Conservation Operations on the Land.—The fourth step of doing conservation work in the field has necessarily been guided by opinion and experience. To date, acquisition of land for conservation purposes has been confined to areas not suitable for farming. As there are very large and important areas not suitable for farming, the retirement of these for preservation, planting, or regeneration must become a major activity. Action to date in subsidizing tree-planting on eroded land and subsidizing soil-conservation works of a special character must be followed up with assistance to oversow, top-dress, spell, fence, and modify sheep and cattle ratios, in order to control erosion. More difficult, and even more important, is positive action to prevent the onset of erosion by adopting similar measures at an earlier stage.

Information Service.—The fifth step is the development of an information service to meet the needs of staff, Catchment Boards, educational institutions, and the man on the land. Part of this service has been inaugurated, and publicity by way of bulletins, film strips, movie films, and a mobile cinema unit and displays at agricultural shows has been undertaken, but as yet the surface only has been scratched. Information arising out of surveys and research work and experience from demonstration farms and field operations, as well as overseas experience and data, has to be selected, collated, marshalled, and distributed through the most appropriate channels to the people who need it.

There are four major projects involved in restoring the balance between land use, vegetation, soils, slope, and climate.

Progressive recuperative treatment of upwards of 14,000,000 acres of natural grasslands (the high- and low-country tussock), by spelling, seeding, rabbiting, fire-control, reduced grazing with more cattle and fewer sheep for a convalescent period at least, planting of shelter and wind breaks, and the greater production of supplementary feed to obviate overgrazing during lean periods. An approximate estimate of the cost of such a programme is £3 per acre.

Conservation treatment of upwards of 10,000,000 acres of North Island hill country by the introduction of suitable clovers and grasses by surface sowing and top-dressing, modified grazing and spelling, adequate fencing, a higher cattle-sheep ratio, and the production of supplementary feed, particularly cattle feed. Where the land can be top-dressed with phosphate the job will not be difficult, but on poorer, more inaccessible land slow rebuilding under a cattle economy and the introduction of lower fertility demanding clovers (*Lotus major*, trefoil, and strains of white clover) must be tackled. Regrassing of eroded land, stabilizing slopes by trees and grass, gully-control measures, and extensive planting of very steep land is essential. This may involve an average cost of up to £8 per acre, but a permanent carrying-capacity of the equivalent of one and a half sheep per acre can be assured on land treated.

Modified use of ploughable land: Upwards of half of all ploughable land in New Zealand is on slopes which suffer at various periods from sheet and wind erosion principally. Small losses from this highly productive land are in the aggregate probably more serious than from the aforementioned land. The land is sufficiently productive to carry the added cost of conservation measures, so early action to introduce the necessary modifications is essential. The work hinges on building up the fertility of the soil with fertilizers, lime, and soil restorative crops, grasses, and clovers in well-planned crop rotations, greater use of live-stock and the use of overseas contour cultivation, strip cropping and contour pasture furrowing, and adequate protected drainage-ways. Further drainage, irrigation, and flood-control work are also needed on much of this land. Probably as much as 6,000,000 acres requires treatment along the lines indicated above which will involve an outlay of from £8 to £20 per acre the greater part of which the land can well afford to carry though individuals may not be able to finance it directly.

Forestry and protection work: Owing to the very hilly mountainous type of land that dominates the topography of New Zealand, 52 per cent. of it being too steep or high for farming, the best utilization lies in the production of native and exotic forests and in its use for water-conservation purposes over an area of 34,000,000 acres. Large areas unsuitable for native or exotic forests, including mountain areas, must be planted for protection purposes or regenerated to native plant cover over an unknown area. In addition, at least 3 per cent. of each farm requires trees for shelter and farm uses, which will involve the planting of upwards of 1,000,000 acres of trees.