

# 1 *Introduction*

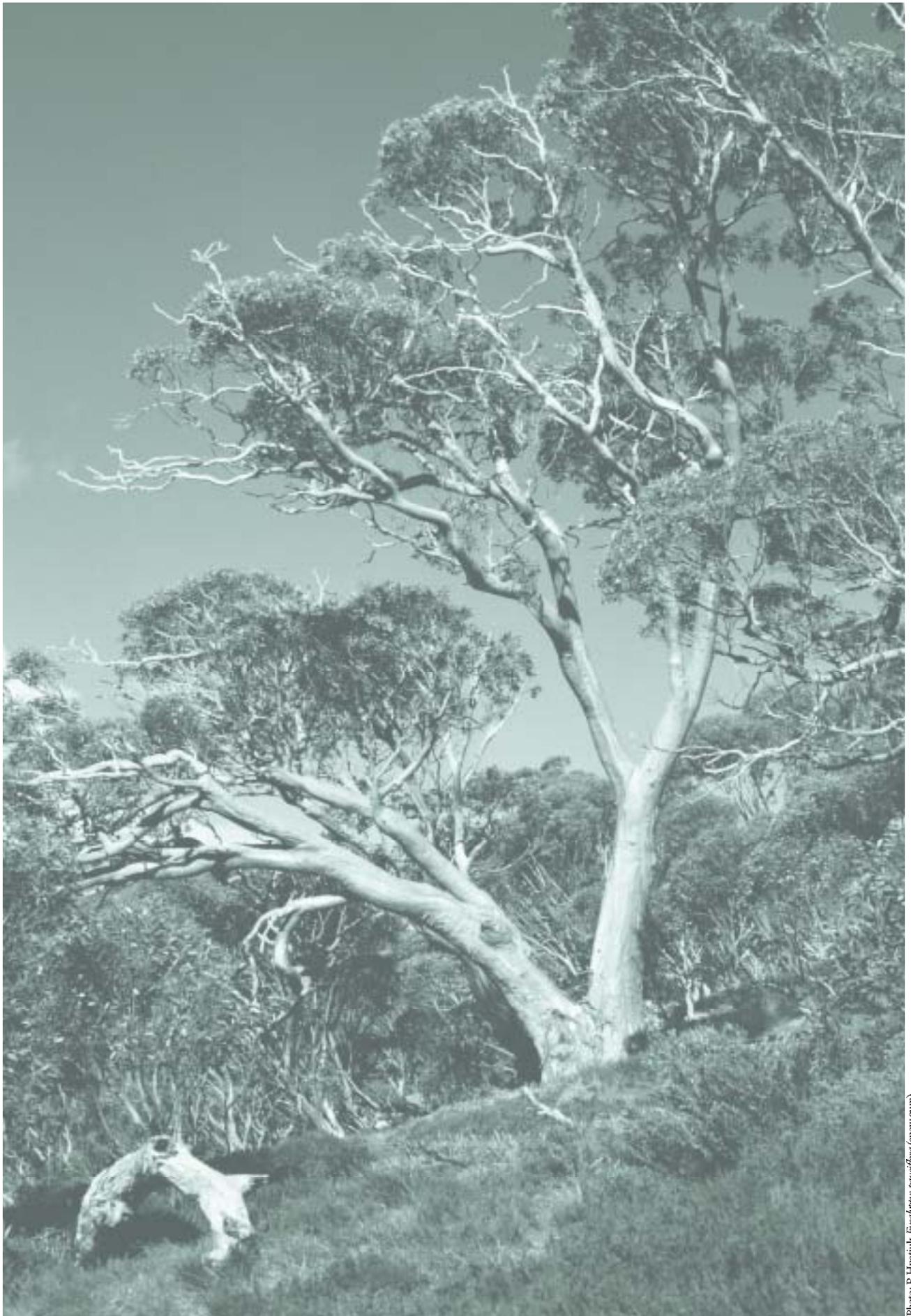


Photo: R. Hradnik. *Eucalyptus pauciflora* (snow gum)

# Introduction

This is the first national State of the Forests Report for Australia. It has two purposes: to describe, at a national level, the broad characteristics, location, extent and ownership of Australia's forests; and to provide baseline information indicating the status of these forests and the range of uses to which they are put. The report's origins lie in the National Strategy for Ecologically Sustainable Development and the National Forest Policy Statement, both of which were produced in 1992. They required the production of a five-yearly State of the Forests Report to the public.

Preparation of this report commenced in late 1994. The process of gathering, verifying and cross-checking information has been slow: it competed for the time of agencies that were also involved in the regional forest agreement process, a key initiative of governments. In addition, for many of the items reported on there was no previous national set of statistics. The regional forest agreement process has involved the gathering of new information about a significant part of Australia's forest estate. Some of this information has been included in this report, but there is much more that must be analysed before it can be fully incorporated into national-level reporting.

The contents of this report were developed by referring to the Tasmanian State of the Forests Report, the Canadian State of the Forests Report (Canada was the only other country known to have completed a national report), and to relevant chapters of State of the Environment Reports produced by individual States and Territories. This report also aimed to expand the coverage of forests given by the Australian State of the Environment Report, published in 1996.

The Montreal Process criteria and indicators of sustainable forest management, developed by an international working group of which Australia is a member, were also used to guide the development of this report. Since work on the report began, the Montreal Process has advanced: it published its First Approximation Report for Australia in 1997, based substantially on the information gathered for

this State of the Forests Report. Subsequent State of the Forests Reports may focus more sharply on the Montreal Process criteria and indicators than has been done in this first edition.

## How the data were obtained

The National Forest Inventory sent questionnaires to relevant Commonwealth, State and Territory forest and conservation agencies requesting information on a wide range of forest-related issues. Responses were collated by the National Forest Inventory project team. Where the questionnaires were incomplete, other sources such as annual reports were gleaned, and other non-forest-related agencies such as the Australian Bureau of Statistics, the Australian Bureau of Agricultural and Resource Economics and the Australian Taxation Office were consulted. The report also used data from the 1997 report of the National Plantation Inventory. Most of the data in the current report predate information specifically gathered through the regional forest agreement process. It has not been possible to analyse and update databases with the new regional information.

The process of producing this report has served to identify a number of deficiencies in our ability to report on the state of the forests. Rectifying this situation will become part of preparations for subsequent State of the Forests Reports.

In particular, the relationship of the forests to the Indigenous peoples of Australia is an important element in the consideration of forests. The ways in which this relationship can be reported are the subject of specific research programs of the Montreal Process. However, there are no existing sources of information that could be used for this first edition. Issues are raised within the body of the report, but the detail provided is low.

## Forest cover inventory

An inventory of the national forest cover, undertaken for this report, was completed in 1997 using more than 100 data sets (Map 1). Many of these were created from extensive new vegetation mapping by State or Territory government agencies or from mapping specifically undertaken by the National Forest Inventory. Much of the data was compiled from aerial photographs and satellite imagery. The most recent imagery used is from 1994 and the majority is from 1991: the data sets produced from them vary widely in their level of detail.

A geographic information system was used to combine these data sets to generate national maps at a level of precision that has not been possible before. Nevertheless, the accuracy of these maps is dependent on the reliability and scale of the data that underlie them: as mapping at a finer scale continues, further revisions of forest area estimates may be expected.

## Defining a forest

Central to reporting on the state of Australia's forests is a consistent definition of what constitutes a forest. This report uses a definition that differs significantly from some previous definitions. As a result, the estimate of forest area given in this report is dramatically different to some earlier estimates, but similar to others.

### The current definition

The 1992 National Forest Policy Statement, signed by all Australian State and Territory governments and the Commonwealth, provided a clear biological definition of forest but contained uncertainty relating to crown cover and height. To remove this uncertainty, the National Forest Inventory reworded the definition slightly. Thus the definition of forest used in this report is:

*An area, incorporating all living and non-living components, that is dominated by trees having usually a single stem and a mature or potentially mature stand height exceeding 2 metres and with existing or potential crown*

*cover of overstorey strata about equal to or greater than 20 per cent. This definition includes Australia's diverse native forests and plantations, regardless of age. It is also sufficiently broad to encompass areas of trees that are sometimes described as woodlands.*

This is similar but not identical to the single internationally accepted definition of forest used by the United Nations Food and Agriculture Organization, which is:

*Land with tree crown cover (or equivalent stocking level) of more than 10 per cent and area of more than 0.5 hectares. The trees should be able to reach a minimum height of 5 m at maturity in situ. May consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground; or of open forest formations with a continuous vegetation cover in which tree crown cover exceeds 10 per cent.*

## The effect of changing the definition

The current Australian definition is different from some previous widely used Australian definitions in several important ways. First, the minimum potential crown cover to qualify an area of trees as forest is now 20 per cent, which puts into effect the National Forest Policy Statement requirements that 'forest' is to include what has sometimes been called 'woodland'. This contributes about 112 million hectares of woodland to Australia's total forest estate. Second, the definition refers to 'trees having usually a single stem' and sets the lower tree height limit at 2 metres. This allows the inclusion of the forest-forming mallees and adds about 11.8 million hectares to the total forest area. The full definition, which requires the vegetation to be of tree formation, excludes shrublands, even if they are higher than 2 metres. Finally, the previous widely used definition for reporting forest statistics was specifically designed to capture those forests that were potentially commercially exploitable: that is, greater than 20 metres high except for white cypress-pine forests, which were included irrespective of height. The current definition is biologically based rather than focused on a particular use of the forest.

The current definition embraces large areas of woodland not previously defined as forest,

making a much broader examination of forest uses, disturbances, policy and management appropriate. However, there is disparity between the amount of information available for the open forests and woodlands of northern Australia, south-east Western Australia, South Australia and western parts of New South Wales and southern Queensland – the ‘new’ parts of the forest estate – and that available for the commercial forest types of Tasmania, the east coast and south-west Western Australia. The quality and quantity of information available for the latter regions have been further enhanced through the regional forest agreement process. This State of the Forests Report reflects the disparities of data quality and availability between these regions.

## Defining a plantation

The definition of plantations used in this report is the same as that given in the National Forest Policy Statement. Thus, plantations are:

*intensively managed stands of trees of either native or exotic species created by the regular placement of seedlings or seeds.*

Primarily large commercial plantations are reported. With a few exceptions, small areas of farm forest plantings generally less than about 1000 hectares in size are not reported here. They will be the focus of new work aimed specifically at documenting the location and size of this resource.

## Implications of continued forest mapping

The information on the area of forest is the best available now but there remain significant deficiencies in our knowledge. For example, the National Forest Inventory has begun a program to map in detail the large area of forest across northern Australia. Based on the information that will be gained from this exercise, it is expected that the total area of forest reported here will decline. There will also be changes in forest area that occur through the permanent clearing of forests, the extension of plantations onto previously unforested sites, natural regeneration of abandoned pasture lands, and revegetation programs. There will also be changes to the area of forest reported through improvements in the recording of forests against nationally accepted criteria. For example, not all records have been updated from the previous system of reporting areas of commercially valuable forest. In a number of the major commercial forest types, the forests were previously reported as ‘open forest’ when, in fact, they are woodlands or even open woodlands. When this information becomes available, it will show changes against the statistics reported here.

