

cent. of the total State forest area of 8,762,079 acres, making a strong contrast with the 1921 figures of 1,668,319 acres, or only 24·5 per cent. of the total of 6,802,970 acres. The progress of this change is strikingly set out in Appendix II.

CHAPTER IV.—FOREST MANAGEMENT.

SECTION A.—SURVEYS.

29. Topographical surveys covering 6,516 acres were completed—4,300 acres by plane table and the balance by the grid system; 2,817 acres were subdivided into compartments for forestation purposes. For timber appraisals, 154 areas totalling 22,049 acres were surveyed, while the reconnaissance of 3 areas covered 1,679 acres. Tramways 51 miles in length, and roads totalling 32 miles, were also surveyed. Aerial survey work was completed over three small areas totalling 3 square miles; incomplete work comprises one area partly photographed, one to be rephotographed, and two not yet commenced; atmospheric conditions over these latter areas were not conducive to good photography. (Appendix IV).

30. Mapping resulted in 2 new topographical maps of afforestation areas (Kaingaroa and Ashley). One privilege map and 20 operational maps were added to the permanent forest atlas, while 5 stock maps were renewed, and additions made to 48 stock, topographical, and operational maps. For general use, 54 copies of these maps were prepared.

Entries in the forest registers totalled 178, these being made necessary by Proclamations, &c., affecting the status of 317,358 acres of land. The recording of this total area and of various privileges required 1,832 additions to the forest atlas; and for various purposes 241 plans and 848 tracings were prepared, 836 lithographs, &c., coloured, and 264 plans mounted. In the preparation of 230 licenses and 446 permits a total of 2,474 diagrams were drawn, while 17 honorary Forest Ranger's certificates were engrossed, 18 atlas sheets renewed, and 882 photostat prints and 2,352 helio prints prepared, 1,894 of the latter being the work of other Departments.

The total number of recorded photographic negatives is now 15,336, of which 518 were added during the year.

SECTION B.—FOREST-MANAGEMENT STAFF.

31. The shortage of trained staff has continued, and only four officers were available for the preparation of working plans. Silvicultural activities and utilization duties arising from the war emergency have occupied a good deal of the time of these officers, thus contributing to delay in completion of working-plan reports. A fifth officer, however, was appointed towards the close of the year, while two junior officers were appointed as assistants to the working-plans officer for Rotorua Conservancy. These three appointees are in the Forest Ranger division, but have had the benefit of some degree of professional forestry-school training. Provision was made for the training of forest cadets in working plans and silviculture.

SECTION C.—PREPARATION OF FOREST WORKING PLANS.

32. Due to staffing limitations and pressure of emergency duties, it was not possible to complete the preparation of any working-plan reports, with the exception of one for controlling kauri-cutting in State forests. As the latter embraces all kauri-bearing State forests, and the Forests Act limits the operation of each forest working plan to an individual State forest, the plan prepared will function as a departmental control plan prescribing the allowable kauri cut in State forests. A working plan proper in respect of a kauri State forest of a total area of 30,450 acres was in course of preparation at the close of the year.

Analyses of production and markets have revealed that kauri-production from private forests is now falling so suddenly as to restrict forcibly the utilization of kauri timber to essential uses. In the past, kauri timber was, of course, utilized very largely for general purposes, and in addition considerable areas of kauri forest, large in the aggregate, were destroyed by fire. Although the remaining State forests constitute virtually only remnants of the original kauri stands, it is anticipated