



Conservation and Management of Rainforests

(IFA Forestry Policy Statement No. 1.1)

The Issue

Rainforests have been identified in Australian society as places of exceptional aesthetic, commercial, scientific, and philosophical value. Realising these values concurrently is a challenge for forest and land managers, sometimes creating conflict between stakeholders. The pressures on rainforests are a continuing cause for concern, irrespective of whether rainforests are retained strictly for conservation or are managed for other purposes.

Background

Australian rainforests are distributed over the entire latitudinal range of Australia, yet only occupy about 4.2 million ha or 0.5% of Australia. They include both moist evergreen rainforests of Eastern Australia and deciduous rainforests of Northern Australia. They contain 60% of all Australian plant families and about one third of all mammal and bird species. They are defined as closed (>70 percent projective foliage cover) broad-leaved forest vegetation with a continuous tree canopy of variable height, and with a characteristic diversity of species and life forms, including vines and epiphytes. Rainforest canopy species are able to establish below an undisturbed forest canopy, or in small canopy gaps resulting from locally recurring minor disturbances, such as isolated wind throw or lightning strike, which are part of the rainforest ecosystem. Such species are not dependent on fire for their regeneration.

Rainforests may be classified climatically as cool temperate, temperate, sub-tropical, tropical or monsoonal, by landscape position, as riverine, galleried or littoral, as well as by the dominant species. Because various types of rainforest can inter-grade, and because species identification can be very difficult, the structural classification system developed by Webb (1978) has been adopted widely.

Australian rainforests are an ancient life form that once dominated the Gondwana supercontinent long before the appearance of the eucalypts. Northern Australian rainforests also contain species that arrived from Asia as the continent drifted northwards and the climate became warmer and drier.

Rainforests formed an integral part of the cultures of indigenous peoples throughout the wetter parts of Australia. At the time of European settlement, rainforests were confined to discontinuous stands that represented a small percentage of the natural vegetation of eastern and northern Australia. Subsequently, a large portion of the rainforest in many regions was made available for clearing and the land was used for other purposes. About three quarters of Australia's rainforests have been destroyed since European settlement.

Rainforests were reserved in public tenure at the beginning of the 20th century primarily for commercial timber production, although in time other management objectives including water supply, landscape stability and wildlife conservation became progressively more important. There were considerable areas of tropical rainforest in Queensland and northern NSW that produced tropical timber on a sustainable basis for many years. During the 1980s many States protected remaining rainforests and in 1988 the Commonwealth used its external treaties power to protect nearly 9000 km² of forest in the wet tropics as a World Heritage Area. Limited timber harvesting still occurs on private land and to provide limited quantities of high value specialty timber from public land in Tasmania.

Pressures for the destruction of rainforest (including that on private land) may arise from the requirement of land for infrastructural and residential development; the desire to produce alternative pastoral, agricultural, horticultural or tree crops often irrespective of the long-term sustainability of these enterprises; and indifference to the need for protection of forests from destructive agents such as diseases, pests and repeated fire. While natural disturbances contribute to ecological processes in

rainforests, some disturbances can have an impact on biodiversity conservation and the quantity and quality of water obtained from forested catchments

Pressures for the preservation of rainforest arise from recognition of the many values that rainforests have in today's society. These include the fact that rainforests contain important components of Australia's microbial, plant and animal diversity and they also provide specialty foods and medicinal products. Rainforests also are a key link in science and conservation, including the value associated with the biological functioning of the complex ecological processes within rainforest communities. Rainforests possess inherent aesthetic value, as well as cultural and social significance to the national heritage. They also affect water quality and quantity in forested catchments and have economic values associated with timber harvesting and tourism.

Australia remaining rainforests on public land have now largely been incorporated in conservation reserves. Overall 44% of rainforests are in reserves, 25% are on private land, 19% are in multiple use forests and the balance is on leasehold land. Rainforests are dynamic ecosystems, and the ecotone between rainforest and other vegetation types changes over time in response to the presence or absence of disturbance and climate change. Fragmented areas of rainforest, isolated by cleared or modified landscapes, are particularly susceptible to threats associated with physical and biological environmental pressures and are unlikely to realise their full ecological potential without skilled management.

Policy

The Institute of Foresters of Australia (IFA) recognises that rainforests have a wide range of important biological, cultural and economic values and advocates the protection and sustainable management of these ecosystems for current and future generations.

The IFA supports and encourages:

- The conservation of rainforests through their inclusion in conservation reserves, other protected areas and sustainably managed forests or protected by a conservation covenant.
- Proper management of protected rainforests, including the inventory of biological resources, definition of management strategies and monitoring of changes over time.
- The natural regeneration of rainforest and the afforestation of cleared lands with rainforest species to increase rainforest habitat, particularly where rainforests have previously existed.
- Ongoing research to identify the requirements for maintenance of essential physical and biological processes in rainforests, the cultivation in plantations of high value timber species and the attainment of appropriate balances between sustainable production forestry and reservation.

The IFA considers that:

- The management of rainforests in accordance with the principles of ecological sustainability and clearly identified management objectives will ensure its conservation for future generations.
- The long history of indigenous association with rainforests, including cultural beliefs and traditional uses, is important and should be addressed clearly in management of all rainforests.
- There is an ongoing need for Governments to provide advice and assistance to private landowners on the management and protection of rainforests.
- Sustainable utilisation of rainforest timber, particularly for specialty timber products, is possible if based on scientific principles and conducted in accordance with a Code of Practice.
- Silvicultural treatment provides options for maintaining or manipulating plant and animal species or forest tree associations within the rainforest.
- Rights to harvest should be available for landowners who conduct reforestation with rainforest species.
- Efforts should be made to rehabilitate rainforests that have been degraded by past activities and to minimise the adverse effects of weeds, pests, diseases and fire.

- Mixed forests, which contain elements of rainforest and other vegetation types, have special values but should be considered separately to rainforests when determining land use and forest management strategies.

Further Information

Australian Heritage Commission (1987) *The Rainforest Legacy – Australian National Rainforests Study Vol 1 The Nature, Distribution and Status of rainforest types*. AGPS

Bowman, D.M.J.S (2000) *Australian Rainforests: Islands of Green in a Land of Fire*. Cambridge University Press

National Forest Inventory (2003) *Australia's State of the Forests Report 2003*.

Poore, Duncan (1989) *No Timber Without Trees – Sustainability in the Tropical Forest*. Earthscan Publications

Webb, L.J. (1978). A general classification of Australian rainforests. *Australian Plants* **9**, 349-363.

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