

## THE ISLAMIC REPUBLIC OF PAKISTAN

Pakistan lies between latitudes 23°30' and 36°45' North and between longitudes 61°30' and 76° East, adjacent to Iran on the west, Afghanistan in the north, China to the north east, India on the east and is washed by the Arabian Sea in the south. It stretches 1,600 km north-south and about 885 km east-west, covering a total area of 796,700 km<sup>2</sup>. With a coastline of approximately 1,000 km, the country has an Exclusive Economic Zone of over 270,000 km<sup>2</sup>.



FIG. 1.- Pakistan.

Pakistan is a land of diverse relief with rugged mountains, deserts and river valleys. The climate is very variable, depending on aspect and elevation and as a whole, the country remains under the grip of severe cold from November to March and is extremely hot from May to September. Irrigation-aided agriculture provides occupation for 70% of its approximately 130 million people. Industrialisation and mechanisation, coupled with increased urbanisation and education in recent decades are rapidly changing the socio-economic structure of the country.

Pakistan, a federation consisting of four provinces and some federally administered areas, has a parliamentary system of Government, with a two-chamber legislature. The President is the Head of State, while the Chief Executive of the Federation is the Prime Minister.



FIG. 2.- SV BEHR PAIMA.

### The Hydrographic Service

At the time of independence, Pakistan did not inherit any hydrographic service or survey vessel. Being a littoral state, the importance of a hydrographic service was soon realised and a modest beginning was made in 1949, with the conversion of an old frigate (PNS ZULFIQUAR) into a survey ship which formed the back bone of the Service. Later, in 1955, a Hydrographic Office was established at the port city of Karachi, with the aim of coordinating hydrographic survey in Pakistan waters and producing nautical charts and associated publications based on the British Admiralty standards.

Right from its infancy the Hydrographic Service, despite innumerable difficulties and lack of expertise, undertook and completed a number of important surveys of coastal areas. It also collected and provided basic data for feasibility studies of new ports, which eventually resulted in the establishment of Chalna Port in East Pakistan (now Bangladesh) and Port Bin Qasim, near Karachi.

In 1976, the Hydrographer of Pakistan was entrusted with the responsibilities of area coordinator in the World Wide Navigation Warning System (WWNWS) for Area IX, comprising 17 littoral States covering the entire Red Sea, the Gulf of Aden, the Persian Gulf and the North Arabian Sea. To keep pace with modern communication systems being practiced for safety of mariners and to fulfil its obligations as Navarea IX Coordinator with regards to GMDSS, Pakistan has

commenced promulgation of MSIs through INMARSAT via Perth LES, Australia from 1 January 1996.

In view of the fast pace of advancement in Hydrography/oceanography and related sciences, together with the need to exploit the vast sea resources, it became necessary by the late 1970s to phase out and replace some of the ageing and obsolete facilities. This included the survey vessel and shore support facilities, to meet new challenges presented as a result of the signing of the Law of the Sea Convention in 1982, whereby Pakistan acquired a vast EEZ.

The Hydrographic Service underwent a complete transformation in the 1980s, with the introduction of the latest concepts and techniques in surveying and nautical charting. The acquisition of a modern survey vessel fitted with sophisticated electronic position fixing aids, integrated digital data logging systems and a host of oceanographic equipment, together with the setting up of a shore based charting centre with computer assisted cartographic systems and chart printing press were the main features of this modernisation programme. In addition, a school of hydrography was established, which runs basic hydrographic and cartographic courses for officers and all level courses for technicians. There are plans to upgrade the school to conduct Category 'B' hydrographic courses, as per IHO standards, in the near future.

Hydrographic survey of the entire coast of Pakistan has been completed in addition to some oceanographic research in the EEZ. Good progress has been made in the publication of nautical charts of the coastal areas. Plans are in hand to complete surveys of the entire Pakistani waters, including the EEZ, and to produce better quality charts to help the mariners navigating through Pakistani waters with more safety.

The Pakistan Navy Hydrographic Department organized an International Seminar on Regional Cooperation in Hydrographic Matters, in May 1996. Delegates from Iran, Qatar, Saudi Arabia and UAE participated in the seminar. This was the first ever seminar held to promote hydrography in the region. The delegates showed keen interest and enthusiasm to continue dialogue in the future aiming to form a Regional Hydrographic Commission to promote cooperation amongst the regional countries in the field of hydrography.

In compliance with IHO recommendations, PN Hydrographic Department has recently signed an agreement with the UK Hydrographic Office, for mutual exchange of hydrographic data. Under this agreement, the two Organisations will exchange navigational and hydrographic information which will subsequently be used to improve safety of life at sea.

PN Hydrographic Department has its main office at Islamabad with a sub office in Karachi where the charting centre, chart depot and Headquarters of Navarea IX Coordinator are located. The Department is reasonably equipped and organised to meet the needs of the country and is trying hard to keep abreast, by rapid technological advancement in the field of hydrography and oceanography. Pakistan is member of the IHO since 1950 and enjoys good relations with other marine related international organisations around the world.