

OLD GROWTH FORESTS AND WOODLANDS



CONTEXT

Old growth forests and woodlands (hereafter 'old growth forests') hold significant ecological, cultural, spiritual, aesthetic and scientific values. They are characterised by features that can take decades or centuries to develop. Old growth is a developmental stage that exists within a landscape continuum of forest structure and ecological function across both space and time. Protecting old growth has been an objective of national forest policy since 1992. However, as forests continue to change in response to time, disturbance, land management practices and climate, conservation strategies need to recognise that placing forests into protected area reserves on its own is unlikely to be sufficient to maintain old growth over the long term. Even when protected from harvesting, old growth can be impacted by fire, drought or disease. Planning and management across all tenures, over long timeframes, can help maintain a shifting mosaic of forest growth stages, supporting the continuity and future development of old growth forests under changing climate and disturbance regimes. Conservation of old growth forests will require investment in mapping of extent and condition across all jurisdictions and tenures and a commitment to ongoing monitoring, reporting, research and collaboration with Traditional Custodians, land managers, scientists and communities. A whole-of-landscape and intergenerational approach is needed to provide more effective protection of old growth forest values, including active and adaptive management to foster the old growth forests of the future.

FORESTRY AUSTRALIA ADVOCATES THE FOLLOWING:

- Old growth forests should be defined and identified consistent with the nationally agreed definition provided in Australia's forest glossary. That is: *Ecologically mature forest where the effects of past disturbances are now negligible*, where 'ecologically mature' is forest displaying a range of structural, functional and compositional attributes and ecological processes characteristic of forests in their mature or senescent growth stages and where disturbance may be any natural or human-caused event that damages, destroys or removes significant structural and physical properties of the vegetation community
- Old growth forests should be identified as a whole forest area rather than based on the presence of individual old trees. In other growth stages, individual trees that are very old, giant, or otherwise have outstanding ecological value, warrant specific management consideration
- Old growth forests should be consistently protected from deforestation and land clearing associated with mining, agriculture, urban and other forms of development, and from large scale and intensive timber harvesting
- Old growth forests and surrounding landscapes require active management to maintain and promote old growth forests of the future. Appropriate interventions can protect and enhance old growth values in other growth stages by enhancing structural complexity and ecological function, and support cultural practice and bushfire mitigation.
- Regular, national, cross-tenure assessments of the extent and condition of old growth forests are required to effectively manage their conservation. Ongoing investment in consistent nation-wide data, mapping updates, monitoring and reporting of old growth forests, based on contemporary technology and field verification should be a priority for government working collaboratively with land owners and

managers, conservation organisations and Traditional Custodians.

- Aboriginal and Torres Strait Islander peoples' knowledge, aspirations and management practices should inform planning and management of old growth forests and surrounding landscapes, and Traditional Custodians should be empowered to conduct management practices.

SUPPORTING NOTES

Defining old growth forests determines how they are identified and mapped. Australian forests are diverse, and the characteristics that indicate old growth can vary substantially between forest types. Although canopy tree age has sometimes been used, a single age threshold is not a reliable indicator. The age at which old growth characteristics develop depends on forest type, site productivity and the nature, frequency and intensity of disturbance. Further, some old growth forests contain multiple age classes of trees, including young regeneration.

During Australia's Regional Forest Agreement (RFA) processes of the 1990s, protection of old growth forests on public land was a key focus of the Comprehensive Regional Assessments. A significant body of work went into refining a definition of old growth as *ecologically mature forest where the effects of disturbance are now negligible*. This remains the nationally recognised definition of old growth forest.

In general, old growth forests are comprised of many hollow-bearing trees, structural complexity in the vegetation, biological legacies such as standing dead trees and large logs. They have particular biodiversity value because they host habitat structures that take many decades or centuries to develop. A consistent marker is senescence. Senescent trees are ecologically valuable due to the networks of plant, animal, fungus and microorganism species they host. From a social and cultural perspective, old growth forests provide a link to the past and are valued for their aesthetic, timber and spiritual qualities.

POSITION STATEMENT

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While the ecological concept of old growth is broadly understood, translating it into consistent identification of old growth forest values has historically proven challenging and requires regionally appropriate, measurable criteria. Approaches have included thresholds based on the proportion of mature and senescent canopy identified through aerial photographic interpretation, as well as age-based criteria such as classifying forests above a nominated age. Protection of old growth forests varies depending on land use, tenure and regulatory pathways. Old growth forests are not universally protected from deforestation or disturbance associated with mining, agriculture, infrastructure or urban development. Australia's national environmental law does not recognise old growth forest as a Matter of National Environmental Significance and, at state level, there is variable legislative recognition.

A consistent approach to conservation should focus on the values requiring protection and the likely impacts of proposed activities, rather than treating particular land uses in isolation. Conservation does not mean old growth forests should be completely untouched by people or disturbance. This is particularly important in Australia, where Aboriginal and Torres Strait Islander peoples have cared for and managed forested landscapes for millennia. Cultural burning and other management have been part of the ecological and cultural history of many forests valued as old growth today.

Placing remnant old growth forests into protected reserves has been the dominant contemporary conservation strategy, but this has not ensured their persistence. Severe, landscape scale bushfires are by far the largest cause of old growth forest loss and decline, and Australian forests are increasingly exposed to drought, storms, pests and disease. Even without disturbance, old growth forests are not a static end state.

Conserving old growth forest values at landscape scales will require active management. In some forests, the best outcomes may be through minimal intervention. In others, management practices such as planned fire, weed and pest control, and active management of surrounding forests may be necessary to maintain and enhance ecological processes, accelerate the development of depleted old growth features such as tree hollows, increase resilience to climate change threats and reduce the risk of loss from high-severity disturbance. Management should be evidence-based, monitored and adapted as conditions and knowledge change.

There is a misconception in some public discourse that old growth forests are still widely harvested for timber in

Australia. However, old growth forests on public land in all states and territories, with the exception of Tasmania, are protected from harvesting for commercial timber production. In Tasmania limited timber harvesting occurs in old growth forests. Reliable data to indicate how much timber harvesting may be occurring on private and leasehold lands is lacking.

Because risks of cumulative impacts are increasing with climatic changes, especially the risk of severe bushfires, development activities and intensive timber harvesting should be directed away from forests where they would materially diminish old growth values. There remains a case for very limited, carefully controlled, selective harvesting of some old growth trees where management would demonstrably deliver ecological, cultural or safety outcomes. Decisions are best made at ecologically meaningful local and landscape scales, with the primary objective of maintaining old growth forest values across space and time.

RFAs established nationally agreed minimum benchmark conservation targets for old growth forests in protected area reserves and comprehensive mapping exercises identified the location and extent of old growth forests across public land. Since then, substantial reductions in old growth have been documented in Victoria, almost entirely due to repeated bushfires and Western Australia and Tasmania have reported small areas lost. However, identification, mapping and conservation of old growth forests has not consistently occurred outside of RFA regions or on private land and there is no old growth data for Queensland, South Australia, Northern Territory or the ACT. The 2023 State of the Forests Report notably does not report reductions from the catastrophic 2019–20 Black Summer bushfires affecting NSW and Victoria, indicating the dataset is outdated. These data and reporting limitations mean the extent and condition of old growth forests in Australia remain uncertain.

Professional forest management expertise and empowerment of Traditional Custodians supported by multi-stakeholder engagement and collaborative effort is crucial to supporting old growth forest identification, policy and management practices. Consistent nationwide mapping and ongoing research are needed, together with long-term monitoring and scientific reassessment of reserve effectiveness, species status and forest health. LiDAR, remote sensing and improved spatial analysis, supported by field validation, provides opportunities to improve understanding of old growth extent and condition while maintaining continuity with historical datasets.

Further reading

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