

Natural Resource Commission (NRC)
Assessment: Riverina Red Gum Forests.

Submission supported by:
NSW Farmer's Association – Deniliquin Branch
Southern Riverina Irrigators
Bullatale Creek Landholders Group
Deniboota Landholders Association
Wakool Landholders Association

28th August 2009

Mr John Williams
Commissioner
Natural Resources Commissions
Forests' Assessment
GPO Box 4206
SYDNEY NSW 2001

RE: Terms of Reference – Assessment of Riverina Red Gum Forests

Dear Sir

General Overview

This submission is supported by a range of interest groups who retain the right to submit as individuals in the future or consult with the NRC individually. This combined submission should be seen as the first stage of community input and specifically refers to the VEAC report in Victoria and the terms of reference for the NRC set by the NSW State Government.

The Internationally recognised Barmah Millewa Forest region is part of the Central Murray system which also comprises the Edward, Wakool and Niemur Rivers. The Central Murray system reconnects with the Murray River downstream of Swan Hill.

The region has significant investments in land and capital infrastructure. The extended region comprises a mixture of dryland and irrigation farming. The interests of the region therefore are quite diverse, but aspects of commonality exist, in particular how crown lands in the region are managed in the future and what impact that management, could pose to 3rd party interests.

The future of crown land management in the Barmah Millewa Forest region raises significant areas of consideration for localised and regional communities. In particular, fire management and associated responses, expectations and delivery of water supplies, management of feral animals and weeds, recreational access and a range of other issues.

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This joint submission does not seek to express an opinion on the merits of continued State Forest or potential National Park management. This submission intention is to identify issues that the NRC could use to inform the assessment process and report recommendations.

The Natural Resource Commission's website refers to submissions closing on the 28th August, 2009 in relation to the terms of reference. We believe that the timeframes set for the assessment and resulting community consultation are inadequate. In addition, many sections of the community are unaware of the implications, nor are they aware of this first stage of consultation.

We would like to work closely with NRC to offer assistance in regard to information, data and to disseminate information through our various networks.

This submission is made up of three specific sections.

- **General overview.**
- **Section 1 - Comments on the Actual Terms of Reference set by the NSW Government**
- **Section 2 – Relevant information to support the assessment process – relevant data**
 - Section 2 (a) refers to VEAC reports
 - Section 2 (b) refers to specific NRC terms of Reference

Section (1) New South Wales Government - Terms of Reference: Assessment of Riverina Red Gum Forests

Bioregional assessment: Proposed additional terms of reference

Additional consideration: The Commission should have regard:

- For the social, economic and community interests of regional landholders

Consultation: Proposed additional terms of reference

Additional consideration: The Commission should consult:

- Local landholder groups who have specific legal, financial and social interests relevant to the proposed assessment area

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Section (2) Natural Resources Commission – Assessment of Riverina Red Gum Forests – Relevant Data

This section of the submission is divided into two parts:

- a) broader comments in relation to the VEAC report**
- a) specific comments in relation to the NRC Terms of Reference**

Section (2) a)

Regional /local community groups have identified a range of issues that the Natural Resources Commission (NRC) may consider relevant as part of its Riverina Red Gum Assessment.

We understand that the Assessment process has implications for the broader land status of the area, in particular whether the forest area will come under a different management regime, for example National Park Reserve.

It is important that the recommendations of the NRC underpinned by sound data collection and a comprehensive understanding of the range of issues and impacts. In particular, that proposed land management investigations, consider a much broader range of issues than specifically conservation and timber resources uses.

This submission contends that a range of environmental, social and economic considerations need to be accurately assessed in order to establish what outcomes will result from the NRC assessment process and subsequent recommendations to the NSW Government.

It is important to acknowledge that as part of the Victorian VEAC assessment for River Red Gums, recommendations (R32) - includes that “River Murray Strategy be developed within three years of Government acceptance of recommendations, in consultation with relevant Victorian and New South Wales Government agencies and relevant planning bodies to provide a long term framework for the use of the River Murray on a sustainable basis for recreation, conservation, tourism, commerce and similar uses”.

VEAC is contending that their recommendations contribute to the basis of a River Murray Strategy. However, VEAC has not been inclusive of the NSW Government, or NSW regional communities in drafting its recommendation, yet is proposing that VEAC recommendations will form a considerable framework for future ‘across border management’ for the region.

In particular, consideration needs to include NSW legislation, NSW budgetary considerations, NSW Water Sharing Plans and the impacts of proposed recommendations on third parties.

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Industry impacts are not exclusively limited to changes in timber harvest regimes and subsequent closure of the associated timber industries. Industry impacts extend to private industry impacts, property rights, including water rights and third party impacts on private land, eg fire or flooding impacts.

Agricultural regions are particularly susceptible to fire, therefore the future management of heavily timbered crown resources are of particular concern to private lands adjoining or in the vicinity of Crown Reserves.

The Natural Resource Commission in its terms of reference, identifies key aspects for consideration which include, “the existing science and body of knowledge about the region”.

This submission extends support to the NRC to utilise the extensive knowledge about the history of region within the local communities. In many instances, this knowledge goes back three or more generations and covers a range of current and historical aspects, in particular:

- The structure of the forest
- Flood events and behavioural flows in both the forest and surrounding region
- Fire management and fire behaviour
- Biodiversity interaction with surrounding region

The NRC Terms of Reference for the Assessment, do not identify the interests of local communities outside the specifically identified agencies and indigenous interests. We believe that this omission, highlights the risk that specific localised knowledge may not be included as relevant data in the assessment process.

Recommendation:

This submission contends that while information from the VEAC assessment of River Red Gum areas in Victoria may be of assistance, recommendations from VEAC should not provide the main basis for the NRC’s report on River Red Gum Forests in NSW.

HISTORICAL REFERENCES

The River Red Gum Forests of Northern Victoria and Southern NSW have been subject to active intervention by humans over the millennium which have shaped and developed the forest over thousands of years.

Human influence of the forests is acknowledged by historical verbal and other anecdotal records of Aboriginal and indigenous communities. Since Europeans settlement however, the forests have undergone a long history of changed active management specifically in relation to timber resources, grazing and recreational uses dating back to the mid 1880’s.

Early records indicate that historically, the traditional pre European forests were much more open and resembling typical open woodland status. Records indicate that these open woodlands consisted of significant grassy areas with large dominant River Red

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Gum trees suppressing regrowth until conditions prevailed where regeneration events would occur.

Since European settlement, active management and timber harvesting for over 150 years has led to the current forest status, typified by increased Gum populations and higher stem densities. It is important therefore, that the VEAC proposal establishes a desired condition criteria, that proposed management changes are designed to achieve and that full disclosure of how this will be achieved on an economic basis is identified to the wider community.

Recommendation:

- **That the NRC establish desired ecological benchmark criteria and identify the goals sought from any proposed land management changes**
 - **The feasibility of returning the River Red Gum forest to pre European condition**
 - **The retention of post European River Red Gum forests and identify options to retain/improve current management practices in an ecological/economically sustainable way**

- **These criteria be developed in conjunction with regional communities and there is consultation on the establishment of transparent monitoring program to assess criteria achievements**

WATER MANAGEMENT

The VEAC River Red Gum assessment report, identified that the proposed environmental outcomes resulting from the conversion of current land tenure are dependent on a volume of water equivalent to 4000 gegalitres. The volume of water that VEAC proposed would have significant ramifications on the economy of the region. VEAC did not identify where this water is to be obtained, who will fund such purchases, nor how obtaining this amount of water relates to other National initiatives such as the Living Murray and other major water plans, such as the National Water Initiative.

To put this volume of water into perspective – VEAC’s proposed 4000 gegalitres was approximately equivalent to the total capacity of the Hume Dam. Current storage capacity of the Hume Dam is 3038 gegalitres and Dartmouth is 3506 gegalitres. These storage facilities underpin much of the food production in the entire Murray Darling Basin.

Food and agricultural production in the Southern Riverina Murray Irrigation Limited (MIL) region is supported by licensed entitlements of approximately 1.2 million megalitres. These general security entitlements receive an annual allocation based on tri state agreements and are made available to entitlement holders based on an annual assessment of available water supplies in the Hume and Dartmouth dams. Figures for water external to MIL areas but within the bounds of the region are not quoted.

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VEAC's proposed 4000 gigalitres would typically remove food production from regional areas that contributes over 3 billion to Australia economies

VEAC's report on page 12, also indicated "a program to deliver such floods could be reasonably simple at the broadest level".

VEAC however, **did not** identify accurately how this extensive amount of water will be delivered other than make simplistic reference to a five year time frame and relationship with other high flow events.

VEAC original report recommended that no engineering solutions are included in the management and delivery of this water into dispersed forest habitats. Therefore this reflects poorly on the ability for current community understanding and policies that have encouraged water efficiencies in order to maximise potential production or environmental gains.

The VEAC report did not acknowledge the planning process for delivery of the proposed 4000 gigalitres of water, 3rd party flood impacts and who will be liable for economic damage and losses suffered by regional business, local council road infrastructure repairs and the resulting impacts on council rates to the wider region.

In addition, their report makes no allowance for storage of this proposed 4000 gigalitres and what impacts this will have on existing major water storages and related property rights.

VEAC did not take into account existing water sharing plans, property rights and accounting arrangements under State arrangements within the Murray Darling Basin.

Subsequently a number of key water recommendations by VEAC were not supported by the Victorian Government.

Recommendation:

- **NRC considers that the Barmah Millewa Forest system has a specified and agreed environmental water entitlement of 100,000 GL/year with an additional 50 GL of lower security entitlement.**
- **That the original water claim by VEAC of 4000 gigalitres is not supported**
- **That delivery of environmental water on top of natural high flow events have undergone a full scoping study to assess the social and economic implications of beyond forest boundary flooding impacts, including private land, council roads and infrastructure and economic losses suffered as a result of additional flood events.**
- **A full assessment of any additional water requirements is undertaken in relation to existing Water Sharing Plans in the Murray Darling Basin**
- **A full assessment is undertaken to establish forest watering techniques, including engineering works, that enable environmental water to maximised in terms of efficiency and outcomes**
- **That the NRC recognises and protects existing infrastructure operators ability to continue to supply water rights to their customers/shareholders.**

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FIRE MANAGEMENT

Any future recommendations for changes to fire management regimes crown lands, poses significant risks for the immediate forest regions and surrounding rural lands.

It is well recognised that River Red Gum species do not tolerate hot fire events and current management strategies and fire intervention policies have helped to avoid the catastrophic fire events experienced in the high country of NSW & Victoria in more recent years.

Climate predictions suggest reduced rainfall periods and thus there is a predicted increase in fire risk for both the immediate forests and regions.

VEAC proposed a significant increase in retention of debris on the forest floor which will substantially increase that risk and further reduce opportunities to undertake appropriate fire reduction management.

Should the NRC's report contain recommendations to change land tenure from State Forest management to National Park status, then an appropriate plan of management should be developed in consultation with local communities, to implement necessary fire management strategies. Consideration should also be given to the current conduct of fire operations by State Forests and the current availability of timber harvesting machinery on location, which is quickly utilised in the case of fire. Current management under State Forest regard timber as an asset and therefore fire intervention policies acknowledge that asset.

The VEAC report made no provision for reducing fire risks, particularly in relation to a build up of understorey and debris. The combined effect of increasing forest floor debris, elimination of controlling grass height through removal of grazing species and the increased flood frequencies and heights – will dramatically alter the fire status and therefore the ecology of the region.

It is important that any future conservation strategies developed by the NRC ensure that fire trails and active management of the land continues. Detrimental impacts will result on the forest itself and the broader community if ineffective fire management strategies are implemented. It is important also to understand the nature of the region and the ability for fires to extend beyond the perimeters of established State Forests or new Conservation boundaries. Extreme weather events can quickly turn a forest fire into a major community threat, as hot and windy conditions potentially create fire storms into the open plains. In flat terrains, fire moves rapidly and with many areas not accessible to significant water depots, this poses significant risks to both human and ecological assets.

Further risks to community assets occur during drought periods when normal water supplies simply do not exist, as is currently experienced.

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The VEAC proposal recognise that ecological thinning of the River Red Gum Forest will have to continue in order to maintain the current ecological assets and biodiversity values. It is unclear how this will be done and on what economic basis

Recommendation:

**That the NRC initiate a full assessment a full fire scoping study and risk management strategy is developed in consultation with Governments, Agencies and communities on both sides of the New South Wales and Victoria borders.
That the NRC initiates a report on the costs of ecological thinning**

RECREATIONAL ACTIVITIES

The VEAC report acknowledges that adverse implications resulting from the proposed recommendations would be felt primarily for those communities immediately within the Murray region.

Changes to public land use, particularly in the proposed Barmah National Park, will increase pressure on other recreational areas. While the report allows continuation of recreational camping, the report proposes to minimise camping sites to restricted areas.

The Murray River and adjoining public lands have provided rural communities with significant recreational opportunities. Many families have spent intergenerational time experiencing and enjoying the natural opportunities that these areas have provided.

Rural economies have not enjoyed the prosperity of many more urbanised communities and to restrict or remove traditional recreational zones, will exacerbate rural social and economic impacts already felt in many regions.

Rural recreational users also visit these sites typically for shorter and more frequent periods and these opportunities are relatively low cost in terms of alternative holiday destinations that pose significant costs factors on family budgets. Many rural and farming people find it difficult to travel extended distances and be removed from their employment or business locations for lengthy periods. Closure or restricted access to existing holiday destinations will impose significant difficulties on many families.

The current pressure on these recreational areas is not so significant that any difficulties could not be accommodated by the introduction of more camping guidelines. These could include mandatory requirement for rubbish removal or the provision of further social amenities in terms of rubbish depots or ecologically sensitive toilet amenities.

VEAC's proposed recommendations as a baseline for a River Murray Strategy encompassing the wider Barmah Millewa and other NSW forest regions, will further impact on rural communities.

Recommendation:

That the NRC proposals fully factor in proposals that allow continuation of existing recreational activities that rural communities so heavily depend on.

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BIODIVERSITY & ECOLOGICAL INTEGRITY

The original VEAC proposal did not adequately analyse how proposed management changes will affect biodiversity values currently within the forest environs.

Reduction of timber management, harvesting and thinning, will lead to poor quality trees. It is well recognised that River Red Gum species experience significant regeneration events particularly in disturbed landscapes. The Barmah Millewa and other State Forests have undergone over 150 years of post European settlement disturbance. Therefore significant regeneration is continually occurring. Unmanaged in the future, forest tree densities will be sufficient to stifle growth of trees, which will impact on the development of future habitat trees. Solutions of applying more and more water, will not overcome the natural cycle of River Red Gums that over long cycles (up to 100 yrs) will depopulate themselves through natural die back. Unlike pristine situations, the existing forests have had a long history of disturbance and therefore normal conclusions in obtaining habitat trees will not apply.

The VEAC report assumes that closure of existing activities will produce ecological improvements in forest health. This ignores the fact that increased densities of red gum will lead to poorer quality of timber and potential for habitat trees to reach an age where ecological benefits can be derived. There is no assessment of the likely adverse impacts preventing the formation of hollows for bird species in the region.

VEAC proposed that increasing forest floor debris will increase the ecological benefits for such species as the yellow footed antechinus. This ignores the significant amount of debris currently existing in a permanent state on the forest floor. Significant fuels build up is well recognised as a fire risk, yet no account has been taken in regard to protection of species that depend on the forest. Antechinus inhabit hollow logs and other timber debris on the floor and hot fire events will inevitably impact on the biological integrity of the whole forest region.

The interconnectivity of the Murray forest systems will also provide no protection in terms of fire breaks in high risk events. How such species will recover after intensive wildfires has not been determined.

National Park policies generally tend to place restrictions on forest activities. There is concern that progressive removal of apiarists adding significant risks to the viability of many bee hives, may occur. Should apiarists not have access to public lands, then it may be uneconomic for them to remain in the regional area.

Rural production and the vital role bees' play are well recognised. Closure of public areas may mean that apiarists move from the district. In certain periods, the existing forest tenure, allows bee keepers to maintain hives that provide flow on benefits across many land tenures.

Recommendation:

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That the NRC initiates a full study of the risks to the ecological integrity of the River Red Gum forest resulting from changed land management practises. This scoping study should evaluate:

- **Fire management & risks**
- **Species management and ability to survive extreme weather or fire events.**
- **Recovery plans and techniques to re establish populations that have declined as a result of wildfire.**
- **Full impacts of apiarist's removal from public lands are fully assessed.**

WEEDS & FERAL ANIMAL MANAGEMENT

VEAC recommendations did not address in detail on going management plans for the control and eradication of feral animals and weeds.

This submission encourages the NRC to develop mutually beneficial plans of management and that regional advice is sought to facilitate appropriate regional plans. It is also possible for the NRC to provide innovative solutions to NSW budgetary constraints, such as developing proposals where adjoining landholders can be contracted for specific purposes in implementing plans of management. Developing innovative solutions, could help to overcome long term funding issues with national park management.

It is vital that any proposed changes to current crown land management, fully incorporate strategies to minimise impacts on adjoining landowners. These have not been identified by VEAC.

Recommendation:

NRC recommendations include plans of management developed with regional /local communities in regard to future proposals, specifically referring to:

- **Wild dog and feral animal control plans**
- **Weed control and the establishment of cooperative arrangements to ensure conservation outcomes within the conservation areas and to minimise risks to adjoining landholders**
- **That the NRC investigate cost effective options to utilise the experience/skills/economics of local communities working with the Crown Land Managers to effectively assist in the management of public reserve systems**

SOCIAL & ECONOMIC IMPACTS

The VEAC reports have not been comprehensive and concerns that relevant data was not included as part of deliberations. Limited surveys/ studies underpinned the VEAC report

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In terms of direct economic impact, we understand that no social and economic surveys or considerations for NSW, were taken into account in the VEAC recommendations.

Limited economic surveys apply to a relative small sample of the timber industry. No surveys were conducted on the impacts for fire, flood, recreational loss, or other considerations.

In addition VEAC surveys involved communities far from the impacted region and therefore this may have not been an effective survey to effectively establish recommendations for change of land tenure and management.

It is disturbing that such surveys may have been conducted in non regional areas associated with the assessment area. During the VEAC consultation phase, it was identified that no surveys were conducted in NSW River Red Gum regions. With the proposed recommendations having significant impacts on Southern NSW, there is a significant flaw in the consultative process conducted by VEAC.

Recommendation:

That the development of the NRC's recommendations:

- **Do not rely on the assessment process of VEAC due to significant data and information gaps**
- **A full social & economic analysis of the proposed recommendations and that flow on impacts to NSW landowners, councils and other assets holders are fully incorporated into such a survey**
- **That social & economic survey covers water recovery, water sharing plan implications, fire risks, flood damage, adjoining land implications and recreational issues.**

Section (2) b)

Submission comments on the NRC's Terms of Reference:

1..Comprehensive Reserve System

2. Complementary Methodologies for Protecting Conservation Values

It is important that Federal Strategies for a Comprehensive National Reserve System be designed and developed in a more comprehensive manner. Generally a reserved based approach is seen by Governments as the most appropriate method for achieving conservation outcomes. In developing such strategies, often Governments fail to acknowledge and facilitate budgetary provisions for the land's future management.

There are many examples of private and public partnerships that deliver a range of conservation values, many of which are on private land. These partnerships are underpinned by a voluntary process and therefore ownership and commitment to achieving outcomes is generally strong. Partnership models on private land are also

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generally a cost effective strategy for Governments. Such processes also provide opportunity to develop long term monitoring of biodiversity outcomes.

However, there are few examples of genuine collaborative partnerships between private and public partnerships on public land. Generally in NSW, conservation on public land is confined to management by agencies and with some limited input by indigenous groups. One aspect of innovation in public land management is the opportunity to engage local communities in future management options for public land tenure. This should not be seen as a replacement of agencies, but complimentary in terms of identifying options to underpin efficient use of resources and opportunities to maximise conservation outcomes.

This would also lead to collaborative opportunities for further integration of conservation and production outcomes across private land, with innovative approaches opening many future opportunities.

Changed land tenure, for example the establishment of National Park status, may pose tensions within local communities. One way to overcome and build bridges of understanding is to identify strategies where local communities have advisory or direct input into such things as fire management, flood mitigation, biodiversity goals, thinning programs on a genuine engagement basis. Engaging local farmers/contractors to provide weed control services along park boundaries, may prove more cost effective for delivering services in remote locations. Such services may need to be part of an accreditation program.

Investigating other options based on the RAMSAR principles of wise use of resources that allow continued human involvement, bridge with innovative integrated biodiversity options on private land, may provide a more cost effective strategy for both Government and the environment.

3 Impacts of Drought & Climate Change on Forest Communities

Riverina Red Gum forests, predominantly occur in low lying areas that are subject to intermittent levels of inundation or rainfall events. Occasionally larger flood events may create opportunities for red gums to germinate and grow on higher ground. Generally though, continued growth of such stands would be hindered by a return to normal or dryer seasons.

The Red Gum Forests of the Riverina generally have a long history of intervention and active management. Today's forests do not represent the broader more open forest systems, of pre European times. Current forest stands tend to be denser in population, which regular harvesting enables such densities to continue without substantial forest decline.

In the event that future land management strategies change, then the consequences to the individual health of trees may become more profound. It is widely acknowledge that in low rainfall regions such as the Southern Riverina, forests stands with historical thinning regimes, could not go to an unmanaged state without causing

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individual tree health or stand health decline. External observers may suggest that the answer to individual tree or stand health decline caused by unnatural tree densities in dryer climates, is the application of more water. Such a decision would not be based on ecological grounds.

It is important that the NRC recognises the water management strategies of the Barmah/Millewa, the role of the Barmah Millewa Forum, and the constructive role that local communities have played in developing a forest environmental watering plan.

4) Future employment – Local Communities

The NRC deliberations would need to consider the social and economic impacts from changes of land tenure and resulting changed management operations. This submission will not go in to the specifics of timber harvesting considerations and loss of jobs and industry that may result, at this stage. However, it is important for the NRC to acknowledge the interactive multiplier effect on regional businesses and the broader economic impacts.

The NRC should consider however, that any recommendations on reducing the availability of red gum timber resources to industry, cannot be automatically picked up by private forest resources.

Private Forest Resources are now covered under the new Private Native Forestry Code and it is likely that in the short term, new legislation will replace that code. The significance and detail of the proposed legislation is yet to be seen. However given the combined impacts of new legislative arrangements, prolonged drought or even future climate change scenarios, higher dryer forest areas on private land may not deliver the yield potentials to sustain a red gum timber industry. Simplistic assumptions about the availability for alternative timber sources should not be made.

This region is suffering from a prolonged drought event with many skills leaving the region. The drought has longer term consequences in terms of the skills set available once more normal conditions return. As general business opportunities decline, the engagement of apprentices is a longer term concern. Businesses associated with agriculture and timber interests utilise the resources of various engineering works and other associated industries. As general economic production declines, it is unlikely that new skills sets will be developed and retained in the region. It is important to maintain viable industries in this region to support both communities and associated businesses.

It is often claimed that tourism will fulfil the gaps in economic stability. However recent history has shown that non coastal regions subject to changes of land tenure to national parks, have not necessarily attracted the 50,000 or more visitors as first thought.

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5) Forest Management Practises (refer also to –SECTION 2 a) Historical References, Fire Management, Water Management, Biodiversity & Ecological Integrity, Weed & Feral Animal Management

This submission has referred to the need for future forest management strategies. Specifically the need, to continue to manage the forest areas in terms of thinning, to prevent tree health decline resulting from unsustainable tree densities occurring in dryer climate zones.

The NRC should incorporate the environmental watering plan developed by the Barmah Millewa Forum into its recommendations . Developed in partnership including community, local Government, industry, agencies, this plan was underpinned by a environmental water entitlement facilitated by community/agency based planning.

NRC recommendations should continue to acknowledge the role and expertise of the Barmah Millewa Consultative Groups, set up to oversee and manage environmental and management programs. This is relevant in terms of Living Murray Icon Sites and the also future application of the dedicated environmental water entitlements developed and agreed to by regional communities specifically to benefit the Barmah Millewa site.

It is also important to recognise the impacts of fire on River Red Communities. River Red Gums do not tolerate hot fire events, which generally result in deaths for individual trees. The management of understorey and fuel loads continue to be an ongoing risk to such areas.

The behaviour of fire, its management and future risk scenarios are all issues that the NRC should consider in its recommendations. External risks to private land outside the forest area should also be a key consideration.

Local Volunteer Fire brigades generally have extensive knowledge on fire behaviour , particularly if brigade volunteers are farmers who have an extensive connection to the region.

Fire strategies should be a key consideration, including containment options, fire trail management, associated perimeter plans.

It is of concern that remote decision making for localised or regional areas, continues to pose risks to regional communities. Fire is such an example where it is important to facilitate shared decision making in plans of management.

VEAC recommendations included specific reference to forest debris retention, in particular amount of tonnes retained on the forest floor. The NRC should consider these recommendations carefully, particularly given the knowledge and understanding resulting from recent major Fire events in Victorian, Canberra and New South Wales, specifically in 2002, 2006 and 2009.

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Public environmental policy in more recent times have focussed on exclusions of humans and is broadly based on the 'lock up and leave' scenario. While in theory this concept was accepted as encouraging conservation values, in practise such conservation values did not eventuate in the long term. Weeds and particularly fires, pose significant risks to the values originally earmarked for protection.

6) Intergovernmental obligations, agreements or arrangements.

7) NSW Government policies, programs and Catchment Plans.

Assessment of the Riverina Red Gum Forests and potential changes of land tenure of management, raise the issue of how the NRC recommendations sit alongside Intergovernmental obligations, agreements or arrangements. In addition, how NRC recommendations relate to NSW State based planning instruments, policies and programs.

The Barmah Millewa was listed under the internationally recognised Ramsar Convention which promotes wise use of the resources. It does not exclude active management or industry involvement in forest scenarios. Maintenance of existing forest tenure, should not pose any international risk to this agreement.

Australia is also a signatory to the International Convention on Biodiversity and as such is obliged to protect and enhance biodiversity outcomes. It is common for such biodiversity outcomes to be primarily thought in terms of the need for increased conservation reserves. It is important that a more modern approach is developed where a range of conservation and biodiversity outcomes can be recognised under a variety of land tenure. Finding cost effective strategies on both public and private land, may be particularly relevant in terms of growing population demands on fewer Government resources.

Traditional concepts of national park status may require a more innovative and futuristic vision, in order to achieve or maintain conservation outcomes with changing climatic conditions.

We would welcome the opportunity to explore such options with the NRC.

The NRC report should refer to intergovernmental agreements on Water – specifically the previous National Water Initiative, Waters for our Future and the relevant state Water Sharing plans. This submission does not attempt to list all other programs, but encourages the NRC to also consider Bushfire Management Plans/strategies, Central Murray Floodplain Plan and other contributing knowledge.

In June 1993, the Murray Darling Basin Ministerial Council authorised a Barmah Millewa Forest Environmental Water entitlement of 100 Gigalitres (GL) per year. Entitlements of a further 50 GL exists under special accounting rules.

The formation of the Barmah Millewa Community Reference Group and the Barmah Millewa Forum, processes initiated by the Murray Darling Basin Ministerial Council, resulted in the development of a community/agency Water Management Strategy for

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the Barmah Millewa Forest. Their work would provide valuable insights into agreed management options for watering the forest and the ecological benefits achieved. Many valuable lessons have been learnt, particularly in achieving the 'best balance' of all the issues involved.

The Revised Operating Rules for the Barmah Millewa were endorsed at the March 2007 Murray Darling Ministerial Council meeting. The Barmah Millewa is managed on these operating rules.

The Living Murray Environmental Works and Measures Program is a \$500 million program to deliver works and manage environmental flows. This includes:

- Making the best use of the water available
- Optimising the benefits of any water recovered in the future
- Considering other priority interventions
- Targeting investment towards the best environmental outcome
- Having input from personnel with technical and specialist expertise

Continued options to maximise environmental waters can be achieved by a range of measures, including small scale engineering works to direct flows into areas of need.

Additional water requirements and any potential environmental applications, should only be developed in consultation with existing agreements. Equally the NRC would need to consider environmental water purchases or arrangements to date.

Recommendations on current or new environmental water, would also need to consider third party in relation to major storage dam agreements, actual river flows, timing of such flows and any related external flooding impacts on private land.

8) Indigenous Involvement in Forest Management

This submission does not specifically address the needs of indigenous groups.

It is important however, that the NRC notes that a range of interests exist in relation to the future management of the River Red Gum Forest. In many instances, historical connection to the forest areas, are of equal importance in indigenous and non indigenous communities.

Therefore, it is important that the NRC identifies and builds in consultation arrangements equally across the broad range of interests that support the values of the River Red Gum Forests and its connection to surrounding areas.

9 Commercial, Recreational & Community Uses. - Please refer to section 2 a)

10 Existing science & body of knowledge about the region.

This submission encourages the NRC to adequately consider the body of knowledge that lies within the communities associated with the River Red Gum Region.

Combined submission:

NSW Farmer's Association – Deniliquin Branch, Southern Riverina Irrigators, Bullatale Creek Landholders Group, Deniboota Landholders Association, Wakool Landholders Association

This knowledge is extensive and covers issues such as historical information, fire history and management, timber harvesting, water management, historical flood conditions/benchmarks/data sets, environmental flows and a range of other issues to numerous to list.

We encourage the NRC to adequately consider the range of information available to ensure that the NRC can develop recommendations that deliver environmental, social and economic benefits to our region.

Genuine involvements of the community in developing these considerations, will be a key component to ensure that the NRC's report is supported by regional communities.

The contributors of this submission express their desire to continue dialogue with the NRC to ensure that a range of regional knowledge can contribute to the final assessment report for the Riverina Red Gum regions.

Combined submission:

NSW Farmer's Association – Deniliquin Branch, Southern Riverina Irrigators, Bullatale Creek Landholders Group, Deniboota Landholders Association, Wakool Landholders Association

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NSW Farmer's Association – Deniliquin Branch, Southern Riverina Irrigators, Bullatale Creek
Landholders Group, Deniboota Landholders Association, Wakool Landholders Association