



Figure 1 – Locality map

1. INTRODUCTION

The Campaspe River system beings on the Great Dividing Range near Woodend and flows northwards to enter the Murray River at Echuca. Prominent features on the catchment boundary are: to the west, Mount Alexander; to the south, Blue Mountain and Mount Macedon; and to the east, the Cobaw Range, McIvor Range and the Mount Camel Range. On leaving its hill tract the river (and its flood-plain) enters the southern part of the vast Riverine Plain.

The area studied (see Figure 1) lies in the hilly tract of the Campaspe River and cover some 4,100 sq km. The Coliban River is the major tributary and joins the Campaspe River at Lake Eppalock. However, Bendigo Creek, which does not flow into the Campaspe River, has been included in the study area because its catchment is related physiographically.

Land deterioration, especially in the hilly areas that are prone to water erosion, is common throughout the catchment. The Department of Conservation, Forests and Lands, largely through its former agency the Soil Conservation Authority, has had a long involvement in land reclamation and extension in the catchment, a prime example being the Eppalock Project, where widespread soil erosion upstream of Lake Eppalock has been successfully controlled by the encouragement of improved management techniques and by the construction of physical barriers to prevent the spread of erosion gullies.

Dryland salting also occurs in many areas in the central and northern parts of the catchment, and research by Jenkin and Irwin (1975, 1980) and Dyson (1983) indicates that the clearing of the native vegetation has disturbed the equilibrium of groundwater systems, resulting in rising saline water tables and ultimately dryland salting. Land system studies can have an important role in identifying similar areas of high potential for dryland salting.

Changed management is required in much of the catchment to minimise deterioration of land, and changed use sometimes appear necessary – for example, retirement of land from cropping or grazing.

This report contains basic data for land use planning. Preliminary chapters deal with individual features that affect the nature of the land and its use; namely, climate, geology and geomorphology, soils and native vegetation.

Land systems are mapped and described in terms of land components, each with its array of inherent land features, hazards and broad factors affecting productivity. The final chapter concerns interrelations between land types, hazards, uses and management.