

PART V
GENERAL ASSESSMENT OF THE AREA

28. GENERAL ASSESSMENT OF THE AREA

In this Study, the many changes in the environmental features have been described in terms of recognizable patterns (the land-systems and land-units) and these have been mapped and described. Also, information has been presented on the environmental features and their inter-relationships, and an integrated assessment of them has led to an understanding of the processes operating within the land-systems and land-units.

Consequently, these mapping-units form a framework for considering the systems of land-use, conservation problems, potential for increased productivity and the future utilization of the forest and water resources.



Plate 43 – A carefully managed farm is easy to recognize. A good scatter of trees is retained over the paddocks, pastures are vigorous and protect the soil, and watering points for stock are in sufficient number.

Systems of Land-Use and Soil Conservation

Over most of the land-systems, the land-use is such that there is row little or no soil erosion or loss of fertility. For example, this standard has been approached in recent years on the wheat soils of the Horsham land-system, where the rotation has been lengthened by the inclusion of a pasture of barrel medic.

Nevertheless, there is evidence of deterioration of the land in a few land-systems.

In Dundas land-system, there is the problem of catchment salting. Saline drainage waters reaching the Glenelg River from surrounding properties have raised the salinity of this river to the point where extra water must be released from Rocklands Reservoir to make the river water suitable for domestic use downstream. The establishment of deep-rooted perennial plants, including trees, over parts of the land-system may be necessary to ameliorate this problem.

In the Darracourt land-system changes in land-use are needed. Sheet erosion, gulying and siltation are serious in the Darragan and Darragan Mallee land-units, and a rotation with a long period under improved pasture is desirable.

In the rolling and hilly country comprising the Mirranatwa and Ararat land-systems, the land has deteriorated. Sheet erosion and gulying are common, and there are difficulties in devising an adequate system of management, for example, the means of developing and maintaining a sufficient cover of perennial plants on the steep, cleared hills.

Over the area of survey as a whole, however, the present systems of land-use are maintaining soil stability and productivity.

Potential for Increased Productivity

This may be considered on the basis of uncleared land, alienated undeveloped land and alienated developed land.

Most of the uncleared land is Crown land and State Forest a small proportion is privately owned, chiefly the lunettes in Parrie Yallock land-system and marginal blocks fringing the Grampians Plains land-system. The State-held areas are in three categories. The first is the mountainous land, which is used for its supplies of water and timber, and the further use of this land is considered on p. 168. The second constitutes the extensive deposits, of acidic white sands (the nomopodzols) for which numerous requests for alienation are received. The third category of uncleared State land is the gum and box woodlands held as Reserved Forest, mostly around Rocklands Reservoir. These woodlands are capable of being developed for sheep raising, but because they provide a major part of the limited supplies of millable hardwood in central-western Victoria, and because there is a hazard of salting of the drainage lines after clearing, their retention as Reserved Forest is desirable.

There is some alienated but undeveloped land capable of much higher levels of production (Plate 44). Most of these areas fringe the mountains and are where the stringybark and apple box forests of the Grampians Plains land-system give way to the gum and box woodlands of the plains and tablelands. Partly cleared ringbarked trees, sparse native pastures, regenerating scrub and widespread sheet erosion are characteristic. The development of these areas is of equal importance to the development of the Crown lands, which almost invariably have lower potential and greater costs of development.



Plate 44 – Many underdeveloped areas such as this is still at the initial stage have burnt and ringbarked trees.

The land that has been both alienated and developed with introduced species covers about 70 per cent. Of the survey area, and on such land, the levels of production vary greatly. Part of the reason is the inherent variability in the productivity of the land, but the degree of development and the skill of management are also important. In fact, it is likely that the greatest scope for economical increased productivity lies not in the development of the uncleared or undeveloped areas, but in the improvement of existing farms to the high levels already attained on the best of them, for each kind of land.

Utilization of Water and Forest Resources

The proclamation of defined water supply catchments in Victoria was briefly explained on p. 85. The catchment to Rocklands Reservoir is proclaimed and lies wholly within the area of the survey, as does most of the proclaimed Wimmera Catchment (Figure 32).

Rocklands Reservoir Catchment

The catchment covers 540 square miles and the average annual rainfall varies from 26 inches at the dam to about 35 inches in the central Grampians. Because most of the rain falls between late autumn and early spring, the stream flow into the reservoir is seasonal and mainly during that period.

The parent material, topography, soils and vegetation vary widely across the catchment to produce a number of types of land, which fall into eight land-systems the Grampians Ranges, Grampians Plains, Moora Valley, Mirranatwa, Brimpaen, Dundas, Ararat, and Kowree land-systems. In the mountainous eastern part are the first four of these land-systems, containing the headwater catchments of the Glenelg River. The western part is mostly plain and tableland, mapped as the latter four land-systems and the only mountainous area is the eastern fall of the Black Range.

Nearly all of Rocklands Catchment is within the Grampians Reserved Forest, for which the policy of management provides for both a sustained yield of timber where supply and extraction are possible, and the maintenance of a forest cover that will preserve the quantity, quality and regularity of stream flow. The sandstone ranges and outwash slopes in the eastern part of the catchment are covered with dry sclerophyll forests and heath woodlands of rough-barked species such as brown stringybark, apple box and messmate. These plant communities are of poor form and do not yield an appreciable supply of timber, but they serve as protection forests for soil, wildlife and water supply. On the plains and tablelands in the western part of the catchment, particularly near Rocklands Reservoir itself, are woodlands of gums and boxes, such as red gum, yellow gum, yellow box and grey box. These provide a limited but significant supply of millable timber and firewood. These latter areas could be developed for sheep raising, but such development would remove this supply of timber and give rise to the hazard of salting mentioned below, consequently, it would be better to continue to develop them as sources of timber.

Some freehold land to the east and south of the reservoir is used for sheep and beef cattle raising. Serious soil erosion has not occurred but salting is severe in many drainage lines. It is significant that in adjacent parishes below the reservoir, saline water from cleared properties is impairing the quality of the water of the Glenelg River.

A gazetted land-use determination by the Soil Conservation Authority for the Catchment states that areas of Reserved Forest be retained for forestry and water conservation and that existing freehold areas remain. By this, the importance

of Rocklands Reservoir to the stability and prosperity of western and north-western Victoria is recognized as well as the need to preserve limited supplies of millable hardwood in central-western Victoria.

Wimmera Catchment

The area covered by the proclaimed Wimmera Catchment includes the catchment of the Wimmera River above Glenorchy Weir and the land draining northwards and westwards to the water channel linking Toolondo Reservoir and Taylor's Lake.

Most of the proclaimed catchment lies within the area of survey. The average annual rainfall varies from 191 inches at Toolondo and Glenorchy to 35 inches at Halls Gap. Land-systems included are the Ararat, Mirranatwa, Mt. William Creek and Darracourt in the east, the Grampians Ranges and Grampians Plains in the centre and west, and the East Wonwondah, Brimpaen and Telangatuk in the west.

Most of the land is freehold and is used for the production of fine wool. The policy of future land-use should be to encourage management systems which will eliminate soil erosion and reduce the incidence of salting, particularly within the catchment of Mt. William Creek where two large storages, Lake Lonsdale and Lake Fyans, are surrounded by farming land.

Some of the areas of Crown land and Reserved Forest are in the Grampians, but, unlike the Rocklands Catchment, these areas have no land suitable for development for sheep raising. The most suitable forms of land-use in these Crown lands and Reserved Forests are those now in operation, namely, the maintenance of protection forests, the production of small quantities of hardwood timber and the conservation of water for the Wimmera and Mallee.

