

## NEW ZEALAND

### New Zealand

New Zealand is a small mountainous country comprised of two main islands and several smaller ones totalling some 268,000 km<sup>2</sup> in area. Situated in temperate latitudes in the south-west corner of the Pacific Ocean, it is one of the most isolated countries in the world. In consequence, its people have always lived in close association with the sea. It has a total coastline length of 9,839 nm and a 200 mile Exclusive Economic Zone of 1,144,610 nm<sup>2</sup> - one of the world's largest.

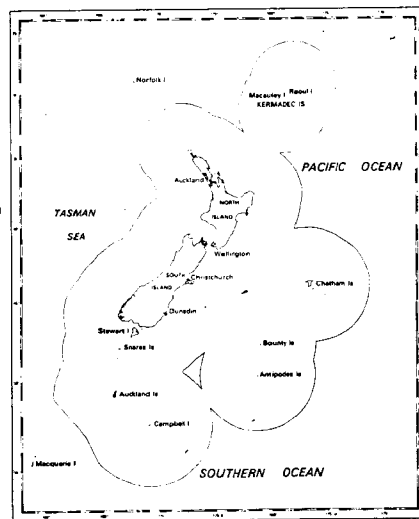


FIG. 1.- New Zealand.

Constitutionally, New Zealand, as a member of the Commonwealth, is a monarchy with a parliamentary government presided over by a Governor-General who is appointed by Queen Elizabeth II. Geographically, the country is long and thin with no point of land being more than 60 miles from the sea. The land is mountainous, particularly in the South Island, and the funnelling effect of the prevailing westerly winds in Cook Strait between the two main islands has a marked influence on the climatic and tidal conditions in that region. The main islands are

bounded on the north, east and south sides by small remote groups of islands, most of which are uninhabited. New Zealand, in geographical terms, is very young. Situated on the rim of the vast Pacific plate, it is very volcanic with uneven and precipitous topography in many areas, both above and below sea level. With a multi-racial (Polynesian, European and Asian) population of only 3.6 million, the country's economy is predominantly agricultural and is totally dependent on exports in order to remain in balance. Because of the low population, home-based manufacturing industry is small and the importation of overseas manufactured products has a major impact on the nation's economy. Maritime trade therefore has played a very significant role in the growth of the country since Europeans started arriving in any numbers during the middle of the 19th century.

Fishing also plays a significant role in the economy. Tourism is of increasing importance to the economy, a number of maritime parks and visits by cruise ships to the unspoiled waters of Fiordland and the sub-Antarctic islands emphasizing the nation's dependence on its maritime capability.

### **Hydrography in New Zealand**

Sea-borne explorers from Europe such as TASMAN, COOK, VANCOUVER and d'URVILLE played a major role in the early charting of New Zealand's waters and coastline from 1769, but no true hydrographic surveys were carried out until the arrival of HMS ACHERON and HMS PANDORA in 1848. Sporadic surveys by other Royal Navy vessels were carried out during the next 100 years; these resulted in several new charts of the New Zealand coast and its harbours being published.

In 1941, the New Zealand Division of the Royal Navy evolved into the Royal New Zealand Navy. In 1949, a Survey Branch was formed with HMNZS LACHLAN, a converted river class frigate on loan from the Royal Australian Navy, commencing the first modern survey in New Zealand waters. In 1951, a Hydrographic Section was established in the Lands and Survey Department to produce charts from LACHLAN's surveys.

In 1953, this section was transferred away from Lands and Survey to the Navy Office, in Wellington, as the Hydrographic Branch. The branch grew steadily and, in 1971, moved to Auckland to be co-located in Takapuna with the Chart Supply Depot, formerly in Devonport, as the Hydrographic Office RNZN.

The current hydrographic flotilla consists of three dedicated survey vessels, two inshore Survey Craft, HMNZ Ships TARAPUNGA and TAKAPU (each 27 m long, 104 tn) and the newly acquired HMNZS RESOLUTION (68 m long, 2,262 tn). RESOLUTION is currently being outfitted with a state of the art multibeam echo sounding system and will, on completion of her conversion, replace HMNZS MONOWAI after a long and productive life.

About 50 hydrographic survey-specialist officers and ratings serve with the Hydrographic Branch of the Navy and a further 33 civilians, mainly engaged in cartography and chart maintenance, are employed ashore in the Hydrographic Office at Takapuna on Auckland's North Shore.

New Zealand has charting responsibility for an area of the South Pacific which encompasses the Cook Islands, Tokelau and Niue. This area, which stretches from the parallel of 7°S to the Antarctic continent, totals some 18 million nm<sup>2</sup> and is about 112 times the size of New Zealand itself. Much of the ocean area is at best only poorly surveyed and the submarine volcanic chains are unstable, which provides a considerable number of features of much hydrographic and scientific interest. A charting arrangement with Tonga provides for co-operation in surveying and chart production.

The Hydrographic Office RNZN produces and maintains 121 charts which provide national coastal coverage, as well as an oceanic coverage of relevant parts of the Pacific. In addition, 60 bathymetric plotting sheets are maintained in support of the IHO world bathymetric data service. Some areas of chart production have been computerised for a number of years. A CARIS system has been purchased and is being evaluated for the production of both paper charts and IHO S-57 compliant data. Charts are sold to the public at the Hydrographic Office or through a network of 153 agents within New Zealand and 23 overseas.

The NZHO provides the co-ordinator for long-range navigational warnings in NAVAREA XIV, participates in IGOSS and is responsible for Territorial Sea and Exclusive Economic Zone delimitation in New Zealand and those South Pacific nations linked in free association with New Zealand. Tidal and ocean current services are provided to other Government Departments and the general public. The Hydrographic Office is also an agency for the sale of UK charts and publications and Australian charts providing a near world-wide coverage.

New Zealand joined the IHO as an associate member under British sponsorship in 1947, subsequently becoming a full member in 1959 and now participates in all areas of international hydrographic decision-making.