

a neighbouring local authority. Moreover, even when such smaller local authorities have carried out important protective works with the aid of Government grants and subsidies the benefit has, in some cases, been eventually lost when the local authority has, through lack of revenue or for other reasons, failed to carry out continuous supervision and maintenance.

Governments have, over many years, paid out large sums in grants and subsidies to local bodies for river-control and flood-prevention works. For instance, during the last two financial years for which the completed figures are available a total of £347,643 has been paid out to River and Drainage Boards, and to this must be added large sums paid out to County Councils for similar works. A comprehensive scheme would ensure that the country derived the maximum benefit from this expenditure of public money.

The average expenditure over the last few years on flood damage restoration on highways has been about £150,000 per annum with about another £75,000 on county roads.

In both the written statements received by the Committee and in the oral evidence given there was a general recognition of the need for a river-control scheme and the prevention of soil-erosion. The Emergency Committee of the New Zealand Counties' Association, which voiced the objections and suggestions of most of the County Councils, commences its summary of its considered statement with the words: "(1) A river and erosion control scheme is needed": and it was found that as the Committee developed and explained the scheme it had in view to the representatives of local bodies who appeared before it, opposition was, in most cases, turned to support.

The following comment from a lengthy review of the original proposals by a County Engineer was apt enough to the situation of the Committee at that period:—

"In the main local authorities will condemn the proposals, but such condemnation should be tempered by the fact that, in dealing with problems of this kind and magnitude, a start must be made somewhere and somehow, and here we have a start. From the destructive criticism which, in most cases, will be abundant, and from the constructive criticism, although usually strong in argument and weak in information, a scheme should be evolved which will cope with the requirements of all, and serve the useful purpose for which it is formulated."

It may be stated, however, that the Committee received, and acted on, much useful constructive criticism founded on experience and knowledge.

New Zealand, owing to its configuration, its abundant rainfall, its rivers with generally short and rapid courses to the sea, and the uninformed destruction of its native plant-life, is to-day peculiarly liable to damage by river-erosion, sheet-erosion, and other forms of soil erosion and deterioration.

Vigorous and large-scale measures are being taken in other countries, particularly in the United States of America, to cope with these forms of damage to their economic life; but in New Zealand no considered plan has, so far, been put forward to combat what are, in fact, related evils.

The evidence before the Committee may be briefly summarized as attributing these evils in New Zealand to (a) increased flooding arising from increased run-off of rainfall through destruction or degrading of plant cover, (b) excessive burning, (c) overgrazing and other phases of inefficient husbandry, (d) damage by deer, rabbits, and other animal pests.

The Committee was informed that inter-departmental Committees which were set up in various districts in 1937 recommended that nearly 4,000 square miles, or, roughly, 2,500,000 acres, of land in New Zealand should be withdrawn from occupation because of soil-deterioration. In the Wellington Land District alone some 105,000 acres of Crown lands have been abandoned through deterioration, and it is estimated that another 200,000 acres is in process of reversion. In the Taranaki district abandoned Crown holdings total over 130,000 acres. Out of 39,000 acres in the Whangamomona Valley at one time held under Crown leases, 26,000 acres have been abandoned.

Evidence was also given that some 600,000 acres of sub-montane tussock land in the South Island should be withdrawn from occupation.

A large-scale experiment in the regeneration of tussock lands under controlled cattle-grazing is being carried out on the Molesworth and Tarndale Runs in the Marlborough district, where extensive deterioration and erosion has occurred.

Other significant figures, which it is unnecessary to quote here, were made available to the Committee.

The report of the Sheepfarming Industry Commission (II.-29A, 1940) states that "land deterioration is widespread. It would be greatly minimized by suitable modifications in farming practice. . ."

Having given careful consideration to the information, suggestions, and objections it received, the Committee recommends the adoption of a scheme providing for (a) the establishment of a central Soil Conservation and Rivers Control Council, and (b) the constitution of catchment districts each under a Catchment Board.

The Council will act as a co-ordinating and supervising body to the Catchment Boards and will also control those areas in New Zealand where Catchment Boards are unnecessary or where the peculiar local problems could not be so effectively handled by a Catchment Board. "Such a co-ordinating head is necessary" (Counties Association).

Each Catchment Board will consist of elective and non-elective members, provision being made that the elective members shall be in a majority. The object of the Committee in providing for nominated members is to ensure that Boards shall have the continuous services of engineering and other technical experts. It is anticipated that in many cases existing local authorities will become the Catchment Boards in their areas, thus utilizing local experience and knowledge.