

## THE REPUBLIC OF ECUADOR

### The Republic of Ecuador

The Republic of Ecuador is situated in the tropical zone of the South American continent. The land area lies between the parallels 1°30'N and 6°S and the meridians 71°56'W and 81°W. The country has a maritime character with 1,200 km of coastline, not including that of the Galápagos and Continental islands. The capital is Quito, located in the Andes, 22 km from the Equator.



FIG. 1.- Ecuador.

Ecuador is bounded to the north by Colombia and to the south and east by Peru. The Pacific Ocean is the boundary to the west. The land area (including the islands) is 281,341 km<sup>2</sup>. The Andes divides the continental part of the country into three natural regions: the Coastal, the Mountain or Interandine region and the East or Amazonic regions. The insular region is situated 620 miles from the coast and is formed by 13 main islands and 64 small islets and rocks of less importance. Only four of the islands have a permanent population, San Cristobal, where the main town, Puerto Baquerizo Moreno, is located, Santa Cruz, Isabela and Floreana. All

the islands are of volcanic origin and due to their unique flora and fauna have been declared "Natural Patrimony of the Humanity" by the United Nations.

The Andean system of mountains is comprised of three chains of mountains: the West chain, in which the highest mountain in the new world can be found - the Chimborazo (6,310 m) - and the East and Central chains.

Ecuador is well endowed with hydraulic resources, as most Ecuadorian rivers are born in the Andes, some of them running into the Amazon basin and others into the Pacific Ocean.

Ecuador is totally included in the tropical equatorial zone, but its climate is unique due to the presence of the cold Humboldt current, together with the Andes, which not only provide differences of climate by their altitude, but also lying perpendicular to the trade winds, cause an unusual diversity of sub-climates, micro-climates and topo-climates. The typical four seasons division of temperate countries does not exist in Ecuador; instead there is a dry season and a rainy season, with the latter lasting from October to March.

The major resources of the country are agriculture and fishing. Cattle farming is flourishing, however, it is primarily devoted to internal use. Mineral production includes gold, from the Nambija mines and other sources discovered in the Provinces of Azuay and Pichincha. Oil production is particularly important to the economy and, since 1971, has reached important levels of production. Ecuador joined the OPEC in 1973.

### **Hydrographic Service**

The Hydrographic Service of Ecuador, named Instituto Oceanográfico de la Armada (INOCAR) was established on 2 February 1932, by the Government of Dr. Alfredo BAQUERIZO MORENO, to fulfil the necessities of the country with respect to nautical cartography. Its mission was to deal with all matters related to hydrographic activity, aids to navigation and to assure the sovereignty in the territorial sea and continental shelf.

During the first years after its creation, the activities of the Hydrographic Service were carried out with the difficulties associated with that period but, in 1940, the first nautical chart was produced and the basic sub-structure in material, funding and human resources began to be established. This fact made it possible to consider other missions, such as scientific investigation, some elements of which were essential for the achievement of naval operations and national development.

According to Executive Order No. 642, the former "Servicio Hidrográfico" was re-named Instituto Oceanográfico de la Armada (INOCAR) on 18 July 1972, granting it adequate funds to allow in the future the continuous evolution to carry out the tasks related to nautical safety and maritime investigation. Accordingly, INOCAR was divided into three Technical Departments: Nautical Sciences, Hydrography and Aids to Navigation, which have stimulated and successfully carried out various projects: engineering projects for drilling platforms, harbour engineering works, mineral working, Rift of Galápagos dredging operations and, lately, programmes of

investigation in the Antarctic. To carry out the preceding tasks INOCAR has the oceanographic/ hydrographic vessel ORION, a modern ship of 1,100 tons, complete with appropriate equipment and laboratories to successfully achieve the aimed targets of scientific investigation, the results of which have been already distributed to the international community.

Four other Departments are included in the INOCAR. The National Oceanographic Data Center, in which data collected from hydrographic and oceanographic operations are stored and processed. The Time Signal Station, which originates and disseminates the official time in the country. The Planetarium of the Navy, an educational and cultural institution devoted to teach astronomy and related sciences. The Naval Printer, which mainly prints and distributes the technical and scientific reports of the tasks carried out by INOCAR. The Nautical portfolio includes 100 charts covering al the continental area and the principal part on the insular area. It is expected to complete the charting of all the national territory in five years.

INOCAR also participates in international projects such as the "El Niño Stream", multinational hydrographic surveys, tsunamis control, etc. Periodically, the INOCAR gives training in hydrography to selected officers of the Navy. A number of hydrographic officers have already been totally trained at the Hydrographic School of Ecuador. Other courses, seminars and symposia related to hydrography and nautical sciences are frequently held in collaboration with other national and international Institutions.

The present Director of the INOCAR from October 1989 is Commander José OLMEDO Morán.