

Executive Summary

The River Red Gum forests and their associated ecosystems are appreciated for their natural, aesthetic, cultural and economic values and uses. However, there are many pressures on these areas. Many River Red Gum forests are severely stressed and there is strong evidence that without improved environmental water flows onto the floodplains, many of these forests may be lost over time.

As many ecosystems in the Investigation area are poorly represented in the conservation reserve system, the Victorian Environmental Assessment Council (VEAC) proposes a substantial increase in the reserve system to improve their protection. In these proposals, VEAC considered the potential impact of climate change and the need to maintain and enhance connectivity across the landscape. However, protection of these ecosystems with conservation land management alone is not enough. Water management is also vital for ensuring the long-term survival of the riverine forests and wetlands, particularly the provision of adequate environmental water flows to allow regular and substantial flooding of the riverine floodplain.

Scope of the Investigation

The Victorian government asked VEAC to:

- identify and evaluate the extent, condition, values, management, resources and uses of riverine red gum forests and associated fauna, wetlands, floodplain ecosystems and vegetation communities; and
- make recommendations relating to the conservation, protection and ecological sustainable use of public land.

In addition, VEAC must take a number of specific matters into consideration (see Chapter 1 for details).

The Investigation began in April 2005 and a Discussion Paper was released for public comment in October 2006. Public comment is sought on this Draft Proposals Paper (released in July 2007), and a Final Report is required to be submitted to the Minister for Water, Environment and Climate Change by 1 February 2008.

Social and economic effects

An independent assessment of the social and economic implications of the draft proposals was commissioned and a summary of the report is included at Appendix 1. The full report is available on VEAC's website (www.veac.vic.gov.au). Chapter 4 includes a discussion of the socio-economic analyses (benefit cost analysis and the regional input output analysis) and the broad social and economic implications of the draft proposals.

Consultation process

VEAC used three primary consultation methods to assist with developing its draft proposals:

- Advisory groups-VEAC established a Community Reference Group, Government Contact Group and Indigenous Steering Committee to provide input and advice. Members of the Community Reference Group include people with backgrounds in recreational uses, industries (timber and grazing), rural communities, local government authorities and other agencies. Members of the Indigenous Steering Committee provided advice on the Indigenous consultation program.

- Formal submissions process-two submission periods have been conducted to date with over 1350 written submissions received in response to the Discussion Paper.
- Direct consultation-VEAC has met with individuals and groups in local communities, community forums, local government authorities, industry bodies, recreation and conservation groups, and government agencies.

Summary of major proposals

The following major proposals are included in this report.

Major new or additional areas of national parks

- Barmah National Park-establishment of a large new national park from state park, state forest and River Murray Reserve in the largest River Red Gum forest along the River Murray.
- Gunbower National Park-establishment of a new national park from state forest and River Murray Reserve on the River Murray near Cohuna.
- Lower Goulburn River National Park-establishment of a new national park mostly from state forest extending from the River Murray, along the Goulburn River to the south of Shepparton and including Kanyapella Basin.
- Warby Range-Ovens River National Park-enlargement and addition to the Warby Range State Park of regional park and state forest along the Ovens River.
- Leaghur-Koorangie National Park-establishment of a new national park in the Loddon and Avoca River floodplains west and south of Kerang, from a number of public land units, the largest of which include Leaghur State Park, Koorangie (The Marshes) Wildlife Reserve and Wandella Flora and Fauna Reserve.
- Murray-Sunset National Park-substantial area addition of state forest (including Wallpolla Island), Mullroo Creek Wildlife Area and River Murray Reserve to this existing national park.
- Terrick Terrick National Park-addition of several grassland nature conservation reserves and other public land units to this national park.

Major new or additional areas of regional or other parks

- Murray River Park-consolidation of the River Murray Reserve and incorporation of regional parks at Echuca, Tocumwal, Cobram, Yarrawonga and Wodonga.
- Four (three new) parks balancing recreation and conservation objectives along the River Murray-Kings Billabong Park incorporating Kings Billabong Wildlife Reserve and Bottle Bend; Murray-Kulkyne Park incorporating the existing park and River Murray Reserve near Colignan; Gadsen Bend Park incorporating state forest and River Murray Reserve south of Robinvale; and Nyah-Vinifera Park incorporating Nyah State Forest and Vinifera forest (River Murray Reserve) downstream of Swan Hill.
- Two new regional parks close to regional centres-Kerang Regional Park incorporating Fosters, Back and Town Swamps and Cemetery Forest Wildlife Reserve; and Shepparton Regional Park adjoining the proposed Lower Goulburn River National Park and incorporating part of the Lower Goulburn State Forest, Shepparton Flora and

Fauna Reserve and Mooroopna Recreation Reserve.

Nature conservation areas

There are 27 new, nine expanded and 13 existing nature conservation reserves in the Investigation area. The majority of the new nature conservation reserves are in the Victorian Riverina bioregion.

State forests

- Gunbower State Forest—incorporates 75 percent of the area in the existing state forest that was previously available for timber harvesting.
- Benwell and Guttram State Forests (northwest of Koondrook)—remain unchanged.

Other areas

There are numerous other areas of public land in the Investigation area. These include 110 natural features reserves and many public land water frontages, three new or modified and 10 existing historic and cultural features reserves, five new or modified community use areas and many water production, service and utilities and earth resources extraction areas.

Changes to land-use categories alone are not sufficient to protect natural and cultural values on public land. VEAC has also proposed changes to public land management in four overarching themes: environmental water, Indigenous involvement, recreation and tourism, and domestic stock grazing.

Major issues

Environmental water

To achieve sufficient flooding and maintain ecological connectivity between the rivers and their floodplains, a volume of water in the order of 4000 gegalitres is required for a floodplain inundation event at least every five years, although VEAC has commissioned further research to refine these figures.

Indigenous involvement in public land management

There is a clear need for resourcing and capacity building to support increased involvement of Traditional Owner groups in public land management and decision-making, including Traditional Owner identification, registration, establishment of internal decision-making processes and informed consent protocols. VEAC proposes co-management of the proposed Barmah National Park and the Nyah-Vinifera Park through Boards of Management with majority Aboriginal membership and a range of other arrangements for shared management including Aboriginal Advisory Committees for west Walpolla Island and Bumbang Island. A change of provisions is required to allow for traditional cultural practice by Traditional Owners across public land through a consent and permit system involving Indigenous Traditional Owners of the specific area.

Recreation and tourism

The sustainable promotion and maintenance of recreation and tourism is an important factor for the River Red Gum Forests Investigation area. VEAC is proposing an increased diversity of camping experiences with more regulated camping in some areas to ensure the sustainability of this immensely popular activity. In addition a ban is proposed

on solid fuel fires and firewood collection on all public land during the high fire danger period and all year in national parks and nature conservation reserves. The development of a River Murray Strategy will provide a long-term framework for sustainable recreation, tourism, commerce and similar uses along the length of the River Murray in Victoria.

Domestic stock grazing

Significant changes are proposed for domestic stock grazing in the Investigation area including the exclusion of broad-acre domestic stock grazing across public land, other than unused roads and a five-year phase out of grazing on public land water frontages.

Summary

Across the Investigation area, the conservation reserve system (land in national parks, nature conservation reserves and some other areas), would increase from 25 percent of public land to 65 percent; or from 5.7 percent of the original extent of River Red Gum forests, wetlands and associated ecosystems to 14.5 percent.

Summary of uses and effects

The independent social and economic assessment found that, overall, VEAC's proposed recommendations would result in a net increase in economic value to Victoria of \$92 million per year excluding the costs of environmental water. Most of the benefits result from non-use values for environmental protection, which are heavily dependent on adequate environmental water. The principal economic costs of the proposed recommendations are also related to environmental water but are difficult to determine largely because of the variable price of water. If the water can be acquired for less than between \$1320 and \$2880 per megalitre, the recommendations would continue to deliver net benefits to Victoria.

The benefits of the proposed recommendations would accrue mostly to people outside the Investigation area, especially in Melbourne, while the costs would be largely borne within the Investigation area particularly in areas near where public land timber harvesting and grazing are focussed: the towns of Cohuna, Koondrook, Nathalia and Picola are likely to be most sensitive to these effects.

Environmental water

The most urgent and serious environmental problem in the Investigation area is the imminent loss or degradation of large areas of wetlands and riverine forests as a result of greatly reduced frequency of flooding. This reduced frequency of flooding is already having substantial negative impacts on natural values (especially biodiversity), Aboriginal associations, recreational values and the sustainability of timber harvesting, and these impacts are likely to become severe without prompt and significant action. Many tens of thousands of hectares of forests and wetlands may be lost without adequate flooding in the near future.

Changes to public land-use categories alone will not be sufficient to address this problem. As a result, VEAC's proposed approach goes beyond such changes to identify the approximate frequency and extent of flooding required to maintain wetlands and riverine forests in a healthy condition and recommends that such flooding be brought

Land use category	Current area (hectares)	Proposed area (hectares)
National park	52,120	151,765
State park	9925	0
Other park (Schedule Three, <i>National Parks Act 1975</i>)	4000	11,105
Regional park (except Murray River Park)	3775	1740
Murray River Park	0	32,030
Nature conservation reserve	11,895	9685
Natural features reserve (River Murray Reserve)	48,665 (16,060)	27,020
Water production	2120	2095
Water supply regulation and drainage	10,545	10,370
Historic and cultural features reserve	705	865
Community use area	2690	2440
State forest	106,910	12,205
Plantation	175	175
Earth resources	125	225
Services and utility	5880	6120
Wildlife co-operative management area	2565	0
Uncategorised public land	6620	875
Total Public Land	268,715	268,715
Freehold	951,380	951,380
Total Extent of Study Area (including all freehold and other land)	1,220,095	1,220,095

about. A key element of this approach is the reinstatement of significant overbank flows from rivers to achieve this flooding and maintain ecological connectivity along rivers and between rivers and their floodplains.

This flooding would require several hundred gigalitres per year. However, for maximum benefit, this water would not be used every year but be accumulated for use every five or so years to mimic a natural flood. This is a significant new approach. It may be that some of the details are not perfect. VEAC's view is that such uncertainty does not constitute a reason not to act. Instead flexibility needs to be built into water management planning to accommodate improved information about the practicalities and consequences of sustainable flood management and provision. The primary and urgent focus of such management needs to be the broader objective of significantly increased overbank flooding to restore and maintain wetland and forest health.

Other issues addressed in draft recommendations on environmental water include inappropriate summer flooding of Barmah forest and deteriorating levee banks.

Indigenous involvement

Council has recommended increased involvement of Indigenous people and Traditional Owners in public land management. A number of draft recommendations have been made to increase Indigenous community capacity and enhance involvement in management, including a proposal for a program that will facilitate Aboriginal Traditional Owner identification, registration, and the establishment of internal decision-making processes and informed consent protocols.

A range of approaches are recommended for increasing Traditional Owner engagement and decision-making within shared management arrangements. The proposed Barmah National Park and Nyah-Vinifera Park are proposed to be co-managed through a new arrangement involving Boards of Management with a majority of members of the relevant Aboriginal traditional owner group or groups. Other arrangements are also proposed including Aboriginal Advisory Committees for the west Walpolla Island area of the Murray-Sunset National Park and for the Bumbang Island Historic and Cultural Features Reserve. A number of flexible arrangements acknowledge

the different aspirations of different Aboriginal Traditional Owner groups at this time and provides for future changes in arrangements for particular areas.

Traditional cultural practice is viewed as one of the key ways that Aboriginal people may keep their culture alive and teach younger generations. VEAC has recommended changes to allow for traditional cultural practice by Traditional Owners across public land in the Investigation area through a consent and permit system involving Indigenous Traditional Owners in decision-making.

Recreation and tourism

Recreation and tourism are significant contributors to the economy of the Investigation area, with around eight million visitor days and \$970 million being spent each year in the region. Most people are drawn to the rivers and streams for recreation activities —notably the Murray and Goulburn Rivers — particularly for low-cost and relatively unregulated camping holidays. Around 0.65 million people a year visit parks in the Investigation area alone, with a strong trend towards increasing numbers.

The increasing popularity of camping in the Investigation area has increased impacts on natural values and altered the overall experience. To accommodate a range of visitor experiences whilst increasing the camping capacity in a sustainable manner, VEAC recommends increased regulated camping in some areas while maintaining dispersed camping in other areas. To further reduce the impacts of camping-related activities, VEAC proposes a ban on solid fuel fires and firewood collection during the designated high fire danger period on all public land in the Investigation area and for the entire year in national parks and nature conservation reserves. This will reduce the likelihood of forest fires and the reduction in firewood collection will improve the habitat for ground dwelling animals.

VEAC's proposed recommendations will reduce the number and area of wetlands available for recreational duck hunting, affecting some 3950 duck hunters who visit these wetlands. A reduction in duck hunters visiting the Investigation area is estimated to lead to a net economic loss of \$0.082 million and 17 (equivalent) direct jobs in the region, particularly in the Kerang area. This is largely due to reduced spending on fuel, accommodation and other services in the region. Recommended improvements to environmental water regimes will enhance many wetlands and therefore improve hunting opportunities for available areas, potentially reducing the estimated economic effects.

Integrated planning along the whole of the River Murray corridor is desirable and should take into account activities on the river itself and adjacent private land, as well as on public land. VEAC has proposed that a co-ordinated River Murray Strategy be undertaken to provide a long-term framework for sustainable recreation, tourism, commerce and other uses.

Biodiversity conservation

The Investigation area follows the riverine corridor running through an essentially semi-arid environment in the northwest to the grasslands of the Victorian Riverina to the fertile mountain valleys in the east. This corridor supports a diverse range of ecosystems and habitats, and many threatened plants and animals. In developing its

recommendations, VEAC has used Ecological Vegetation Classes (EVCs) as surrogates for ecosystems, and the nationally agreed criteria for establishing the comprehensive, adequate and representative reserve system (also known as the 'JANIS criteria'). Protection of threatened EVCs in permanent reserves is a key element of these systems.

VEAC's proposed recommendations more than double the total area of permanent reserves from 69,641 hectares to 178,923 hectares. These proposed reserves satisfy JANIS criteria for the majority of ecosystems and important threatened or depleted EVCs such as Riverine Grassy Woodland, Floodplain Riparian Woodland, Grassy Riverine Forest, Lignum Swampy Woodland, Plains Woodland, Plains Grassland, Semi-arid Chenopod Woodland, Chenopod Mallee and Riverine Chenopod Woodland.

The proposed conservation reserve system provides essential protection for the last Victorian breeding site of the threatened Superb Parrot (in the proposed Barmah National Park) and reduces threats to the endangered Mueller Daisy at two of the most important sites for this species in Victoria.

Consolidation of protected areas into large and well-connected reserves is an important component ensuring long-term viability and allowing for species movement across the landscape. Strong habitat linkages also provide a buffer for the future effects of climate change. Notably, the north-south links in the proposed Warby Range-Ovens River and Lower Goulburn River National Parks and the consolidated Murray River Park will be particularly important habitat corridors or links.

However, environmental flooding is the most critical requirement for biodiversity conservation. Without the implementation of this recommendation public land-use changes will not be sufficient for the long-term sustainability of the River Red Gum forests flood-dependant ecosystems.

Wood products

Timber industry

State forests in the Investigation area are a major source of durable timber products on public land, as well as supporting biodiversity and providing for a broad range of recreational activities. VEAC's draft recommendations significantly reduce the area of state forest—from 106,710 hectares to 12,210 hectares. Commercial timber harvesting in the Investigation area is largely from Barmah, Gunbower and the Lower Goulburn forests. The area available for harvesting (not counting areas in which harvesting is uneconomic, non-viable or prohibited) would reduce from 25,165 to 10,105 hectares, or 40 percent under VEAC's proposed recommendations. This will greatly decrease the volume of wood produced and, consequently, the size of the River Red Gum timber industry.

Estimates of sustainable yield based on new predicted growth rates show that with frequent flooding and the current available area, the sustainable harvest volume is likely to be reduced to 62 percent of the current harvest volume. That is, without any changes as a result of VEAC's recommendations, the sustainable harvest is around 38 percent of current harvest volumes (details provided in Appendix 7).

Countering this loss somewhat, VEAC's environmental water recommendations will increase forest flooding and thereby increase current timber growth rates as River Red Gum forest health depends on water supplied by regular winter-spring flooding. The proposed reduced state forest area and significantly greater floodplain inundation are estimated to result in a sustainable harvest equivalent to 36 percent of the current harvest volumes.

In financial terms, these changes would reduce the net economic contribution of the timber industry to the Victorian economy from \$2.5 million per annum currently to \$0.5 million per annum. Employment in the industry would reduce from around 96 direct jobs currently to around 19 direct jobs (full-time equivalents) in the Investigation area.

Commercial and domestic firewood

The percentage reductions in timber availability (above) resulting from VEAC's recommendations are likely to apply with reasonable reliability to firewood, especially waste timber following commercial sawlog harvesting activities and thinning operations.

Domestic firewood is largely obtained from fallen wood, and is largely constrained by accessibility—it is generally not cost-effective to travel more than about 20 kilometres for domestic firewood. Local firewood strategies such as those implemented following acceptance of the ECC Box-Ironbark Forests and Woodlands Investigation recommendations may be appropriate in parts of the River Red Gum Forests Investigation area to guide the transition to new domestic firewood arrangements. To cater for areas with few affordable alternatives (especially reticulated gas) and where little state forest remains, zones for domestic firewood collection are recommended in the Murray River Park in the Mildura, Robinvale and possibly Nathalia areas. State forests near Koondrook will also remain available for domestic firewood collection.

Domestic stock grazing

Council has considered a range of information and opinions in forming the view that while domestic stock grazing can be an effective tool to address specific land management problems at particular locations and times, scientific evidence indicates that in general it adversely affects natural values especially biodiversity, water quality and soil condition. Accordingly, VEAC is recommending that domestic stock grazing be generally excluded from public land in the Investigation area with the exception of approximately 4600 hectares of licensed unused road reserves. The draft recommendations allow for grazing as a targeted management tool, to address particular environmental or management problems, such as controlling particular weed infestations or maintaining a specific grassy habitat structure. Council acknowledges that excluding stock grazing from public land water frontages is likely to require considerable fencing and off-stream water point installation, and therefore a five-year phase-out period is proposed for removal of grazing from these areas.

These proposals are a significant shift in public land management priorities and will see the cessation of some 1725 licences over an area of approximately 84,900 hectares. This includes some 12,100 hectares of public

land water frontages (1260 licences) subject to the five-year phase-out and broad-acre grazing over about 43,000 hectares which is recommended to cease immediately. The latter includes 29,600 hectares of Barmah forest, which provides an estimated economic contribution of \$250,000, and 2 full-time equivalent jobs, for 38 permit holders. It is estimated the use of public land in the entire Investigation area for domestic stock grazing has an economic contribution of approximately \$1.25 million and supports 14 to 17 full-time equivalent jobs.

Submissions on the Draft Proposals Paper

Specific proposals are made in this Draft Proposals Paper for public land across the River Red Gum Forests Investigation area, and all stakeholders are encouraged to make submissions to VEAC during the public comment period. These submissions are a key part of the consultation process and will be considered in detail when VEAC is developing its Final Report for submission to the Minister for Water, Environment and Climate Change.

The closing date for written submissions is Monday, 10 September 2007.