

# Forest Facts

South-East  
Queensland

## No. 3.1

This information is mainly derived from Comprehensive Regional Assessments carried out for the SEQ Regional Forest Agreement.

prepared by

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for

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## Forests of South-East Queensland Conservation Reserves

The National Forest Policy Statement 1992, signed by the Commonwealth and all States and Territories, promised a nature conservation reserve system for Australia's forests based on the principles of comprehensiveness, adequacy and representativeness — the CAR reserve system. The three principles were defined as follows:

- *comprehensiveness* — includes the full range of forest communities recognised by an agreed national scientific classification at appropriate hierarchical levels;
- *adequacy* — the maintenance of the ecological viability and integrity of populations, species and communities;
- *representativeness* — those sample areas of forest that are selected for inclusion in reserves should reasonably reflect the biotic diversity of the communities.

Under the Regional Forest Agreement process, conservation reserve systems are based on the JANIS criteria<sup>1</sup>.

### Objectives

The objectives for biodiversity conservation for forests are defined by JANIS as being:

- to maintain ecological processes and the dynamics of forest ecosystems in their landscape context;
- to maintain viable examples of forest ecosystems throughout their natural ranges;
- to maintain viable populations of native forest species throughout their natural ranges; and
- to maintain the genetic diversity of native forest species.

<sup>1</sup> The reserve criteria were developed by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee (JANIS) and published in 1997 as the *Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and Representative Reserve System for Forests in Australia* (the JANIS criteria).

For the SEQ Regional Forest Agreement (RFA) process, regional ecosystems were used as the surrogate for biodiversity. In the RFA region, 147 regional ecosystems were defined and mapped at a scale of 1:100,000 (See Forest Facts No. 3.2.).

For RFA purposes, regional ecosystems have been classified as rare, vulnerable or endangered according to the following criteria:

- a **rare** ecosystem is one where its current geographic distribution involves a total range of generally less than 10,000 hectares, a total area of generally less than 1000 hectares or patch sizes of generally less than 100 hectares where such patches do not aggregate to significant areas;
- a **vulnerable** ecosystem is one which has been reduced in extent to 30 per cent of its pre-1750 distribution and is subject to threatening processes, or is not depleted but is subject to continuing and significant threatening processes that may reduce its extent;
- an **endangered** ecosystem is one which has been contracted to less than 10 per cent of its former range, reduced to 10 per cent of its former area or where 90 per cent or more of its area is in small patches that are unlikely to persist.

The JANIS criteria relate to the conservation of biodiversity, old growth and wilderness.

### Biodiversity criteria

The criteria for conservation of biodiversity can be summarised as follows:

- 15 per cent of the pre-1750 extent of each forest ecosystem should be reserved with flexibility consideration applied according to regional circumstances;
- 60 per cent of the remaining extent of vulnerable forest ecosystems should be reserved;

- all remaining occurrences of rare and endangered forest ecosystems should be reserved or protected by other means as far as possible;
- reserved areas of each forest ecosystem should be replicated across the geographic range of the ecosystem to decrease the likelihood that chance events such as wildfire or disease will cause decline;
- the reserve system should seek to maximise the area of high quality habitat for all known species wherever practicable, but with particular reference to
  - the special needs of rare, vulnerable and endangered species;
  - special groups of organisms such as species with complex habitat requirements, or migratory or mobile species;
  - areas of high species diversity, natural refugia and centres of endemism; and
  - species whose distribution and habitat requirements are not well correlated with any particular forest ecosystem;
- reserves should be large enough to sustain the viability, quality and integrity of populations;
- the reserve system should 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.

### Old growth

The criteria relating to old growth are as follows:

- reservation of 60 per cent of old growth within each forest ecosystem, or
- where old growth within a forest ecosystem is less than 10 per cent of the current extent of the

ecosystem, all viable examples should be protected.

### Wilderness

The wilderness quality of an area of forest is assessed according to the National Wilderness Inventory (NWI). An NWI value is assigned by adding scores derived from four indicators: remoteness from settlement, remoteness from access, apparent naturalness and biophysical naturalness.

Under the JANIS criterion for wilderness, 90 per cent of the area of high quality wilderness should be reserved. Generally, high quality wilderness will have a minimum NWI of 12 and a minimum area of 8000 hectares.

### The Existing SEQ Reserve System

SEQ has lost 55 to 60 per cent of its forests through clearing. Of the remaining forest, 44 per cent is on freehold land and therefore potentially threatened.

Relative to other regions in Australia, SEQ has a low proportion of its forest in conservation reserves. As shown in Table 1, the percentage of forest reserved in SEQ is less than half that of any other region where an RFA process has been carried out.

The JANIS criteria can not be met in SEQ from public land alone. It can be estimated that meeting the criteria to the extent possible on public land would require the addition of at least 650,000 hectares. Even that addition would still leave Queensland behind all other regions with respect to the proportion of forest reserved.

**Table 1. A Comparison of Reserve Additions Produced or Proposed by RFAs in Six Regions**

Region	Total Area of Forest (ha)	Area of Forest in Existing Conservation Reserves Pre-RFA (ha)	Percentage of Forest in Existing Conservation Reserves Pre-RFA	Area of Forest in Conservation Reserves Post-RFA (ha)	Percentage of Forest in Conservation Reserves Post-RFA
Tasmania	3,250,000	975,710	30	1,371,710	42
East Gippsland	1,044,000	409,500	39	416,258	42
Central Highlands	600,000	180,000	30	297,000	48
NE Victoria <sup>1</sup>	1,250,000	417,000	33	591,000	47
South-West WA	2,380,000	745,500	31	896,385	38
Eastern NSW <sup>2</sup>	3,000,000	2,000,000	66	2,600,000	87
SEQ <sup>3</sup>	2,700,000	358,000	13	858,000	32

<sup>1</sup> The NE Victoria RFA has not been finalised. The figures are based on the published proposal.

<sup>2</sup> RFAs were begun for five areas in NSW but none have been completed. The NSW Government acted unilaterally to declare a number of forest reserves.

<sup>3</sup> The figures for Post-RFA SEQ are based on the addition of 500,000 ha to the reserve system.

## Biodiversity

The representation of regional ecosystems in conservation reserves in SEQ is very poor. Analysis of the reservation status of the 142 regional ecosystems in the RFA region (excluding Blackdown Tableland) provides the following results:

- 24 (17 per cent) have no representation in reserves,
- a further 60 are represented to 5 per cent or less of the pre-1750 extent, meaning that
- 59 per cent have no more than 5 per cent of their pre-1750 extent in reserves,
- only 39 (27 per cent) of the regional ecosystems are reserved to the level of the JANIS criteria.

The situation is equally poor with respect to high quality habitat for fauna. As shown in Table 3, a significant number of threatened fauna species have a minor part of the modelled high-quality habitat reserved. Similarly, many areas with high fauna diversity are not

**Table 3. Current Reservation of High-Quality Habitat for Threatened Fauna in SEQ**

Species	Conservation Status	High-Quality Habitat in Existing Conservation Reserves (%)
Glossy Black-Cockatoo	Vulnerable	14
Red Goshawk	Endangered	23
Plumed Frogmouth	Vulnerable	11
Cascade Treefrog (northern population) <sup>1</sup>	Endangered	14
Fleay's Barred-Frog	Endangered	36
Fleay's Barred-Frog (northern population) <sup>1</sup>	Endangered	8
Southern Platypusfrog	Endangered	10
Southern Dayfrog	Endangered	8
Coxen's Fig-Parrot	Endangered	47
Black-breasted Button-quail	Vulnerable	11

<sup>1</sup> The genetic studies on the Cascade Treefrog (CRA Prohect 1.1.6) showed that the population to the north of Brisbane was genetically different from that in the border ranges area. Hence, the two populations require separate consideration. It has been assumed that Fleay's Barred-frog should be treated similarly in the absence of further information.

included in the existing reserve system. The Comprehensive Regional Assessment (CRA) project EH1.1.2 assessed the fauna diversity of several hundred parcels of land including most State Forests and National Parks. Of the 20 areas with the highest diversity for fauna, only six (30 per cent) are National Parks, the remainder being State Forests subject to logging.

The CRA flora assessment project identified a number of areas that are highly significant for conservation of flora values but currently lie outside the reserve system. They include Kroombit Tops, Bulburin, Eurimbula, State Forest 1344 (Boompa) near Mount Walsh, Wrattens State Forest (SF639), Mapleton State Forest (SF1239), State Forests in the Conondale and D'Aguilar Ranges, Helidon Hills (SF616) and the Main Range. Recent surveys have shown that the number of plant species occurring in Bellthorpe State Forest is essentially as high as that in any State Forest or National Park of a comparable size in the region.

## Old Growth

The CRA old-growth assessment found only 2.7 per cent of the forests of SEQ could be classified as 'old growth' with a further 5.8 per cent as 'likely old growth'. The total area of old growth is therefore less than 10 per cent of the forest. It was not possible to associate the predominantly small patches of old growth with particular forest ecosystem because of the scale of vegetation mapping. The JANIS criterion can be interpreted in the case of SEQ as requiring all viable examples of old growth to be protected.

Significant areas of 'old growth' and 'likely old growth' occur in State Forests in the Main Range, D'Aguilar Range, Conondale Range, Bellthorpe State Forest, Squirrel Creek and Diaper State Forests, Yabba State Forest, Wrattens State Forest, State Forest 1344 (Boompa) and Kroombit Tops.

## Wilderness

The CRA assessment found high-quality wilderness to be greatly depleted in SEQ. Meeting the JANIS criterion of protecting 90 per cent of high-quality wilderness that meets the minimum area requirement means reservation of State Forests at Kroombit Tops, Blackdown Tableland, Bania, Mt Molangul (Many Peaks Range) and State Forest 1344 (Boompa).

## Summary

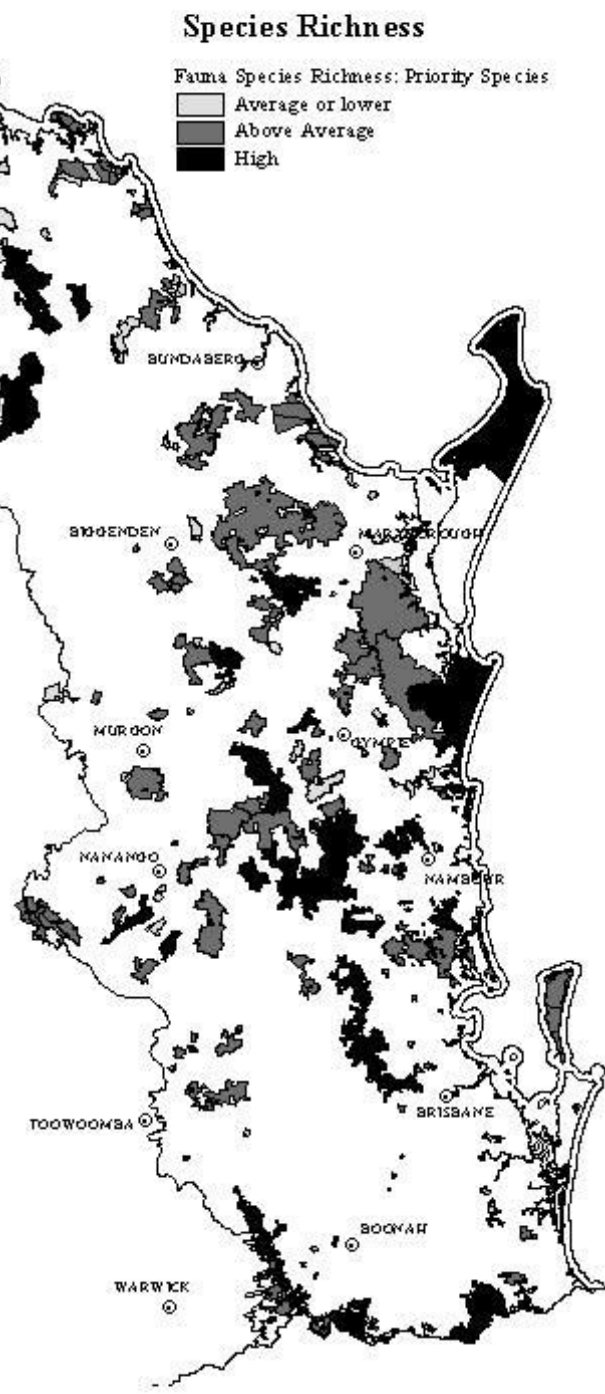
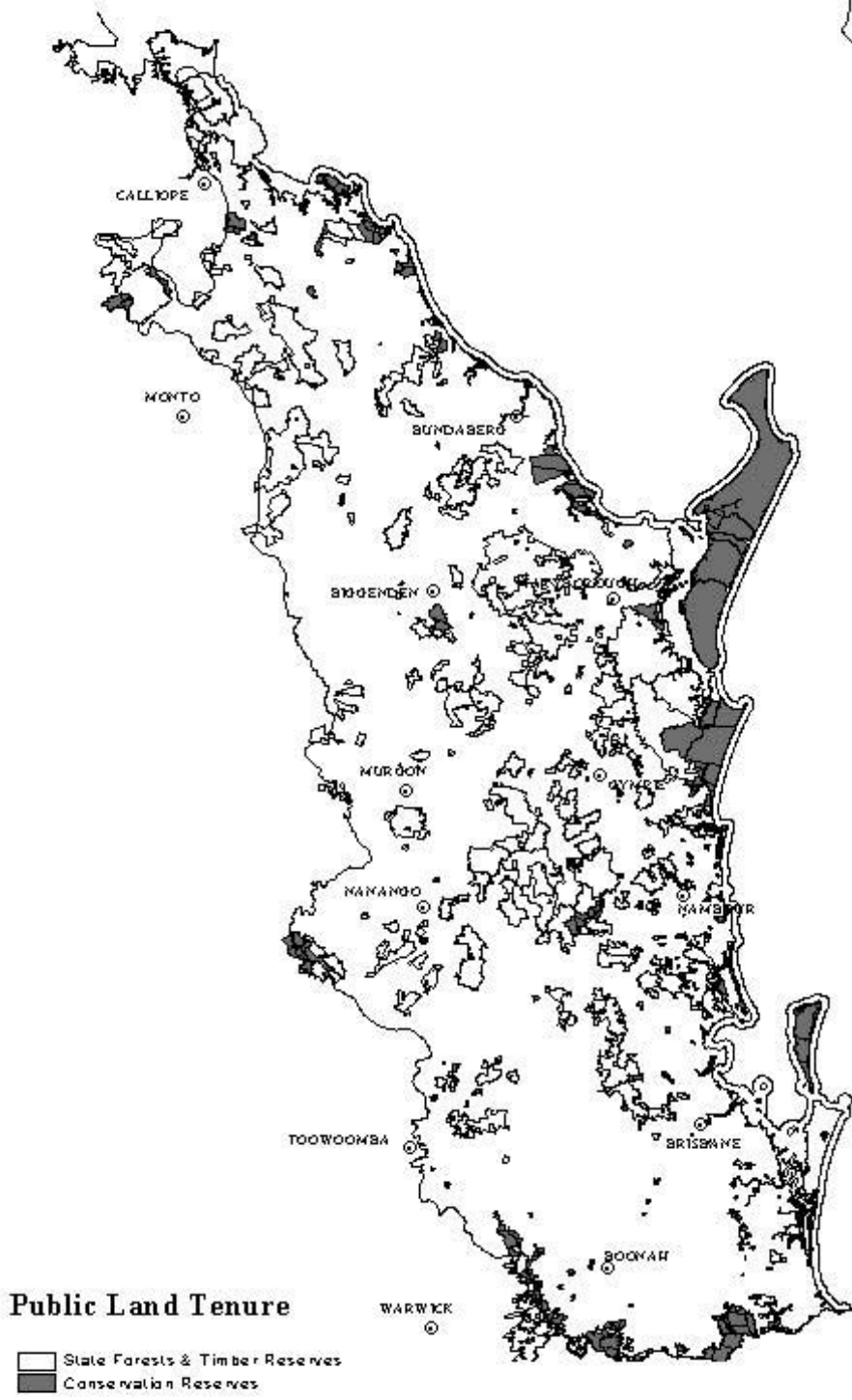
The existing conservation reserve system is grossly inadequate with respect to conserving forest biodiversity. Nearly three-quarters of the forest ecosystems are not represented to the extent required by the nationally agreed reserve criteria, and nearly one-fifth are not represented at all.

Habitat for forest-dependent fauna, including threatened species, is poorly conserved. Many areas of high value for flora lie outside the reserve system as do major areas of high-quality wilderness.

If forest biodiversity, old growth and wilderness in SEQ are to be conserved for future generations, there needs to be a major increase in the reserve system. However, even the inclusion of all publicly owned forest will not meet the nationally agreed reserve criteria. The future of biodiversity in SEQ is grim.

# Current Reservation of Areas of High Fauna Conservation Value

Note: The information in this document was current at May 1999. The situation has changed as a result of the SEQ Forests Agreement, September 1999. For a summary of the outcomes of the Agreement and a map of the new reserves, see the ARCS Web site, [www.rainforest.org.au](http://www.rainforest.org.au).



Priority Species' refers to the 109 species identified by CRA projects as being at greater risk of extinction and in need of conservation priority.