing for the *Mission-Structure for the Extension of the Continental Shelf (Estrutura de Missão para a Extensão da Plataforma Continental)*.



Hydro-oceanographic ship "D. Carlos I".

## Culture

For the Portuguese people, the sea has a very significant cultural dimension. Thus, the Navy commits a great deal of resources in fostering the Portuguese maritime culture, a task performed through a vast number of cultural departments.

The *Cultural Commission of the Navy (Comissão Cultural da Marinha)* is the coordinating body in this area. It issues literary and artistic publications, produced by seamen and others that dedicated themselves to the study of maritime activities and of subjects related to the sea.

The *Marine Academy (Academia de Marinha)* is constituted by notable figures of the cultural and academic Portuguese circles that have distinguished themselves in the areas of naval and maritime history, sciences and technologies.

*Aquarium Vasco da Gama (Aquário de Vasco da Gama)* is a study and investigation body dedicated to the aquatic fauna and flora, which exhibits living species of our seas and other oceanic areas.



Aquarium Vasco da Gama.

The *Navy Band (Banda da Armada)* participates in national protocol and military ceremonies and plays on symphonic concerts all around the country.

The *Central Library of the Navy (Biblioteca Central da Marinha)* contains an invaluable archive for the study and understanding of our past and recent History, paying an important service in supporting readership and investigation.

The *Maritime Museum (Museu de Marinha)* is a reference amongst similar museums around the world. The collection began in the XVIII century and now includes more than 17.000 artefacts, of which 2.500 constitute its permanent exhibition.



Maritime Museum.

*Planetarium Calouste Gulbenkian (Planetário de Calouste Gulbenkian)* promotes the interest for astronomy and celestial navigation, by undertaking daily sessions destined to explain to visitors the movement of celestial bodies and their harmony, besides other scientific knowledge concerning the universe.

The *Navy Magazine (Revista da Armada)* advertises the most relevant events regarding the Navy, dedicating significant space to historical, cultural and scientific articles.