Victorian Environmental Assessment Council

Cover Sheet

Submission to River Red Gum Forests Investigation Draft Proposals Paper
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There is no set structure for submissions. They may range from a short letter outlining your views on a particular recommendation or topic to a much more substantial document covering a range of issues.
Submissions can be made in electronic, audio or printed format. The electronic version should be a Microsoft Word document (.doc) or other text document (.txt, .rtf).
All tracking changes, editing marks, hidden text and internal links should be removed from submissions before sending them to the Council. Large logos, decorative graphics or photos should be removed or kept to a minimum in order to keep file sizes as small as possible.

Please complete and submit this form with your electronic or hard copy submission to:

Director
Victorian Environmental Assessment Council
Level 6/8 Nicholson Street
East Melbourne Vic 3004
By fax to: (03) 9637 8024
By email: veac@dse.vic.gov.au

Name: Barrie Dexter
Organisation: Self
Address: 4 Tyalla Court, Mulgrave. Victoria. 3170
Phone number: [03]95600945 Email: dexter4t@optusnet.com.au

If your submission is addressing a recommendation please indicate the specific recommendation.

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* Submissions will be placed on the Victorian Environmental Assessment's website after receipt unless marked confidential.
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Submission to River Red Gum Forest Investigation Draft proposals paper by

Barrie Dexter Tuesday, October 02, 2007.

ABSTRACT

This submission, in accordance with VEAC"s *"How to make a submission"* outlines my research on VEAC's Draft Proposals Paper on the River Red Gum Forests Investigation.

Over the long term there is demonstrable evidence that stewardship of the natural resources in the area under investigation has ensured their continuance although there are warning signs that management resources and water issues must be addressed without further delay to conserve their biodiversity, vitality and ongoing contribution to human well being.

Attention is drawn to changed land use categories and future uses of public land, problems with data, unresolved issues and whether the draft proposals are in the best interests of the whole community and essential to meet the objectives.

It is concluded that VEAC has failed to demonstrate why the Land Conservation Council's (LCC) 1986 recommendations approved by the Parliament have been "inadequate" and why protection and ecologically sustainable management can only be accommodated in National Parks and Reserves where sustainable productive use is either severely restricted or banned.

However, VEAC has, of itself, concluded that their draft proposals are severely detrimental to human well being.

These matters should be rectified, including a further round of public consultation with the benefit of crucial missing data and reports before the draft proposals are progressed to final recommendations to the Minister for Environment and Climate Change.

Alternatively, the investigation could be terminated because VEAC has not complied with its Act, Terms of Reference issued by the Minister nor exercised proper diligence over the social and economic assessment underpinning the Draft Proposals.

BACKGROUND

VEAC's principal objective under its Act (VEAC Act 2001) is to *"provide independent and strategic advice to the Government of Victoria on matters relating to the protection and ecologically sustainable management of the environment and natural resources of public land".*

The River Red Gum Forests within the investigation area make a good case study. They have provided for humanity for thousands of years.

For example: The Bangerang Cultural Centre Co-operative Ltd in Shepparton (originally known as the Aboriginal Keeping Place), the first Aboriginal managed museum in Victoria, interprets and curates cultural items from the local area, (and other parts of Australia) where the Bangerang tribe consisted of ten different clan groups living in the region between the Murray and Goulburn Rivers. These groups were highly interactive with and interdependent on the environment. Their lifestyle was dictated by floodplain flooding and drying cycles and they extensively practised what we now call "sustainable multiple-use management of the natural resources" – regular fire stick farming, elaborate systems of fish traps and used the forest and wetlands for a variety of food and plant and wood-based products *[Pers. Comm. John (Sandy) Atkinson AM Bangerang Elder].* A similar situation occurred with other Aboriginal tribes in the investigation area.

To consider the RRG Investigation in a contemporary context I have drawn from Macquarie Dictionary the definition for environmental management -

"The management of the environment, particularly in relation to the often conflicting requirements of natural and human-made resources, so that the maximum uses of the land can be achieved without causing environmental destruction".

Following the Land Conservation Council's Murray Valley Study Area recommendations (1986) approved by the Parliament, the Victorian Government has documented formal policy objectives and rationale with respect to the Central Murray red gum forests. There are four documents which

describe the riverain red gum forests in the VEAC study area. These address their resources, uses and values and set out the objectives for managing the Barmah State Forest, Barmah State Park and the Gunbower Forest. A fifth document sets down the water management strategy for the Barmah – Millewa Forest agreed to by the Murray Darling Basin Commission in March 2000. The documents are:

- *Barmah State Park and Barmah State Forest Management Plan*, Department of Conservation and Environment – Victoria (1992)
- *Statement of Resources, Uses and Values for the Mid Murray Forest Management Area*. Cuddy, J. et al (1993), Department of Conservation and Natural Resources, Victoria (April 1993).
- *Forest Management Plan for the Mid-Murray Forest Management Area*. Department of Natural Resources and Environment, (April 2002).
- *Forest Management Plan for the floodplain State forests of the Mildura Forest Management Area,* Department of Sustainability & Environment (2004).
- *The Barmah-Millewa Forest Water Management Strategy,* Murray-Darling Basin Commission (June 2000).

Natural resources of the Central Murray red gum forests

The resources of the mid-Murray river red gum forests include:

- **Wetlands** of international significance encompassing a range of habitats and species, including migratory birds.
- **Flora** – over 550 species – grassland, woodland and wetland vegetation. Red gum is itself unique by world standards due to its special silvicultural characteristics.
- **Fauna** – habitat for many species including 31 mammals, 219 birds, 16 reptiles, 8 amphibians and several species of fish.
- **Landscape** – encompasses woodland forest, grassy plains, lagoons, lakes, tall open forest and the Murray River.
- **Cultural heritage** – a wealth of Aboriginal and European culture and history.
- **Commercial uses** – products include sawlogs, sleepers, piles, poles, fencing and landscape material, firewood and charcoal, specialty wood for fine furniture and wood turning. Grasslands provide agistment for cattle and honey is produced from red gum and box trees.

- **Tourism and Recreation** – hundreds of thousands of visitor days per year with over 100,000 visitors attracted by camping, bushwalking, swimming, fishing, boating, hunting, photography, pleasure driving, natural history and Indigenous and European heritage values. The tourist potential of the flooded forest "in the wet" is virtually untapped.
- **Education** – the forests are major resource for learning of Aboriginal and European history, culture and natural history.
- **National Heritage Values** – the central Murray forests represent a significant component of Australia's history for over 180 years and can continue to do so as a working production forest.

The current formal management objectives of the different public land tenures that comprise the Barmah Forest illustrate the extent to which public policy has allowed the wide range of forest resources, values, and uses to co-exist.

The management objectives of the **Barmah State Park** are:

- to provide opportunities for recreation and education associated with the enjoyment and understanding of natural environments.
- to conserve and protect natural ecosystems.
- to function with State Forest as a major part of flood plain and river management including a natural flood mitigation system of the Murray River.

The management objectives of **Reference Areas** are:

- to maintain natural ecosystems as a reference to which those concerned with studying land for particular comparative purposes may be permitted to refer, especially when attempting to solve problems arising from the use of land.
- to prohibit activities (such as grazing, exploration for minerals and gold, mining, logging and beekeeping) that conflict with the purposes of a reference area.

The management objectives of the **Barmah State Forest and Gunbower State Forest** are:

- to produce hardwood timber for a wide range of specialist uses including charcoal and the long term sequestration of carbon.
- to conserve native plants and animals, and provide opportunities for the development of wildlife conservation techniques.
- to provide opportunities for open-space recreation and education.

- to produce honey, forage, sand and other forest produce such as charcoal.
- to protect values in identified nature conservation and historic sites by implementation of management prescriptions.
- to function with State Park as a major part of flood plain and river management including a natural flood mitigation system of the Murray River.

Despite the on-going co-existence of various forest uses and values, the key government documents listed above also identify numerous factors which must be addressed so as to prevent further deterioration of environmental quality and loss of productive capacity of the red gum forests.

The most critical need is the implementation of a **river and forest water management plan/strategy** which satisfies the key biological requirements of flood and non-flood dependent flora and fauna, and restores river red gum vitality towards pre-river regulation levels.

DRAFT PROPOSALS PAPER FOR PUBLIC COMMENT, JULY 2007.

To gain a full understanding of VEAC's proposals it is necessary to be fully conversant with the Discussion Paper released in October 2006, public submissions to the Discussion Paper and the detail of the draft proposals.

For people to judge the worth of the data and gain a thorough understanding of the wider ramifications of the issues it is necessary to read the supporting documentation and the public submissions. Round 1 & 2 submissions were not posted on the VEAC website. Round 2 public submissions were belatedly (August 2007) made available at VEAC's office in East Melbourne and only 8 selected locations: Gannawarra Shire Council – Kerang; Wodonga Library – Wodonga; Moira Shire Council – Cobram; Mildura Rural City Council – Mildura; Swan Hill Library – Swan Hill; Greater Shepparton Library – Shepparton; Wangaratta Library – Wangaratta; and Shire of Campaspe – Echuca.

Regrettably, there are still a number of key reports, commissioned by VEAC in preparation, with no time frame given for their public availability. Without these reports it is not possible to judge the full impact of the proposals on society.

VEAC identified four key issues.

1. ENVIRONMENTAL WATER

VEAC identifies:
"the foremost environmental threat to the floodplain ecosystems of the investigation area is not merely lack of water volume as such but insufficient overbank flooding … and estimates that 4,000 gigalitres … saved up for five years … is required to achieve significant overbank flood events with a high degree of floodplain connectivity along the length of the Murray".

- There is no evidence that this amount of water can be voluntarily purchased for the environment and the cost, some $10 - $12 billion could be much more effectively spent.
- Obtaining such a huge environmental entitlement entails important social change with Murray-Darling Basin-wide implications. This should have been a key part of the social and economic assessment.
- Accumulating 800 GL each year for five years in sufficiently discrete parcels for effective and efficient distribution and use entails huge penalties for other water uses and users, storage space and delivery to the floodplains via overbank flows.
- The Murray River is not a Victorian river nor is any part of within-bank flows in Victoria. Any analysis of environmental water allocations and their effect on storage management and irrigation and domestic flows must be considered in a Murray-Darling Basin-wide context by the Murray-Darling Basin Commission.
- The Stage I CSIRO report appears to ignore these matters and the 50 year history of research work in the Barmah-Millewa Forest on floodplain vegetation and water needs.
- The MDBC is currently investigating (among other things) issues of the Barmah Choke and more effective and efficient watering of the Barmah-Millewa Forest including a within-bank low to moderate Murray River flows. VEAC appears to have ignored these studies and rejected information previously provided including a direct briefing to Councillors and VEAC staff.

Media reports record that Premier Brumby would reject VEAC's draft water proposals if they were included in the final report.

2. 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.

Various groups consider that conferring National Park status on public land is a prerequisite for meeting the aspirations of indigenous people. This is not universally accepted by indigenous people. There are much wider opportunities for their participation in planning and implementing sustainable multiple-use management of the natural resources compared with confining activities to National Parks, Other Parks and Reserves.

Previous cross-cultural awareness programs implemented in 1985 through the Dharnya Centre in the Barmah Forest were effectively disbanded some years ago and the Centre has had to close because of joint management neglect.

3. 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.

A careful reading of VEAC's draft proposals and information sharing at public meetings reveals that there will be a significant reduction in some recreational pursuits; particularly recreational duck hunting, distribution and number of campsites and the usual activates that are banned in National Parks.

It is acknowledged that pressure must come off some sites at peak visitor times but it is generally the level of ranger resources and land category that will constrain recreational pursuits.

There is strong evidence of "buyer beware" and "read the fine print" when evaluating VEAC's proposals. For example, the Victorian National Parks Association's advertisement in the Riverine Herald, Friday August 31st, 2007 – Page 13 under a heading of "FACTS ABOUT PROPOSED RIVER RED GUM PARKS" lists 9 activities viz: camping, horseriding, fishing, 4-wheel driving, trail bikes, boating, bushwalking, domestic firewood collection and fees for camping. In the preamble VNPA states "The fact is all these activities will be allowed in Red Gum National Parks … Remember some of Red gum forests will be Regional Parks where campfires, camping with dogs and wood collection for camp fires are allowed".

VEAC's general recommendations for National Parks stipulated:
General recommendations for national parks

A *That national parks shown on Map A (numbered A1 to A9) and described below:*
(a) be used to:

i. *conserve and protect biodiversity, natural landscapes and natural processes*
ii. *protect significant cultural and historic sites and places, including Aboriginal cultural sites and places*
iii. *provide opportunities for recreation and education associated with the enjoyment, and understanding of natural environments and cultural heritage; and that:*

(b) the following activities generally be ***permitted****:*

i. *bushwalking, nature observation, heritage appreciation, picnicking*

ii. *camping in designated areas, and dispersed camping in accordance with Recommendation R28-R29 if specified where this will not adversely affect biodiversity values or water quality*
iii. *car touring, including four wheel driving, on formed roads and tracks*
iv. *mountain bike and trailbike riding on formed roads and tracks*
v. *horseriding on formed roads and tracks*
vi. *apiculture at existing licensed sites, subject to the outcome of research into the ecological impacts of this industry, and park management requirements*
vii. *research, subject to permit and that:*

*(c) the following activities **not** be **permitted**:*
i. harvesting of forest products (see note 1 below)
ii. grazing by domestic stock (see note 2 below)
iii. hunting and use of firearms (see note 3 below)
iv. exploration and mining, other than continuation of operations within existing permits and licences, as approved
v. dogwalking and camping with dogs
vi. overnight camping with horses
vii. solid fuel at any time of year

(d) unused road reserves be added to adjoining parks where appropriate, and

(e) be reserved under Schedule 2 of the National Parks Act 1975.

Notes:
1. Ecological thinning may be permitted where required.
2. Short-term grazing may be contracted for ecological or management purposes such as targeted weed control.
3. Hunting and use of firearms authorised as part of a pest animal control program and/or for traditional Aboriginal cultural purposes in accordance with Recommendation R26-R27.
4. Practical access should continue to be provided to existing private land holdings surrounded by a national park.
5. Implementation of recommendations and land management should allow flexibility for minor boundary adjustments.

Although VNPA claim there will be NO change to current rules for all these activities except camping – combination of formal sites and dispersed camping and domestic firewood – specified collection zones; invariably, once a State Forest is declared a National Park many formed roads and tracks are closed to the public, poorly maintained and general access reduced. The experience is that public access is greatly reduced.

Such management action has greatly reduced fire prevention and fire suppression activities in many of Victoria's National Parks and led to millions of hectares being destroyed by wildfire (2002-2003, 2005, 2006-2007).

4. 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.

***R33** That: cultivation, cropping and domestic stock grazing not be permitted on public land in the River Red Gum Forests Investigation area, except:*
(a) in areas proposed to remain as public land water frontages (natural features reserves) where grazing be subject to a phase out to be completed within five years of government response to these recommendations; and
(b) in areas proposed to remain as unused roads (services and utilities–transport (roads) where an unused road license is current).

Notes:
1. This recommendation is consistent with recommendations for relevant public land categories (notably national parks, the Murray River Park, nature conservation reserves and state forests) which also specifically exclude domestic stock grazing, and which would be effective immediately from the time of establishment of new or ongoing areas in these categories.
2. Land managers may utilise stock grazing under contract for ecological purposes or for short-term management purposes such as targeted weed control.
3. Continuation of grazing on unused roads should not be interpreted as a step towards their disposal; in general, unused roads should stay in public ownership.

Then VEAC reports that:
"This proposal to largely exclude grazing on public land is a significant change in emphasis from most existing management of domestic stock grazing on public land.

… although a growing body of research demonstrates that stock grazing usually has significant impacts on ecological communities which have not evolved under such grazing regimes, demonstrating specific environmental damage (or sustainability) at individual locations is costly, time consuming and is consequently rarely done.

This approach differs from the intent of earlier government-approved recommendations of the Land *Conservation* Council... *recommended that grazing continue on stream frontages where it does not conflict with several other uses, notably conservation of native flora and fauna, and restoration of indigenous vegetation.*

VEAC is explicitly recommending in this Investigation that grazing generally not be permitted other than to address a particular environmental or management problem, such as controlling particular weed infestations or maintaining a specific grassy habitat structure. It is Council's expectation that this purpose will arise Infrequently…

VEAC is also recommending two other limited exceptions to the immediate removal of grazing.

"A five year phase-out of stream frontage licences, to allow time for the administration of the change and for fencing and alternative water sources to be established where required. There are also a large number of unused road licences, most of which are not completely fenced if at all.

Because it would currently be impractical to manage these areas separately from the agricultural land in which they are embedded VEAC is recommending that grazing continue to be permitted in these areas."

VEAC previously reported, Discussion Paper page 84/85
"Cattle are also attracted to Moira Grass, in preference to any other fodder. This species grows in flood-prone grasslands and breaks a period of winter dormancy growing prolifically during spring flooding. The combined effects of altered water regimes and the preference of cattle grazing have substantially reduced the distribution of Moira Grass."

No reference is provided for this major assertion directly linking water regimes and grazing. It is a prime example of devaluing the Discussion Paper with such sweeping unsubstantiated statements.

Further, *"Domestic stock grazing also limits the recruitment of red gum populations, with the effect decreasing as stocking rates decline (Jansen and Robertson 2005).* This effect is exacerbated by an increased abundance of seed-eating ants at sites grazed by cattle (Meeson et al 2002)".

No reference/description is made to the type of site, the intensity of grazing, the origin and level of seed supply and a host of other factors that come into play in such circumstances. No reference is made to grazing of cattle aiding the regeneration of red gums (Dexter 1970).

The intensity of cattle grazing in Barmah Forest does not, for practical purposes of regenerating river red gum on final-cut areas, limit on effective stocking of regeneration. NOR, for that matter, colonisation of open Moira Grass plains with red gum – a significant problem exacerbated by changed river flows and forest/wetland flood regimes.

Compare the statement in the Discussion Paper attributed to Jansen and Robertson (2005) with selected extracts from their source paper published in Proceedings of the Royal Society of Victoria, Volume 117, No 1. 30 June 2005 pages 85 – 95.
"All forest sites were classified as low grazing (<5 DSE [dry sheep equivalent])/ha/annum. The study region comprised a 620 kms section between Gundagai and Hay in the middle reaches of the Murrumbidgee River and additional sites in Millewa Forest near Mathoura."

Jansen and Robertson report:
… "while few differences were found between ungrazed and low grazed sites this is not surprising given the small number of ungrazed sites and their prior history of grazing (all "un-grazed" sites had been grazed in the past). Thus while there was little clear evidence of significant impacts of grazing on biodiversity at low stocking rates (<5 DSE/ha/annum) this is most likely due to a lack of reference sites in near pristine condition.

While grazing impacts on riparian condition and biodiversity were clearly evident it is difficult to separate out the effects of past grazing history and associated land management practices from current grazing intensity...

While grazing by domestic stock has clearly had major impacts on the condition and biodiversity of riparian zones another major factor to consider is changed flooding regimes …

These changes are likely to have particularly influenced wetlands, understorey plants and recruitment of red gums which are dependent on flooding (e.g. Dexter 1978; Young et al 2001). These alterations to flows are likely to have exacerbated the impacts of grazing (e.g. Meeson et al 2002)".

Clearly some statements in the Discussion Paper use the reference with a biased inference against regulated cattle grazing as applied in the main forest areas.

It is certainly a complex subject and the Discussion Paper does say "Alternatively, domestic stock grazing can positively affect the environment if applied in a strategic manner" and goes on to refer to "limited studies that have been undertaken to determine the effectiveness of different grazing strategies for maintaining and enhancing biodiversity" suggest that intermittent grazing provides the best biodiversity outcomes by creating heterogeneity through both time and space (Dorrough et al 2004).

Again there is no clue whether these studies are directly applicable to the forest.

Amy Jansen summed up the situation nicely when presenting her paper to the Royal Society Meeting on Barmah-Millewa Forest – 18/19 June 2005.

- *We don't know what it was like before – confounding factors of fire, flood and native fauna, seasonal condition and pre and post European land management practice;*
- *We can't go back to what it was;*
- *Under circumstances of low stockings it is very hard to say exactly what specific damage grazing does – confounding factors of stocking rates/grazing intensity – periodic/year round, flood regimes, seasonal conditions, combine to influence effects.*

MAJOR ISSUES IDENTIFIED BY THE COMMUNITY.

1. PERCEPTIONS OF INDEPENDENCE & CREDIBILITY

The VEAC Act of Parliament requires Council to *"carry out investigations that are requested by the Minister …" with the objective to "provide independent and strategic advice to the Government of Victoria …"*

– ALP – Victoria's National Parks and Biodiversity Policy – 2006 Victorian election. The Premier and Minister for the Environment pledged – para 6, page 9; *"Create new Red Gum National and Forest Parks if recommended by VEAC".*

– This is reinforced by a report (Kristin Favaloro) in the Shepparton News, Monday 20th November 2006, page 4; *"Leading conservation groups have cautiously welcomed a commitment to create new National Parks along the Murray River.*

The commitment by the Victorian Government was made after the Victorian Environment Assessment Council conducted an independent investigation of river red gum public land in Northern Victoria."
"This announcement strengthens the ALP's (Australian Labor Party) commitment to protecting public red gum forests, wetlands and rivers for future generation", Victorian National Parks Association spokesman Nick Roberts said.

There is nothing in the investigation's terms of reference that compels VEAC to *"… investigate the creation of a chain of multiple-use parks on public land along the Murray River…",* rather, the emphasis is *"make recommendations relating to the conservation, protection and ecological sustainable use of public land as specified in Section 18 of the VEAC Act 2001".*

2. BIODIVERSITY CONSERVATION - ECOLOGICAL VEGETATION CLASSES [EVCs]

Both the National Reserve System and the Regional Forest Agreement processes incorporate the need for a **comprehensive, adequate** and **representative** (CAR) conservation reserve system.

CAR criteria describe biodiversity at the level of "ecosystems". In Victoria, EVCs are being used as ecosystem surrogates to measure comprehensiveness, adequacy and representativeness, being the principal unit for describing/categorizing vegetation and subsequent mapping and application in land use planning and management.

"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."

VEAC's Discussion Paper records *"169 EVCs".*
"169 EVCs have been identified in the river red gum study area …
The vast majority can be defined within 34 EVCs … covering the forests, woodlands and wetlands along the floodplain."

Mr Doug Frood's comments on vegetation communities when presenting to the Royal Society Meeting on the Barmah-Millewa Forest – The University of Melbourne 18/19 June 2005, included:

- Most EVCs are in a reasonably narrow elevation range within the forest;
- Flooding frequency and depth – free drainage versus partial drainage (final water removed by evaporation) influence EVCs;
- Opportunistic flood plain vegetation;
- EVCs can be overlaid. Azolla can be considered as an EVC in its own right
- EVCs competing for some space or grading into each other – fluctuating boundaries based on hydrological regimes.

Mr Frood's work is cited in Mr James A Fitzsimons' paper – *Public Land Use Planning Using Bioregions and Other Attributes Determining the Study Area of the VEAC River Red Gum Investigation – in Proceedings of the Royal Society of Victoria, Volume 118, No 1, 31 October 2006.*
Fitzsimons reports: *"Ecological Vegetation Classes are a type of native vegetation classification described through an inferred fidelity to particular environmental attributes …*
Modelling of the predicted pre 1750 distribution of EVCs allows for comparison of past and current extents and thus determination of levels of depletion prior to European settlement. Based on this, priority setting for those EVCs most in need of increased protection can occur.

The EVCs reported by Frood and developed by DSE, 169 (Appendix 6) and defined within 34 main EVCs (Appendix 7) need accreditation from a recognised independent Botanical Authority.

Frood gathered his data over several years and demonstrated the highly dynamic nature of the floodplain at a micro-scale. As a consequence of variable flooding this makes such a fine classification impractical as the boundaries respond to the vagaries of the flood regime. Likewise, of the 34 main EVCs described in Appendix 7 some show inconsistency in classification and some are identified for further investigation.

The arbitrary use of EVCs is exemplified in Overton et al[1] report prepared for VEAC.
The Victorian Department of Sustainability and Environment has mapped the floodplain vegetation using Ecological Vegetation Communities (EVC) mapping units. This data was provided by VEAC for this study. The EVC mapping of existing floodplain vegetation is complex and includes a number of vegetation community classes. It was decided to reduce these classes to simplify the analysis of flood regime. The first stage of this was to use the simplified classes provided by VEAC and to then further simplify them into the classes in the table below.

Area (ha) of each vegetation class simplified from the Victorian EVC mapping for the River Murray floodplain.

Vegetation Class	Area (ha)	% of area
water	8590	4
wetlands	23133	11
aquatic	2356	1
forest	22828	11
woodlands	28913	14
woodlands/lignum	17682	8
lignum	3160	1
floodplain forest	14169	7
floodplain woodlands	78741	37
grass	595	<1
chenopods	9322	4
saline	1231	1
sand	43	<1
non-riparian	1079	1

Surface hydrology data was provided by the Murray-Darling Basin Commission and consisted of 'modelled' daily flow data from the MSM BigMOD programme and actual recorded data at a number of gauging stations. This project was particularly interested in the flows over the last 50 years. Hydrology data for natural flows was also provided by the MDBC as 'modelled' daily flow data under natural conditions which consists of the removal of storages and infrastructure with no water extractions. The extent of the natural floodplain would have been reduced by levees and other barriers but it is the flow in the river under natural conditions that we are using and not the natural flood extent.

Neither VEA Councillors nor VEAC executive staff could explain at a recent community meeting (Moama, NSW 8 August 2007) how these EVCs related to DSE's categories and how they related to flood regimes.

While a huge amount of work was invested in attempting to predict pre 1750 distribution of EVCs there remains ambiguity on the classes and "assumed" classifications that bring into question the validity of the data on which to justify the proposed reservations into National Parks and Reserves. The fact is that the essential elements are adequately conserved under current highly regulated practices. This is recognized under the International Agreement – RAMSAR. What is lacking and has been for several decades is effective and efficient water management.

Again VEAC has identified that the most critical requirement for biodiversity conservation is *"environmental flooding"* without providing the community with practical options on how this might be achieved.

VEAC should commission an independent botanical authority to assess the classification of the EVCs and recommend on their botanical integrity and their practical application as ecosystem surrogates to measure comprehensiveness, adequacy and representativeness.

[1] Flooding Frequency and Vegetation Health. Relationships for Environmental Flows in the River Murray in Victoria. Interim Report. Stage I. printed 2007

3. SOCIAL AND ECONOMIC ASSESSMENT

(a) VEAC's earlier Discussion Paper[2]
Part D. Social and Economic Issues. Pages 293-294.
"VEAC recognizes that the social and economic implications of possible changes are extremely important and need detailed consideration. Accordingly, Chapter 8 profiles the existing socio-economic characteristics of the local government statistical areas associated with the study area. VEAC will commission a study into the importance of existing activities for both the Draft Proposals Paper and Final Paper."

The information should have been available as part of VEAC's requirements to release a Discussion Paper with sufficient time for community consultation and response prior to formulating the Draft Proposals' Paper.

(b) VEAC's Draft Proposals Paper is underpinned by two reports feeding into social and economic considerations:

- URS Australia Pty Ltd, June 2007;
- Socio-Economic Assessment – River Red Gum Forests Investigation, Gillespie Economics, DCA Economics and Environmental and Resource Economics, June 2007.

The consultants[3] used the non-market valuation technique Choice Modelling as a stated preference claiming that *"the key advantage of using the technique is that it is capable of assessing non-use values – the values that people in the community might hold for environmental assets, irrespective of whether they have direct or indirect contact with them".* [my emphasis]

Quite apart from "pure" economic theory and practice, the use of Choice Modelling is inappropriate because of the bias implanted in the general community as a result of the relentless campaign of green groups pedalling mis-information. It is just not possible to obtain an unbiased response even under the most rigourous development of the choice questions to minimise such bias.

Further, it is doubtful if the process used to survey people provided a truly random [and statistically representative] selection of respondents such as is critical for any non-biased survey.

Choice Modelling and particularly the way it has been used is flawed because you can elicit any answer you desire. Also, it is demonstrably unsound in feeding Choice Modelling into a benefit cost analysis.

VEAC's proposals mostly concentrated on non-productive use values of the forests with dire consequences for the social, cultural, economic and environmental well being of local and regional communities and State-wide on the overall contribution of the forests to the State of Victoria and the Nation.

To deliberately propose changes that will decimate sections of the community viz:

Page 68, Draft Proposals Paper:
"Most of the benefits from the proposed recommendations result from non-use values for environmental protection, which are heavily dependent on adequate environmental water. These benefits would accrue mostly to people outside the Investigation area, especially in Melbourne, while the costs of the proposed recommendations would be largely borne ... in the 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, as they would be occurring in the context of the contraction of local economies and populations in these areas that has been experienced is recent years."

Page 85 Draft Proposals Paper:
"Overall the towns of Cohuna, Koondrook, Nathalia and Picola are likely to be the most sensitive to any job losses (and potential population losses).
At an individual level there are also a range of potential impacts of the loss of employment for individuals and their families including poverty and financial hardship, reduced future work

[2] River Red Gum Forests Investigation – Discussion Paper. VEAC. October 2006.

[3] Prof Jeff Bennet, ANU; Dr Rob Dumsday, DCA Economics; Prof Chris Lloyd, Melbourne Business School & Ms Marit Kragt ANU for URS Australia Pty Ltd. Non-Use Values of Victorian Land: Case Studies of River Red Gum and East Gippsland Forests. 1 June 2007.

opportunities, reduced participation in mainstream community life, strains in family relationships, and intergenerational welfare dependency."

Page 40 Socio–Economic Assessment:
"There may also be psychological difficulties that can cause a great deal of distress to sufferers and their families; prevent a return to work; and be costly to the community (Ganley 2002-2003)."

… without properly quantifying all the benefits of the forests and then place the onus on the government for paying compensation, is totally unacceptable.

This is causing great stress in affected communities to the extent that the matter has been referred to Beyondblue, the national depression initiative.

VEAC convened a meeting of the Community Reference Group (CRG) in Shepparton on 28 August 2007. Dr Rob Dumsday an economic analyst and champion of Choice Modelling went through the methodology, and defended the findings in the reports which underpinned VEAC's draft proposals.

Clearly the consultants contracted for the social and economic assessment were fully briefed by VEAC on what was in the draft proposals prior to them gathering information for their report, whilst the CRG, peak organizations (mostly?) and general community had no prior information. Equally clear, were the serious deficiencies/omissions in the report[4], viz:

- *The assumptions for environmental outcomes were specified by VEAC*
- *It is emphasized that these assumptions will be re-visited in the light of the flood modelling recently commissioned by VEAC*
- *Non-market issues that are not addressed in this analysis include implications for indigenous cultural heritage, and the cultural heritage value of the Barmah muster and other red gum related heritage issues*
- *The environmental benefits of excluding grazing from riparian areas have not been explicitly calculated*
- *The environmental benefits of conservation works undertaken by hunters on wetlands in the study area over the past fifty years have not been quantified*
- *The implications of different forest management regimes for emissions of greenhouse gases have not been considered*
- *VEAC indicated that there will be no net recreation and tourism benefits or costs associated with their proposals over the next 20 years or so*
- *VEAC draft proposals will have positive environmental impacts outside Victoria and these will be considered later*
- *It was assumed that additional management costs for the public land areas, including new national parks, would be $3M per year*

The consultants also attached a number of important qualifiers to their report including:

- *First, to our knowledge, there have been no transactions over 20 GL in the past and VEAC proposals involve acquiring 40 times that amount each year. There is no analysis which informs us of the likely impacts on water prices of these quantities being withdrawn from irrigation.*
- *Second, none of the 500 GL per year of water under the Living Murray agreement has been recovered to date and only about half of it has appeared on the Eligible Measures Register. The political economy of acquiring the equivalent of up to an additional 800 GL pr year would require extensive analysis and negotiation between three State governments and the Commonwealth.*
- *Third, while the quantities involved represent only about 7 percent of the average annual total inflows to the Murray River below Darling River (about 11,200 GL), they represent 30 percent of Victoria's 2004/05 total allocation (although the benefits of overbank flows would accrue to all three States).*
- *Fourth, the implications for storage of the environmental water have not been addressed – the requirements of the draft VEAC proposals represent about 40 percent of the total storage available in the system.*
- *Fifth, the logistics of storing and delivering the quantities of water suggested will require extensive analysis of a complex system.*
- *Sixth, any re-allocations of water in the Murray Darling Basin will need to take account of forecasts made about the effects of global warming.*

[4] River Red Gum Forests Investigation – Socio-Economic Assessment prepared for VEAC by Gillespie Economics, DCA Economics and Environmental & Resource Economics. June 2007.

- *Seventh, the social and economic impacts of withdrawing large quantities of water from irrigation have not been assessed. Approximately 60 percent of the benefits of VEAC's draft proposals are enjoyed by people in Melbourne while only about 5 percent accrue to those in the study area. In contrast, most of the costs of the draft proposals are incurred by those living in the study area.*

In summary, the figures that we present should be seen as part of a pre-feasibility analysis which suggests that further work is warranted before making decisions on the allocation of water in the Murray Darling Basin.

Clearly they will need to be considered in conjunction with the VEAC draft proposals once the flooding analyses commissioned by VEAC have been completed.

It was also revealing that Dr Dumsday was surprised at the singular approach taken by VEAC at a draft proposals stage with the damning comment on the process *"economists are used to (*evaluating) *a range of options but we only got one!"*

The majority of the CRG rejected outright the Draft Proposals and were dissatisfied that many questions remain unanswered.

These reports contain sufficient material to alert serious disquiet in the process, methodology and significant omissions of key data necessary to make informed comment on VEAC's draft proposals, including whether VEAC has the necessary impartiality and ability to oversee the study.

The social and economic assessment should be re-done addressing these issues and put out as a supplement to the Draft Proposals Paper with requisite time for community comment.

4. PRODUCTIVE FOREST USES AND VALUES – TIMBER RESOURCES

VEAC's report makes no attempt to factor in the social, cultural, economic and environmental ATTRIBUTES that multiple-use forest management make to society. DVDs "Making the Connections: Redgum Living Legends & Redgum Forests, River Boats and the Port of Echuca" produced by Faye Ashwin and "Water Wood & Wildlife - Opportunities for the Riverain Forests of the Central Murray", submission to the VEAC RRG Forests Investigation from the National Association of Forest Industries, New South Wales Forest Products Association Ltd, Timber Communities Australia Ltd and the Victorian Association of Forest Industries (October 2005) and numerous other submissions on VEAC's Discussion Paper drew attention to many of them but were apparently ignored in VEAC's social and economic assessment.

There is no consideration of:

- The contribution that sustainable forest industries make to saving the planet from climate change.
- The value of production forestry especially in the storage of carbon in Red Gum timber products and regenerating healthy forests.
- The Government's decision to upgrade rural railways with Red Gum sleepers and the subsequent contracts recently let to provide 300,000 such sleepers.
- The social and economic consequences of converting Victoria's timber sleepered rail track to concrete sleepers including on going maintenance of present infrastructure.

Confusion remains over the net area of available forest for timber production because the Department of Sustainability & Environment has indicated that it will not be finishing the partially completed State Forest Resource Inventory program for this FMA due to uncertainty of future public land tenure created by the VEAC River Red Gum Forests Investigation!

The Mid-Murray Forest Management Area Plan released in April 2002 notes that the region's net area available for timber production is comprised of the river red gum forests that *"generally equate to the Riverine Grassy Forest vegetation type … that covers … 41,166 ha* or 25% of all public land in the FMA'.*

(* Note, 46,017 ha of "economically accessible area" was revised down to 41,165 ha net available area – Riverine Grassy Forest. Subsequently, without any credible explanation VEAC's Draft Proposals Paper lists the area as 25,164 ha.)

VEAC's explanatory note states:

* Saw logs are commercially harvested from 25,164ha. NO credible explanation is given as to how or why this is derived.

- As a result of VEAC's recommendations the production area to the timber industry will fall from 25,164ha to 10,105ha.
- VEAC acknowledges the methods used to produce estimates of sawlog availability is only indicative and nominates extensive work to address potential problems in methodology but no time frame to do so.

Attention is also drawn to VEAC's Discussion Paper Page 211 Forest Inventory which states:
"A Statewide Forest Resource Inventory (SFRI) was initiated in 1994 – 95 … there has been little if any systematic analysis of existing data, or systematic planning for future data collection … Mapping of the river red gum forests has been completed but it has not been used for strategic planning to identify the relative sawlog productivity of stands or to forecast sustainable yield of wood products.

In addition, a previous estimate of sawlog resources put out in:
Our Forests Our Future – Balancing the needs of the Community, Jobs and the Environment – Department of Natural Resources and Environment (2002) pages 164-186 was severely discredited in an independent assessment by an Expert Data Reference Group (EDRG).

This group used a one to five star rating to classify data quality and methodological rigour where one star indicated inadequacy and five star, excellence. The Mid Murray FMA and the Mildura FMA each received an overall rating of one star.

The lack of any credible resource data precludes VEAC from coming to any objective conclusions on the RRG resources in the majority of the study area and also makes it impossible for meaningful community feedback.

5. MEETING OBLIGATIONS UNDER INTERNATIONAL TREATIES.

The principal objective of VEAC is to… *"provide independent and strategic advice to the Government of Victoria on matters relating to the protection and ecologically sustainable management of the environment and natural resources of public land".*

In meeting this objective, VEAC's draft proposals are predicated on the singular view that protection and ecologically sustainable management can only be accommodated within National Parks and Reserves where *"Productive use is either severely restricted or banned"*.

VEAC concedes that high levels of protection is often controversial, that forests in the investigation area are used for many purposes, but *"Many community and industry groups have used the forests for generations in a relatively unrestricted manner".*

Presumably, *"relatively unrestricted manner"* contrasts with greatly restricted uses permitted in National Parks.

It is true that the forests were unsustainably exploited in the nineteenth century. With the establishment of a Forest Department in 1908, which became a separate entity from the Lands Department in 1918, active and adaptive management, under progressive legislation governs activities to ensure their sustainability.

There have been three significant failures concerned with meeting the legislative requirements and implementing Land Conservation Council (LCC) recommendations approved by the Parliament following the LCC's study of the Murray Valley in the 1980s.

1. Effectively and efficiently restoring floodplain flooding without serious disadvantage to other water uses and users has been unacceptably slow; frustrated by State's rights issues since the LCC's recommendations some 20 years ago.

2. Sustainably managing natural resources and monitoring compliance with a vast array of Acts, associated Regulations and Treaties is now much more demanding on the responsible agencies. However, resources commensurate with the task have been greatly downsized rather than kept pace with the greatly increased demands for their services.

3. Parks Victoria effectively has a power of veto over forest fire prevention and suppression in National Parks, but the Department of Sustainability and Environment has the responsibility for fire management (prevention and suppression). Forest fire management is no longer the primary core business of DSE and, in recent years, wildfires have ravaged vast tracts of

Victorian National Parks and State Forest, severely impacting on adjacent communities and causing billions of dollars damage.

Current problems with forest fire management on public lands are not yet resolved. One thing is certain, active rather than passive management of public lands is required for their long term protection and environmental sustainability.

Importantly, there is increasing recognition in International Treaties such as the RAMSAR Convention that conservation of wetlands encompasses not only ecological sustainability but includes their wise-use (sustainable use) for the well-being of human communities. The application of RAMSAR principles to the River Red Gum Forests is a good example.

The RAMSAR Convention on Wetlands[5] signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides the framework for national action and international co-operation for the conservation and wise use (sustainable use) of wetlands and their resources.

The original emphasis upon the conservation and wise use of wetlands was primarily as habitat for waterbirds.

Over the years the Convention has broadened its scope to now cover all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity, conservation and for the well being of human communities.

*"**Wise use**",* first outlined in Article 3.1 of the [RAMSAR] convention (1971) and defined in 1987 as the *'sustainable utilization of wetland resources in such a way as to benefit the human community while maintaining their potential to meet the needs and aspirations of future generations' ...conservation ... is still vitally important to the future of our planet*. In 1990 and 1993 the Contracting Parties articulated *"guidelines"* and *"additional guidance"* for the implementation of the wise use concept, but these are fairly general, and have evolved to the present time.

Ramsar handbooks for the wise use of wetlands, 3rd edition.
Handbook 1 provides the over-arching guidance on the use of the whole set of Ramsar Wise Use Handbooks.

The principles of "wise use" and the maintenance of "ecological character" of wetlands lie at the very heart of the Ramsar Convention.

But what precisely is meant by the terms "wise use" and "ecological character"? A definition of "wise use" was first adopted by Contracting Parties at COP3 in 1987. Subsequently, the Convention's Scientific & Technical Review Panel (STRP) developed definitions of "ecological character" and "change in ecological character" which were adopted by COP7 in 1999.

Since the adoption of the "wise use" definition, the language of environmental conservation has evolved and changed, with new terminologies such as in the 1987 Brundtland Commission report on sustainable development, the 1992 Convention on Biological Diversity's (CBD) use of the terms "ecosystem approach" and "sustainable use", and most recently the Millennium Ecosystem Assessment's (MA) definitions and descriptions of the characteristics of ecosystems and of "ecosystem services". In order to ensure that the Ramsar definitions are up-to-date and in line with such current language, in 2002 Parties requested the STRP to review the definitions and propose updated definitions as necessary. This Handbook provides these updated definitions, as adopted by COP9 in 2005 as Resolution IX.1 Annex A.

*Importantly, in undertaking this work the STRP recognized that the Convention lacked an overall framework for its implementation of "wise use". The conceptual framework for ecosystems and human well-being developed by the MA proved to be highly relevant in this context, particularly as it speaks directly to the Ramsar Convention's recognition of the interdependence of people and their environment. This conceptual framework links indirect and direct drivers of change with biodiversity, ecosystems and their services **AND THEN WITH HUMAN WELL-BEING AND POVERTY REDUCTION.** Under this framework, Ramsar's "wise use" equates with the maintenance of ecosystems and the continued delivery of ecosystem services to maintain human well-being.*

[5] Extract from the RAMSAR Convention on Wetlands

Substantial areas, Barmah and Gunbower Forests, of RRG investigated by VEAC come under the Ramsar Convention – wetlands of international significance being listed on 15 December 1982 before the Land Conservation Council's detailed land use study in the Murray Valley. These forests were accepted as living, working forests under highly regulated sustainable management. These largely multiple-use forests continue to meet RAMSAR criteria with the exception of flooding requirements; much reduced flooding being the most threatening process to sustaining biodiversity of flood dependent flora and fauna and the inherent productive capacity of the forests.

Under multiple-use management these forests also satisfy currently agreed criteria – the Ramsar Convention's recognition of the interdependence of people and their environment. This conceptual framework links indirect and direct drivers of change with biodiversity, ecosystems and their services AND THEN WITH HUMAN WELL BEING AND POVERTY REDUCTION. Under this framework's Ramsar's "wise-use" equates with the maintenance of ecosystems and the continued delivery of ecosystem services to maintain human well being.

VEAC's draft proposals do not recognize these "wise-use" attributes. Rather, VEAC's draft proposals signify that the long term maintenance and protection of biodiversity can only be achieved in National Parks and Reserves where sustainable use of productive resources is either severely restricted or banned.

VEAC has not made a case for this singular approach. VEAC has identified their draft proposals as severely detrimental to individuals and communities within the investigation area and put the onus on Government (Taxpayer) to pay compensation. There is no doubt that this outcome is neither tolerable nor acceptable to both the wider community and Government.

CONCLUSIONS

VEAC's proposals are based on one premise: that protection & ecological sustainable management of the environment & natural resources can only be achieved in National Parks & Conservation Reserves.

VEAC has failed to demonstrate why the LCC's 1986 recommendations accepted by Government have failed, with the exception of identifying water as the most serious unresolved problem, to meet requirements under their Act and Terms of Reference.

Economists commissioned by VEAC to undertake the social & economic assessment were surprised at this singular approach, rather than being asked to evaluate a range of options at draft proposals stage.

Dubious data, absence of key reports & the acknowledgement by the economists undertaking the social & economic assessment that the proposals for environmental watering are at a pre-feasibility analysis requiring further work, is a damming indictment on the whole investigation.

These matters must be addressed & a further round of public consultation undertaken or the investigation terminated.

It is concluded that VEAC has failed to demonstrate that protection and ecologically sustainable management can only be accommodated in National Parks and Reserves where sustainable productive use is either severely restricted or banned.

However, VEAC has, of itself, concluded that their draft proposals are severely detrimental to human well being.

Over the long term there is demonstrable evidence that stewardship of the natural resources has ensured their continuance although there are warning signs that resourcing and water issues must be addressed without further delay to conserve their biodiversity, vitality and ongoing contribution to human well being.

Barrie Dexter.
Tuesday, 2 October 2007