



# State of Australia's forests Conservation



About 16% of Australia's native forests are in formal nature conservation reserves, including nearly three-quarters of all known old-growth forests. The rate of forest clearing for agriculture and urban development is declining, and information on forest dwelling species is increasing.

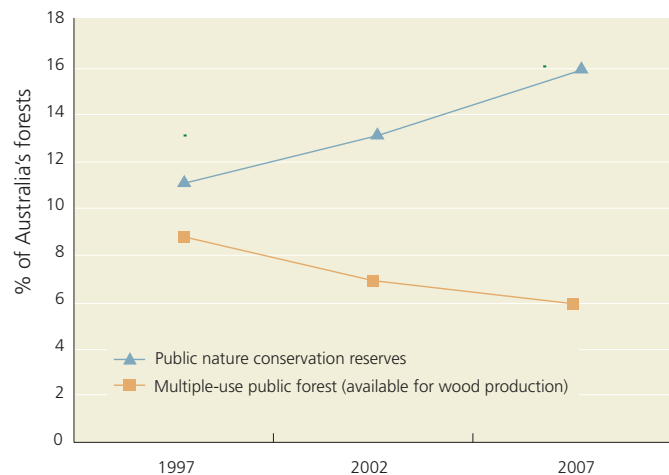
## Forest in conservation reserves

The area of Australia's native forest in formal nature conservation reserves is increasing. In the five years to 2005–06 it grew by about 1.5 million hectares to 23 million hectares, or from 13% to 16% of Australia's total area of native forests. At the same time, the area of multiple-use public forests, in which wood production is often an objective, declined from 11.4 to 9.4 million hectares.

The increase in nature conservation reserves and decrease in multiple-use public forests continue a longer-term trend (see figure).

In the main native-forest timber production areas, the Australian and some state governments have negotiated regional forest agreements, which are 20-year plans for the conservation and sustainable management of Australia's native forests. They include provisions to establish comprehensive, adequate and representative ('CAR') reserve systems. Overall, the aim is to place in nature conservation reserves 15% of the pre-1750

Change in percentage of forest in formal nature conservation reserves on public land and multiple-use public forest available for wood production, 1997 to 2007



Tropical rainforest, World Heritage Area, far north Queensland.

distribution of each forest type, 60% of the existing distribution of each forest type if vulnerable, 60% of existing old-growth forest, 90% or more of high-quality wilderness forests, and all remaining occurrences of rare and endangered forest ecosystems (including rare, old-growth forests).

In the five years to 2005–06, representation in formal nature conservation reserves increased for most forest types. There were notable increases in some, including rainforest (from 33% to 55% of the forest type) and mangroves (from 13% to 18% of the forest type).

The network of formal nature conservation reserves is complemented by informal forest reserves. Informal reserves are areas set aside for conservation purposes in forests used for the production of timber and other forest products, and by areas of private forest managed for conservation objectives. The area of informal forest reserves has been increasing in recent years, although the full extent of the increase has not been reported nationally.

## Old-growth forest

Old-growth forests are ecologically mature forests that have been subjected to little or no timber harvesting, roading or clearing. They usually comprise large overstorey trees, a well-developed understorey of other tree species and shrubs, and ecological features such as dead standing trees, large logs on the forest floor, and many nesting hollows. A number of wildlife species rely on old-growth forests for their long-term survival.

An estimated 5.03 million hectares of Australia's tall, wet forests are old-growth. This is a decline of 200,000 hectares over the



Understorey and forest floor under old-growth forest.

five years to 2005–06, mainly due to the impact of severe fires and re-mapping. About 73% of these old-growth forests are within formal nature conservation reserves.

## Forest loss

The net rate of loss of woody vegetation (mostly forest) between 2000 and 2004 was estimated by the Australian Greenhouse Office to be 260,000 hectares (0.25%) per year, due mainly to clearing for agriculture and urban development. A large part of this loss occurred in Queensland in two forest types: open acacia, and eucalypt medium woodland. Australia's long-term rate of woody vegetation loss is declining in response to changed land management practices and increased legislative controls.

## Forest dwelling species

The number of forest dwelling species – species known to use forests for all or part of their lifecycles – is increasing as ecological studies add to our knowledge. Ecological information is comprehensive for at least 10% of mammal, bird and amphibian species, while partial ecological information is available for about 60% of known forest dwelling vertebrate and vascular plant species. Ecological information is very limited for most forest dwelling invertebrates, fungi, algae and lichens.

A total of 1,287 forest dwelling species are listed as vulnerable, endangered or threatened under the *Environment Protection and Biodiversity Conservation Act 1999 (Cwlth)*. Thirty-nine species or subspecies were removed from the list during the reporting period, and 67 were added. Most additions of forest dwelling species to the list were made based on inherently small population sizes and ongoing impacts on habitat extent and quality, including the impacts of introduced species and unsuitable fire regimes. Most removals were made as a result of improved information.

The number of forest species for which data on genetic variation are available has also increased but is still very small. Several studies have documented genetic variation and distribution patterns within existing populations of a relatively small number of forest dwelling species. Conservation measures focus on increasing connectivity between isolated patches of native vegetation, increasing the area of forest contained in public and private nature conservation reserves, managing threats to native species, and assisting the recovery of threatened species.

Genetic resource conservation plans exist for more than 40 native timber and oil-producing species, a 70% increase on the number reported in 2003. Tree breeding and genetic improvement programs are expanding the scope for conserving native forest genetic resources, including of non-commercial endangered species.

## Further reading

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Echidna (*Tachyglossus aculeatus*) – a common inhabitant of many Australian forests.