

There has been a steady increase in the demands for general forecasts not only from Kelburn, but also from the Branch Aviation Offices.

The farming community in particular is making fuller use of the services available. Various Government Departments, local bodies, and organizations, such as yacht clubs, for example, are provided with a specialized service to meet their particular requirements. Special arrangements are made for Catchment Boards in the provision of warnings of heavy rainfall, and the State Forest Service receives detailed advice during periods of potential fire hazard.

Following a request from the New Zealand Railways for forecasts of heavy rain-falls in the Maraetaha section of the Gisborne line, a special study was made of conditions likely to produce excessive falls in this area.

Collection and Dissemination of Weather Reports.—A rapid exchange of information between forecasting centres is a prerequisite to making the best use of all reports available. The general supervision of the operation of the Meteorological teleprinter network in New Zealand is the responsibility of the Kelburn office. This network connects the radio stations and telegraph offices at Auckland and Wellington, and the telegraph offices at Christchurch and Dunedin with the local meteorological offices, as well as linking the meteorological branches at Whenuapai, Mechanics Bay, Ohakea, Palmerston North, Paraparaumu, Kelburn, Woodbourne, Nelson, Wigram, and Taieri.

As part of the system of international exchange, the Wellington office prepares and broadcasts in international meteorological code from Post and Telegraph Department radio transmitters a selection of weather reports collected in the New Zealand area. These "collectives" comprise reports from land stations, ships, and aircraft, as well as upper air information. Coded copies of the analyses of the surface weather charts, and of the chart for the 700-millibar level, are also broadcast. In all, these coded broadcasts now total more than 70,000 groups per month.

The corresponding analyses and "collectives" covering reports originating in the South Pacific Islands area are prepared by the Meteorological Office at Nadi and broadcast on three frequencies simultaneously from Nadi Aeradio Station.

CLIMATOLOGY

The observations upon which climatological statistics are based are gathered from a variety of sources and with the co-operation of various Government Departments, local bodies, and hundreds of private individuals. I wish, once again, to acknowledge our indebtedness to these observers for their valued assistance, and particularly to those many observers who every day, year after year, have retained an interest in weather observing, and have continued voluntarily to send us returns each month.

The stations which furnish climatological data are divided into three main networks—climatological, rainfall, reporting. Some notes on the changes which have occurred in observing stations and the class of observations available are given below:—

Climatological Stations. At such stations the basic instruments are a rain-gauge, and five thermometers, known as the dry bulb, wet bulb, maximum, minimum, and grass minimum. Many more instruments are available at certain selected stations. At the more fully-equipped stations the additional instruments include thermometers for measuring soil temperatures at various depths down to 3 feet, evaporimeter and anemometer, as well as automatic instruments to give continuous records of temperature, rainfall, humidity, wind, and sunshine. Observations are made daily at 9.30 a.m.

During the year a number of new stations commenced operation. At Owairaka, Auckland, a new station is run in co-operation with the Plant Research Division of the Department of Scientific and Industrial Research. Others were set up at the Soil Conservation and Rivers Control Council's Research Station at Wairenga-o-Kuri; at Flock House, Bulls; at the Horticulture Division's nursery at Levin; and at Invercargill Aerodrome. Two stations in Canterbury, one at Kimberley and the other at