

APPENDIX 4 SUMMARY OF CRITERIA FOR THE COMPREHENSIVE, ADEQUATE AND REPRESENTATIVE RESERVE SYSTEM

The following section is derived from the 'Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and Representative Reserve System for Forests in Australia. A Report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee.' (JANIS 1997)

This summary is intended only as a guide to the reserve criteria. Readers are referred to the published report which provides the full context for the information outlined below. The report is available through the Environmental Resources Information Network on their World Wide Server. Contact: <http://www.erin.gov.au/land/forests/rfa.html>

PRINCIPLES

Comprehensiveness

Comprehensiveness - includes the full range of forest communities recognised by an agreed national scientific classification at appropriate hierarchical levels.

Adequacy

Adequacy - the maintenance of ecological viability and integrity of populations, species and communities.

Representativeness

Representativeness - those sample areas of the forest that are selected for inclusion in reserves should reasonably reflect the biotic diversity of the communities.

CRITERIA FOR THE CAR RESERVE SYSTEM FOR FORESTS

Biodiversity Criteria

1. As a general criterion, 15 per cent of the pre-1750 distribution of each forest ecosystem should be protected in the CAR reserve system with flexibility considerations applied according to regional circumstances, and recognising that as far as possible and practicable, the proportion of dedicated reserves should be maximised.
2. Where forest ecosystems are recognised as vulnerable, then at least 60 per cent of their remaining extent should be reserved. A vulnerable ecosystem is one which is:
 - approaching a reduction in areal extent of 70 per cent within a bioregional context and which remains subject to threatening processes; or
 - not depleted but subject to continuing and significant threatening processes which may reduce its extent.
3. All remaining occurrences of rare and endangered forest ecosystems should be reserved or protected by other means as far as is practicable.
4. Reserved areas should be replicated across the geographic range of the forest ecosystem to decrease the likelihood that chance events such as wildfire or disease will cause the forest ecosystem to decline.

5. The reserve system should seek to maximise the area of high quality habitat for all known elements of biodiversity wherever practicable, but with particular reference to:
 - the special needs of rare, vulnerable or endangered species;
 - special groups of organisms, for example species with complex habitat requirements, or migratory or mobile species;
 - areas of high species diversity, natural refugia for flora and fauna, and centres of endemism; and
 - those species whose distributions and habitat requirements are not well correlated with any particular forest ecosystem.
6. Reserves should be large enough to sustain the viability, quality and integrity of populations.
7. To ensure representativeness, the reserve system should, as far as possible, sample the full range of biological variation within each forest ecosystem, by sampling the range of environmental variation typical of its geographic range and sampling its range of successional stages. Forest ecosystems are often distributed across a variety of physical environments and their species composition can vary along environmental gradients between the micro-environments within the ecosystem. This approach will maximise the likelihood that the samples included in the reserve system will protect the full range of genetic variability and successional stages associated with each species, and particularly those species with restricted or disjunct populations.
8. In fragmented landscapes, remnants that contribute to sampling the full range of biodiversity are vital parts of a forest reserve system. The areas should be identified and protected as part of the development of integrated regional conservation strategies

Old-growth Forest Criteria

1. Where old-growth forest is rare or depleted (generally less than 10 per cent of the extant distribution) within a forest ecosystem, all viable examples should be protected, wherever possible. In practice, this would mean that most of the rare or depleted old-growth forest would be protected.
2. For other forest ecosystems, 60 per cent of the old-growth forest identified at the time of assessment would be protected, consistent with a flexible approach where appropriate, increasing to the levels of protection necessary to achieve the following objectives:
 - the representation of old-growth forest across the geographic range of the forest ecosystem;
 - the protection of high quality habitat for species identified under the biodiversity criterion;
 - appropriate reserve design;
 - protection of the largest and least fragmented areas of old-growth;
 - specific community needs for recreation and tourism.

Wilderness Criteria

Ninety per cent, or more if practicable, of the area of high quality wilderness that meets minimum area requirements should be protected in reserves.

RESERVE DESIGN AND MANAGEMENT

The way in which a reserve is designed can influence not only the protection of conservation values, but the efficiency and effectiveness of subsequent management for conservation within the reserve. The criteria which should influence reserve design include:

- boundaries should be set in a landscape context with strong ecological integrity, such as catchments;
- large reserved areas are preferable to small reserved areas, though a range of reserve sizes may be appropriate to adequately sample conservation values;
- boundary-area ratios should be minimised and linear reserves should be avoided where possible except for riverine systems and corridors identified as having significant value for nature conservation;
- reserves should be developed across the major environmental gradients if feasible, but only if these gradients incorporate key conservation attributes which should be incorporated in the CAR system;
- each reserve should contribute to satisfying as many reserve criteria as possible;
- reserve design should aim to minimise the impact of threatening processes, particularly from adjoining areas;
- reserve should be linked through a variety of mechanisms, wherever practicable, across the landscape.