

LAND SYSTEMS OF VICTORIA

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ACKNOWLEDGMENTS

This report is a synthesis of the work of many people over several decades, and has been undertaken in a number of discrete stages.

The acquisition of the base soil and land data – 1963 – 1992:

Many staff of the (then) Soil Conservation Authority and Department of Agriculture, and their successor bodies, undertook the detailed land studies and soil surveys that provide the raw data for the synthesis for the State-wide Land Systems. These people are identified, together with their study areas, in chapter 3 of this report. In all, 29 separate studies and 21 authors provided the base land and soils information.

Special mention must be made of Geoff Downes, Frank Gibbons and Jim Rowan. They contributed to the development of the land system mapping methodology, and supervised much of the field survey work and data analysis and presentation.

The Statewide “mud maps” – 1975

The first synthesis of land and soil data on a state-wide scale resulted in the 1975 Land Systems Map of Victoria (the ‘mud maps’), produced under the direction of Jim Rowan and Bryan Young. These maps were produced from the available land system and soil survey information. Information for those areas not yet studied was derived from air photographs and geology maps. These maps were intended as an interim measure, pending a more complete description of the lands and soils of Victoria.

The Statewide Land Systems – 1988

The Land Conservation Council used SCA’s land systems as a key input to its regional public land use investigations, providing data on land capability and to gauge representation in reserves. The Council’s *Statewide Assessment of Public Land Use* of 1988 generated the immediate need for a more comprehensive and systematic synthesis of the available land and soils data into an integrated statewide map and data set. A much richer dataset of land and soils base information was available, reflecting the additional soils and land undertaken since the 1975 maps were prepared.

Acknowledgment must be made of the essential work of the late Jeff Jenkin, who used his extensive knowledge of Victoria’s lands to define geomorphic units. These Geomorphic Units, being genetically based and mapped at various scales, provided an excellent framework for ordering the land systems according to fundamental processes that affect land use.

Jim Rowan undertook the monumental task of the synthesis, drawing on his extensive knowledge and experience of Victoria’s many environments as well as the published information on Victoria’s lands and soils. The product was a consistent, if basic, description of the land and soils of Victoria on a common basis and scale, presented as a series of 1:250,000 topographic maps and brief report (Land Systems of Victoria, Edition 1, published in 1990).

Conversion of the 1988 Statewide Land Systems to a digital dataset

The hard copy maps of the land systems and the tabular descriptions were converted into digital format in 1994-95 to improve their utility. Both the maps and the dataset were extensively reviewed and revised in the development of the corporate dataset for the Department’s Geographic Information System.

Keith Reynard digitised the maps into the Department’s Geographic Information System.

Lynne Matthews undertook the daunting task of checking these maps against the author’s working maps and identifying those land systems missing from the Table of Land System descriptions in the original report.

Simon Ransome, Jim Rowan and Les Russell resolved a number of inconsistencies between the corrected maps and tables.

Les Russell converted the land systems descriptions into digital format and, with the assistance of Jim Rowan and Simon Ransome, substantially revised and extended the initial report. This revision drew heavily on the chapter “Geomorphology” by Jeff Jenkin in *Introducing Victoria’s Geology*. Eds. Cochrane, Quick, and Spencer-Jones, Geological Society of Australia (Victorian Division) for descriptions of the geomorphic processes and various Geomorphic Divisions of Victoria. The revised

report also drew heavily on material assessing the productive potential and inherent susceptibility to degradation of soils prepared by Jim Rowan for the 1991 "*State of the Environment*" report.

The current report is largely derived from this revision.

This report includes substantial extracts and modified material from other relevant sources as well as much new material. The unpublished draft of Land Systems of Victoria-Edition 2 (Rowan, Russell and Ransome, 1994) which itself drew on a number of sources, including the assessment of the productive potential and inherent susceptibility to degradation from the 1991 State of the Environment report, and the original report by Rowan (1990). The major changes to the Statewide Land Systems Approach are:- (i) A revised key to the Land Systems of Victoria. This has resulted in change to the factors of landform and lithology, as well as the addition of another factor; lithological age. This task was overseen by David Rees, Mark Imhof and John Williamson and distributed for comment. (ii) The addition of newly available studies such as Far East Gippsland, Shires of Towong, (western part - formerly Shire of Tallangatta), West Wimmera and Lowan. This is seen as part of an ongoing process of including newly available information where appropriate and adapting this new information into the Statewide Land System Framework. This edition will be modified in the future, mainly due to the incorporation of further Land System studies as they occur with the possibility of a revised geomorphological framework which provides a hierarchical framework for the land systems per se. The new geomorphological framework would provide for a greater resolution of geomorphological features that are potentially mapable. Further modification of the process of definition of Statewide Land Systems may also include change in the climatic variable.

Enhancement of the geomorphological framework - The geomorphological Reference group are reworking the geomorphological framework, adding greater differentiation (three tiers in place of two) above the land systems

Authors: Rowan, J. N., Ransome, S. W., Russell, L. D. and Rees, D.B.

Editor (Ed. 3) Rees, D.B

PREFACE TO EDITION 3

This report includes substantial extracts and modified material from other relevant sources as well as much new material:

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