SOUTH EAST FOREST RESCUE

SUBMISSION ON THE PRELIMINARY ASSESSMENT REPORT;

RIVERINA BIOREGION FOREST ASSESSMENT: RIVER RED GUMS AND WOODLAND FORESTS, 2009.

Excessive damage to the ecological life support system will markedly alter civilization, as it is presently known, and might even result in human extinction. However, if humankind learns to live sustainably, the likelihood of leaving a habitable planet for posterity will dramatically increase.[1]

South East Forest Rescue takes a firm stand on environmental protection of the native forest estate and expresses deep alarm at the welfare of forest-dependent threatened species and the cumulative impacts of industrial degradation of native forests that are exacerbating extinction rates and destroying soil, water, and carbon capacity.

We call for the Commissioner to have full and frank regard for the urgency of action on climate change and ending the rampant degradation of the native forest estate.

> With Australia's existing plantations able to meet virtually all our wood needs, whether for domestic consumption or export, native forests are available for immediate climate change mitigation.[2]

We believe that current State native forest management has gone beyond its scope as the public caretaker, has broken it's pact with it's citizens and is needing immediate reform. We suggest Indigenous ownership of all public native forest and the complete transfer of wood product's reliance to the plantation timber industry and the salvage recycled hardwood timber industry output, a single authority for national native forest stewardship modelled on the New Zealand example and an immediate nation-wide program of catchment remediation and native habitat reafforestation.

We maintain that the pretence of implementing Ecologically Sustainable Forest Management has failed, is corrupt, and has not delivered on obligations. These unacceptable outcomes are at the expense of current and future generations and are to the detriment of our unique flora and fauna. The Preliminary Assesment Report (PAR) makes no consideration of the national reserve criteria or how they will be met. The assessment is very inadequate with regards to forest ecology and systematic conservation planning. It does not constitute a Forest Assessment.

We hold that these Red Gum forests and wetlands are the world's largest stands of river red gum and are unique and highly threatened landscapes. They are listed as Ramsar Wetlands. They provide crucial habitat for many threatened and endangered species including the Barking Owl, Southern Bell Frog, Murray Cod, Squirrel Glider, and the Fishing Bat. The NRC has not conducted a scientific assessment of the conservation values of River Red Gum forests in the study area. The impact of logging on ecosystems has not been considered. The Forestry Commission, trading as Forests NSW, descriptions for these practices vary from 'Single Tree Selection' and 'Australian Group Selection' to 'Thinning', which translates as clearfelling or patch clearfelling on the ground. The NSW Red Gum forests are being logged at an unsustainable rate.

We state old-growth red gums store large amounts of carbon safely out of the atmosphere. To take action on climate change we must protect our native forests. We note that the report states:

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[1] Cairns J., 'The Future of Life on Earth' Article 19, *Ethics in Science and Environmental Politics* [2004] 1-2, <www.esep.de>.

[2] Ajani J., 'Time for a Coherent Forest Policy - Finally' (2008) Centre for Policy Development at <http://cpd.org.au/article/time-coherent-forest-policy-finally>

> The general condition of river red gum forests across the bioregion is understood to be relatively poor. River red gum in many of the state forests has been observed to be heavily stressed. Condition is likely to continue declining, and the forests are in need of water.[3]

We agree that these forests could provide 'long-term security for ecological communities and individual species' if they were transferred to National Park Estate. Unfortunately the evidence suggests that if logging continues 'there will be a decline in river red gum wetland extent'.[4]

Government owned and managed native forest logging practices have resulted in illegal logging, destruction of old-growth trees in special protection zones and multiple breaches of procedure. There is no monitoring of post-logging of compartments to assess the actual impact of operations, and to have ensured that prescriptions were complied with. Insufficient resources are directed towards non-compliance activities and, as a result, there is no systematic monitoring of logging operations. There should have been vigorous processes for the monitoring of all operations and this should have been supported by appropriate funding. This should have been implemented and regulated by an independent authority.

We acknowledge that many important cultural sites and resources are contained in red gum wetlands. Indigenous nations along the River Murray managed these wetlands for thousands of years and continue to hold essential ecological knowledge. Therefore joint management is the best way to protect red gums by combining Indigenous and Western management of country. This will ensure the protection of cultural sites, promote education about Aboriginal cultures, and provide job opportunities for Indigenous people.

Analysis of the PAR

After extensive scrutiny of the PAR we note with concern that it is dominated by Forests NSW motherhood statements and outright hyperbole as exampled by the statement:

> Silviculture: The *art* and science of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values of the many landowners, societies and cultures.[5]

Suggesting that State Forest Officers (SFO's) are modern-day alchemists, dictating the course of nature, is hubristic to say the least. As science has now proven that deforestation is detrimental to society it would suggest that reliance on Forests NSW for definition of terms is not only inappropriate, it highlights the lack of independence and due process oft quoted as a goal of this assessment and the NRC.

We also note that the PAR begins with the disclaimer:

> Some issues…are better documented than others and some of the documentation understandably reflects the particular focus of the person or organisation preparing the original material.

The inadequacy of the PAR is highlighted by the above quote.

We note with some concern the irregularities in data provision, as noted by the Auditor-General in regards to FNSW. The PAR states at page 54:

> This results in a net harvestable area of approximately 111,000 hectares (Forests NSW, pers. comm.)

On page 59 table 7 states that there is a net harvestable area of 306 444 hectares. This example of conflicting figures is yet more proof that FNSW reportage is erroneous as a matter of course.

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[3] Preliminary Assessment Report: *Riverina Bioregion Regional Forest Assessment*; River Red Gum and Other Woodland Forests (2009) p38.
[4] PAR above n 3, p135.
[5] Ibid *Glossary* p193, (emphasis added).

Forests NSW 'best practice' is evidenced by the statement:

> Reducing the number of trees through any of the three silvicultural systems above may reduce tree mortality due to competition for water and improve the regeneration prospects of retained and thinned trees.[6]

The simple translation of this statement would be that logging and killing trees reduces tree mortality. On ground evidence shows patch clearfelling can in no way be described as thinning or beneficial to forest values.

In 1870 the river red gums in Barmah Forest were 'so dense that the eye can penetrate only a little way into the forest' and that there were '80–100 trees per acre'.[7]

The many instances of 'don't know' evidenced in the PAR is of concern. If there is no data available then this process must be much more extensive than the original scope of assessment. It seems history repeats itself when implementing Forest Assessments. We contend that as a nation we have much more data and scientific knowledge than even ten years ago, given these forests are some of the most studied in Australia.

Key issues for legislative and policy frameworks

The PAR does not apply or mention the precautionary principle. The definition of ESD and the precautionary principle currently in place is contained within the *Protection of the Environment Administration Act 1991* at s6(2):

> Ecologically sustainable development can be achieved through the implementation of the following principles and programs:
>
> (a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
>
> In the application of the precautionary principle, public and private decisions should be guided by:
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> (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
>
> (ii) an assessment of the risk-weighted consequences of various options,
>
> (b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,
>
> (c) conservation of biological diversity and *ecological integrity*—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.

There is much uncertainty on the effects of climate change but one of the certainties is that deforestation is one of the biggest causes.

> The loss of natural forests around the world contributes more to global emissions each year than the transport sector. Curbing deforestation is a highly cost-effective way to reduce emissions; large scale international pilot programmes to explore the best ways to do this could get underway very quickly.[8]

The Stern Review goes on to state in Annex 7f:[9]

> Deforestation is the single largest source of land-use change emissions, responsible for over 8 GtCO2/yr in 2000. Deforestation leads to emissions through the following processes:
>
> The carbon stored within the trees or vegetation is released into the atmosphere as carbon dioxide, either directly if vegetation is burnt (i.e. slash and burn) or more slowly as the unburned organic matter decays. Between 1850 and 1990, live vegetation is estimated to have seen a net

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[6] Ibid p59.

[7] Fahey C., 'Barmah Forest: A History' Department of Conservation, Forests and Lands, Melbourne in Ballinger A., and Mac Nally R., 'The Landscape Context of Flooding in the Murray–Darling Basin' Advances in Ecological Research 39, Elsevier, [2006].

[8] The Stern Review on the Economics of Climate Change <http://webarchive.nationalarchives.gov.uk/+/http:/www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm>

[9] Ibid, 'Emissions from the land-use change and forestry sector.'

loss of 400 GtCO2 (almost 20% of the total stored in vegetation in 1850).[10] Around 20% of this remains stored in forest products (for example, wood) and slash, but 80% was released into the atmosphere. The removal of vegetation and subsequent change in land-use also disturbs the soil, causing it to release its stored carbon into the atmosphere.[11] Between 1850 and 1990, there was a net release of around 130 GtCO2 from soils.

Also a correct definition of CAR is in order. The original definition was:

Comprehensiveness: which refers to the extent to which a reserve system contains samples of the major forest ecosystem types in a region.
Adequacy: entails a suite of considerations that enable an evaluation of the extent to which the long term ecological viability of conservation values is ensured.
Representativeness: assesses the extent to which the variation and diversity within each major forest ecosystem is protected.[12]

We also note with concern the scant mention of the EPBC Act. We hold that the continued logging of these forests is illegal under this Act. Section 17B states:

(1) A person is guilty of an offence if:
(a) the person takes an action; and
(b) the action results or will result in a significant impact on the ecological character of a wetland; and
(c) the wetland is a declared Ramsar wetland.
(1A) Strict liability applies to paragraph (1)(c).

And at (3): An offence against subsection (1) or (2) is punishable on conviction by imprisonment for a term not more than 7 years, a fine not more than 420 penalty units, or both.

The *Ramsar Convention* states at Article 4:

1. Each Contracting Party shall promote the conservation of wetlands and waterfowl by establishing nature reserves on wetlands, whether they are included in the List or not, and provide adequately for their wardening.

Article 4 (2) states:

Where a Contracting Party in its urgent national interest, deletes or restricts the boundaries of a wetland included in the List, it should as far as possible compensate for any loss of wetland resources, and in particular it should create additional nature reserves for waterfowl and for the protection, either in the same area or elsewhere, of an adequate portion of the original habitat.

We contend that the State government is obliged to compensate the NSW citizens for the loss of wetland values as a result of 'targetted thinning' and 'stand improvement' logging over the past 100 years.

ESFM

There is an obvious disjunction between what the native forestry industry believe is 'best practice' and what independent scientists, academics and 80% of the community believe is sustainable. Forests NSW seem to be oblivious to the word 'ecologically' and state they operate according to principles of ecologically sustainable forest management (ESFM). We

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[10] Baumert, Herzog and Pershing 'Navigating the numbers: Greenhouse gas data and international climate policy' World Resources Institute, [2005]; see also Houghton J.T., 'Revised estimates of the annual flux of carbon to the atmosphere from changes in land use and land management' 55 *Tellus B*, [2003]1850-2000, 378.

[11] Houghton J.T.,'Tropical deforestation as a source of greenhouse gas emissions', (2005) in*Tropical Deforestation and Climate Change* , Moutinho and Schwartzman [eds.]; see also Houghton JT, Ding Y, Griggs DJ, et al. (eds.), 'Climate change 2001: the scientific basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change' *Intergovernmental Panel on Climate Change*, Cambridge University Press [2001]; also Food and Agriculture Organization of the United Nations, 'State of the world's forests', Washington, DC: United Nations (2005).

[12] Mackey B., 'Regional Forest Agreements -Business as Usual in the Southern Region' 43(6) *National Parks Journal*, December [1999].

contend that there is no genuine attempt to implement and enforce the ESFM principles in any diligent manner. The five principles of ESFM are:[13]

1. Maintain or increase the full suite of forest values for present and future generations across the NSW native forest estate;

Clear felling, under whatever guise put forward by FNSW spin doctors, the demise of species and the water shortages are all a breach of the principles of intergenerational equity.

Australia has an obligation under international law to ensure that human rights are protected.[14] These obligations arise through Australia's ratification of various international human rights instruments like the *International Covenant on Civil and Political Rights* and the *International Covenant on Economic, Social and Cultural Rights.* Australia has agreed to 'respect, protect and fulfil' these rights.[15] Principle human rights which are subject to degradation as a result of climate change are the right to life,[16] the highest standard of physical and mental health[17] and the right to water.[18] The Australian Human Rights commission in its submission to the *Environment Protection and Biodiversity Conservation Act 1999* review stated that the Act:

> requires formal and direct linkages to the *Water Act 2007* as a matter of urgency.[19]

Deforestation and degradation is one of the biggest causes of climate change.[20] Water quality and availability has been dramatically reduced by logging of most catchment areas.[21]

There are obligations on the Commonwealth of Australia arising from the *Intergovernmental Working Group in Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests (Montreal Process),* the *Convention on Biological Diversity, Agenda 21* and the *Kyoto Protocol on Climate Change.*

Agenda 21 states:

> 11.1. There are major weaknesses in the policies, methods and mechanisms adopted to support and develop the multiple ecological, economic, social and cultural roles of trees, forests and forest lands…More effective measures and approaches are often required at the national level to improve and harmonize ..legislative measures and instruments…participation of the general public, especially women and indigenous people.

There is no mention of how the public fora will inform the final report. Merely holding a public forum does not constitute meaningful participation of the public in any decision making processes.

In the *Vienna Convention on the Law of Treaties 1969* Article 18 states:

> A State is obliged to refrain from acts which would defeat the object and purpose of a treaty when:
> (a) it has signed the treaty or has exchanged instruments constituting the treaty subject to ratification, acceptance or approval, until it shall have made its intention clear not to become a

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[13] See eg Attachment 13 *Regional Forest Agreement for Southern NSW 2001,* p107.

[14] UN Office of the High Commissioner for Human Rights, "What are Human Rights?" (2008).

[15] UN Committee on Economic, Social and Cultural Rights, *General Comment No 9 – the Domestic Application of the Covenant (1998)* UN Doc E/C.12/1998/24; UN Human Rights Committee, *General Comment No 31 – Nature of the General Legal Obligation imposed on State Parties to the Covenant (2004)* UN Doc CCPR/C/21/Rev.1/Add.13; UN Committee on Economic, Social and Cultural Rights, *General Comment No. 3 - On the Nature of State Parties' Obligations (1990)* UN Doc, E/1991/23, annex III.

[16] The right to life is contained in Article 6 *International Covenant on Civil and Political Rights*, opened for signature 16 December 1966, 999 UNTS 171 (entered into force 23 March 1976); Australia ratified the ICCPR on 13 August 1980 and the CRC on 17 December 1990.

[17] Article 3 of the *Universal Declaration of Human Rights,* GA Resolution 217A(III), UN Doc A/810 at 71 (1948).

[18] See Articles 11 and 12 ICESCR; Article 14, paragraph 2(h) CEDAW; Article 28, paragraph 2(a) CRPD; Article 24, paragraph 2(c) CRC.

[19] See the Australian Human Rights Commission 'Independent Review of the EPBC Act,' 30 January 2009.

[20] Professor Ross Garnaut, *Garnaut Climate Change Review,* 2008.

[21] Mackey B, Keith H, Lindenmayer D, and Berry S, 'Green Carbon: The Role of Natural Forests in Carbon Storage, Part 1, A green carbon account of Australia's south-eastern Eucalypt forest, and policy implications' ANU E Press, [2008] available at <http://epress.anu.edu.au/green_carbon_citation.html>.

party to the treaty.

A material breach of a treaty is:

(a) a repudiation of the treaty not sanctioned by the present Convention; or

(b) the violation of a provision essential to the accomplishment of the object or purpose of the treaty.

Therefore by not preventing the destruction of NSW state forests, for not enforcing the legislative requirements for compliance, for wilfully contributing to climate change Australia is not only in breach of it's domestic obligations, it's in breach of it's international obligations.

2. Ensure public participation, access to information, accountability and transparency in the delivery of ESFM;

For FNSW record of adhering to this principle see *Watt v Forestry Commission* and *Digwood v Forestry Commission.*

There is no environmental democracy and no consultation in State Forest areas. Individuals or communities call a meeting, the community objects, Forests NSW log regardless. The rights of public participation is limited to making submissions to the state and federal governments if the various pieces of legislation come up for review.

Agenda 21 states:

> 23.2. One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making…This includes the need of individuals, groups and organizations to participate in environmental impact assessment procedures and to know about and participate in decisions, particularly those which potentially affect the communities in which they live and work.[22]

To date SEFR has seen little data on Forests NSW assessment of the impacts of logging on native forest ecosystems.

3. Ensure legislation, policies, institutional framework, codes, standards and practices related to forest management require and provide incentives for ecologically sustainable management of the native forest estate;

In contrast the FNPE Act and subordinate legislation provide incentives for unlawfulness without fear of capture. When penalties are low, and the possibilities of being found out are light, people take risks.[23] Regulatory systems rely upon the enforcement of statutory requirements.

> When there is no enforcement contraventions go unpunished and the incentive for compliance is nil.[24]

'Sustainable use' means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.[25] Despite the rhetoric on 'sustainable forestry' the prescriptions have not been effective in protecting forest species and habitats and they do not comply with the principles of ecologically sustainable development and the conservation of biodiversity.[26] In the Red Gum forests there have been several breaches of logging conditions that prevent trees over 150cm being felled. In addition freshly cut stumps were found in a protective exclusion zone around a tree harbouring a Wedge-tail eagle nest.

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[22] Agenda 21 also states at 23.2: "Individuals, groups and organizations should have access to information relevant to environment and development held by national authorities, including information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection measures." < http://www.un.org/esa/dsd/agenda21/index.shtml>; for an example of FNSW unwillingness to inform the public see *Watt v Forests NSW* [2007] NSWADT 197. The royalty rate is $6.90/tonne for pulp logs from the Sthn Region & $16/tonne for Eden.

[23] Bates G., Lecture on Fundamentals of Environmental Law, ANU, 16 July, 2009.

[24] Macintosh A., 'Why the Environment Protection and Biodiversity Conservation Act's Referral, Assessment and Approval Process is Failing to Achieve it's Environmental Objectives' 21 EPLJ [2004] 288 p302.

[25] Convention on Biological Diversity (Rio de Janeiro, 5 June 1992) Entry into force generally and for Australia: 29 December 1993 *AUSTRALIAN TREATY SERIES 1993* No. 32

[26] Ibid.

The NSW Red Gum forests are subjected to patch-clearfelling, a technique that removes all trees within 0.4 of a hectare, or around half a football field. This is not sustainable as evidenced by the PARs own data.

4. Apply precautionary principles for prevention of environmental degradation;

The Precautionary Principle is Principle 15;

> Where there are threats of serious or irreversible environmental damage full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment.

As McClellan CJ stated:

> Thus, the inherent uncertainty or bias in the scientific method combined with (generally speaking) a perennial lack of resources and a consequential lack of data to assist scientists, leads inevitably to the conclusion that there is likely to be an incomplete understanding of the full extent of the environmental impacts of any particular act or activity proposed. That prospect, supported by empirical observations gathered world-wide, led to the development of the precautionary principle as a commonsense approach to avoid or minimise serious or irreversible harm to the Environment.[27]

In other words, if you are unsure of the consequences or effects your actions will have in respect to environmental ecosystem damage, then do not act. The scant regard to the precautionary principle is exampled by the statement:

> The Plan comments that the exact ecological outcomes arising from operation of the proposed structures will be unknown until they have been operated in real time, under a range of antecedent conditions, and that the exact nature of both unregulated and regulated river flows, and the quantum of environmental water available, is unknown. Consequently, operation of the structures will be altered in line with adaptive management principles in order to react to the ecological response observed.[28]

5. Apply best available knowledge and adaptive management processes;

It is absurd to allege that these principles are at the helm of native forest management, given what we have seen of day-to-day forestry operations. One of the biggest myths is that FNSW replant after logging native forests. This is very far from the truth. Once logged and burned the forests may take decades to regenerate or they might not regrow at all, and at any rate replanting is not sufficient to offset the biodiversity losses created by clearing because of lags in species becoming established and differences in species composition.[29] Forests are altered inexorably. The public are subsidising the logging of native forests, which hold and remove vast amounts of carbon, so they can be turned into sleepers or firewood. This is certainly not sustainable. The PAR figures on product volume estimates are:

35% firewood and 25% sleepers.[30]

Occular evidence suggests these figures are erroneous. The figures provided by the Economists at Large are:

Sawn timber 17%
Residual/Other 83%
This is broken down into 65% firewood
18% mulch
3% appearance grade
7% structural grade
7 % residual.[31]

Even at PAR rates the majority of product is low 'value added' product. The combined revenue

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[27] In *BGP Properties Pty Limited v Lake Macquarie City Council* [2004] NSWLEC 399 citing Trenorden J et al in *Conservation Council of South Australia v Development Assessment Committee and Tuna Boat Owners Association* (No 2)/ [1999] SAERDC 86

[28] PAR above n3, p157.

[29] FNSW proposed to burn 23,263 hectares just in the Southern sub-region, FNSW Southern Region Burning Proposals 2007.

[30] PAR above n3, p108.

[31] 'River Redgum Forestry in the NSW Riverina; Seeing the Value for the trees' Economists at Large, 2008.

of sleepers down to sawdust is greater than that for furniture grade to decking timbers.

> The greatest change would have been the vast quantities of fallen timber that have been removed from floodplains for firewood since settlement by Europeans…On floodplains the debris appears to have been lost principally for firewood and timber harvesting.[32]

Nothing highlights the double speak of Forests NSW more clearly than the statement on page 97:

> Collaborative efforts between Forests NSW, timber industry operators, NGO and community groups as well as other Government agencies led to the development of policies and plans to promote and protect non-use values. Permanent reservation areas for Flora reserves and cultural heritage sites, retention of hollow habitat trees for fauna and the recognition of the Central Murray State Forests as wetlands of international significance stand as testaments to ecologically sustainable management practices introduced over the past 30 years.

Granted there has been a collaborative effort between FNSW and loggers, but to state that their archaic practices are ecologically sustainable goes against even the findings of the PAR. These types of statements are offensively erroneous. The government has not ensured the adoption of Ecologically Sustainable Forest Management practices, environmental safeguards have not improved and DECC has not ensured the maintenance of existing regulatory controls.[33]

The aim of implementing a Forest Agreement and then an IFOA for the 'long term benefit' of these forests is a specious claim given the failure of Northern, Southern and Eden Forest Agreements and IFOAs to deliver protection or any social, economic or environmental benefits to the State and community.

Heritage values

'Land is intrinsic to our identity…words don't have any meaning, it goes beyond explanation.'[34]

The PAR states at page 93

> The NRC's assessment follows after significant work done as part of Forests NSW EIS conducted last year, and it will need to be followed up with more detailed and focussed consultations with Aboriginal people.

We question the use of the word 'significant'. Two meetings and a one day workshop in April at the end of the EIS process with one week left to go to print does not constitute any sort of meaningful consultation. The NRC has only spent two days with Aboriginal people, which is far better than any FNSW records. The recommendations that a full time consultant be employed throughout both the EIS and NRC processes was ignored. If the State government was serious about consulting with Aboriginal people it would grant ownership of these forests to them. Connection to the land goes beyond the western concept and understanding of nature, with the intrinsic link and relationship, caring for country, fundamental to Indigenous peoples and crucial to society.

> Yorta Yorta Nation have selected representatives descending from the 16 family groups from the region. This group was formed to make decisions in regards to land and water in the Murray-Goulburn region with an aim to advance sovereignty, self-determination and preservation. Since 1994, the Yorta Yorta nation has been trying to lodge for their land rights

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[32] MacNally R., Parkinson A., Horrocks G., and Young M., 'Current Loads of Coarse Woody Debris on Southeastern Australian Floodplains: Evaluation of Change and Implications for Restoration' 10(4) *Restoration Ecology* [2002] 627.

[33] The *Southern Region Forest Agreement 2002,* Environmental Management Systems 2.1. "The EMS shall be the mechanism by which SFNSW will implement commitments and obligations under the NSW *forest agreements* and RFAs and effectively contribute to Australia's international obligations under the Montreal process." ESFM 'initiatives' are in s2 (11).

[34] A senior Boonerwrung elder in Kingsley j., Townsend M., Phillips R., and Aldous D., "If the land is Healthy It Makes the People Healthy: The Relationship Between Caring for Country and Health for the Yorta Yorta Nation, Boonwurrung and Bangerang Tribes' 15 *Health and Place* [2009] 291.

but their claims have been rejected on all occasions.[35]

Biodiversity

The assessment report does not provide any scientific assessment of the impacts of logging and other activities on forest ecology and does not refer to relevant literature. It does not properly address the great percentage of biodiversity in the forests, restricting itself to a handful of threatened species, without considering biodiversity surrogates or regionally significant species. It does not identify refugia, corridors and linking habitats in the region. For example about 54 waterbird species have been recorded breeding in the forest. A further ten species are non-breeding vagrants or migrants listed in migratory bird agreements with Japan and China.[36]

The numbers of threatened species, threatened populations and ecological communities increased significantly over the last ten years. The Intergovernmental Agreement 1992 states that:

> The parties agree that policy, legislative and administrative frameworks should provide for:
> (iv)consultation with affected individuals, groups and organisations;
> (v)consideration of all significant impacts;
> (vi)mechanisms to resolve conflict and disputes over issues which arise during the process;
> (vii)consideration of any international or national implications.[37]

Many threatened and endangered flora and fauna species are at extreme risk from current logging operations. The Reserve system gazetted to date is neither comprehensive, representative, or adequate to meet the needs of threatened species survival. The Scientific Committee's figure for NSW species, populations or ecological communities threatened with extinction in 2009 is 1035.[38] This figure, when compared to the 1998 figure of 868[39] is the most indicative of FNSW effect on our environment.[40]

Professor Richard Kingsford, Professor Brendan Mackey and a think tank of thirteen eminent scientists has stated:

> Loss and degradation of habitat is the largest single threat to land species, including 80 percent of threatened species.[41]

As proven the greatest threats to Australia's biodiversity are caused by broad-scale land clearing and forestry operations including establishment of plantations and fire management practices, yet these industrial forestry practices continue to remain exempt from legislation.[42] Compared to most other public forests in NSW, the Red Gum forests of south west NSW are woefully mismanaged. In the coastal forests of NSW, for example, 10 habitat trees and 10 recruitment trees must be retained every two hectares, though FNSW does not adhere to these prescriptions. This compares to only four of each in the Red Gums. In the Red Gum forests in

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[35] Ibid.

[36] Leslie D., 'Effect of River Management on Colonially-Nesting Waterbirds in the Barmah-Millewa Forest, South-Eastern Australia ' 17 *Regulated Rivers Research and Management* [2001] 21–36.

[37] IGA 1992 sch 2 (3).

[38] For 2008 figures See <http://www.threatenedspecies.environment.nsw.gov.au/index.aspx>.

[39] For 2000 and 2003 figures see <http://www.environment.nsw.gov.au/soe/soe2003/chapter6/chp_6.3.htm#6.3.69> and for 2006 figures <http://www.environment.nsw.gov.au/soe/soe2006/chapter6/chp_6.3.htm#6.3.71>.

[40] See <http://www.threatenedspecies.environment.nsw.gov.au/index.aspx>. Two examples illustrate this point: firstly, in relation to the endangered Hasting River Mouse and the Southern Brown Bandicoot, the conditions contained in the Integrated Forestry Operations Approval for these species have been weakened for certain core areas at the behest of the Forests NSW to increase access for logging. Secondly, in relation to the endangered Spotted-tailed Quoll, FNSW were found illegally logging a Spotted-tailed Quoll exclusion zone in Forestland State Forest in Upper and Lower North East NSW. They admitted the fact, but claimed it was a 'mistake'.

[41] Kingsford R. T., Watson J. E. M., Lundquist C. J., Venter O., Hughes L., Johnston E.L., Therton J.A., Gawel M., Keith D.A., Mackey B.G., Morley C., Possingham H.P., Raynor B., Recher H.F., and Wilson K.A., 'Major Conservation Policy Issues for Biodiversity in Oceania' InterScience [2009] 834-840 at <http://www3.interscience.wiley.com/journal/118487636/home?CRETRY=1&SRETRY=0>

[42] See The National Strategy for the Conservation of Australia's Biological Diversity (1996).

Victoria, no tree greater than 100cm is allowed to be felled. The limit in the NSW Red Gums is 120cm. Big older trees provide habitat for hollow-dependent species like the endangered Barking Owl and Squirrel Glider.
The NSW Scientific Committee made a determination in 2007 that the loss of hollow-bearing trees is a key threatening process.[43] Key Threatening Processes such as the removal of dead trees and the loss of hollow-bearing trees occur on a daily basis on the State forest estate, with impunity.

The Expert Panel stressed that the persistence and perpetuation of hollow bearing trees is imperative for the survival of forest fauna.[44] A discussion of the conservation measures in place to maintain these hollow bearing trees highlighted the following points:

- Tree mortality is high; the ratio of one recruit tree to one hollow bearing tree is unlikely to maintain the targeted number of hollow bearing trees in Net Harvest Areas in the mid to long term. This is particularly the case in the regrowth zones. Modelling is required to define a more appropriate ratio of recruits to hollow bearing trees.
- The rotation time between harvesting events within a compartment requires revision. Current rotation intervals are too short to allow recruitment trees to form hollows. Additionally, hollow bearing trees retained from the previous harvesting event are not permanently marked therefore could be removed in the next rotation.
- Guidelines or criteria should be developed for the selection of recruitment and hollow bearing trees. Trees with the potential to develop a broad range of hollow types should be targeted for selection. Suppressed trees should not be selected as recruit trees.
- Prescriptions for the retention and recruitment of hollow bearing trees in the Net Harvest Area should be rewritten to emphasise not only maintaining these features during a single cutting cycle but managing them to persist in the landscape.
- Specific prescriptions should be developed for hotspots, defined as areas of high species richness. A sliding scale, where incremental increases in species diversity are matched by increases in prescription strength, was suggested.

SEFR's observations, from on-ground monitoring ten years later, see little change to logging practices; the habitat to recruitment ratio is still one to one; the regrowth zone is weaker, because only the hollow-bearing trees present are retained there are no stipulations in any harvest plans to retain previously retained trees and rotation times have shortened.
Habitat and recruitment tree selection is getting more parlous by the year. Many suppressed recruitment and very small habitat trees (often with no visible hollows) are always found when auditing logged areas, though the stumps are invariably of the largest size class. The sliding scale idea was put in place yet the solid data on exact amounts of each habitat class that has been logged since 1999 seems non-existent and the volume of 'high' class habitat is not reported on.

FNSW have been informed on the extent of threatened species in their region yet could only find a few of these species. To obtain data for surveys FNSW officers conduct 'nocturnal surveys'. On the South Coast of NSW SFOs have often been observed shining their torch on the ground to look for aboreal mammals and nocturnal birds.

Logging contractors and FNSW are the biggest and most common 'negative agents of a native forest. The ecosystem health and vitality of a native forest becomes severely affected once logged and burnt.

> Commercially logged forests have substantially lower carbon stocks and reduced biodiversity than intact natural forests, and studies have shown carbon stocks to be 40 to 60 per cent lower

[43] DECC Scientific Committee Final Determination at <http://www.environment.nsw.gov.au/threatenedspecies/KeyThreateningProcessesByDoctype.htm>
[44] From 'Review of Protective Measures and Forest Practices – Biodiversity Workshop Southern Region' Ecologically Sustainable Forest Management Group, July 1999, Project No. NA45/ESFM p176-177.

depending on the intensity of logging.[45]

The report does not provide an assessment of the adequacy of environmental prescriptions on logging and fails to make any comparison with prescriptions applied in other regions.
Red Gum forests are vital refuges for plants and animals in a rapidly warming world.

Water

> The magnitude, timing and duration of floods which sustain the river red gum forests are likely to change significantly into the future.[46]
> Therefore it is unlikely that inundation extents beyond the 25,000 ML/d will be delivered at the appropriate frequency and duration to sustain vegetation communities into the future. Considering this, the ecological objectives for Barmah-Millewa forest are unlikely to be met.[47]

In June 2004, the Intergovernmental Agreement on Addressing Water Overallocation and Achieving Environmental Objectives in the Murray–Darling Basin was signed by the Commonwealth and relevant State Governments.
The parties committed funding of $500 million over five years to recover 500 GL per annum of water to achieve specific environmental objectives and outcomes for six significant ecological assets.[48] Five of the significant ecological assets are localities within the Murray River system for example Barmah Millewa Forest, while the sixth significant ecological asset, the River Murray Channel, forms an artery between forest, floodplain, wetland and estuarine assets.[49]
The River Murray Channel has now been recognised as 'a significant ecological asset'.
The interconnectivity of water and land ecosystems is without question and the symbiosis is a fine ecological balance that has been greatly affected by logging and river regulation.

There is growing evidence that lower rainfall and reduced runoff in the south-east of Australia is linked to global warming.[50] Forests are responsible for the transpiration of vast quantities of water, both in quantity (representing some 48% of all terrestrial evapo-transpiration) but also from soil depths and over periods well beyond those from mere surface evaporation. This transfer of water from the earth's soils to the atmosphere by trees is both significantly greater than that observed from similar non-forested lands and contributes to far more frequent and denser cloud formation than from similar non-forested lands. Consistent decreases in water loss, cloud formation and rainfalls have been recorded over regions following de-forestation. Higher levels of cloudiness and rainfall have similarly been confirmed over forested or re-forested regions than over equivalent cleared regions or oceans.

Integral to their transpiration of massive quantities of water to form clouds, many forests also release vast quantities of bacteria. These are convected into the clouds from the stomatal cavities of foliage and act as cloud condensation and rainfall nuclei. Over 1 billion tonnes of such organic nuclei are produced and released into the upper atmosphere annually. Laboratory and cloud seeding studies confirm the effectiveness of these hygroscopic nuclei in forming condensation droplets, retaining and coalescing water droplets resulting in increased rainfalls. Many forested regions may therefore be able to maintain higher levels of transpiration, cloud cover, cloud albedo, rainfall and bio-productivity than cleared regions.[51]

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[45] Mackey B, et al above n 21.
[46] PAR above n3, p25.
[47] PAR above n3, p137.
[48] Council of Australian Governments, 2004 .
[49] Murray Darling Basin Ministerial Council, 2004.
[50] SEACI *Global warming linked to rainfall decline in south-east Australia,*(Media Release) South Eastern Australian Climate Initiative, 1 May 2009.
[51] Jehne W., 'Forests Make Rain - the role of forests in the microbial nucleation and governance of rainfalls and sustainable bio-systems' (2006) CSIRO 64E *Sustainability Newsletter* 17.02.2007 <http://www.bml.csiro.au/SNNewsletters.htm >.

Climate Change

Progressive deforestation since the commencement of agriculture is destroying the Earth's natural ability to regulate water and temperature balances, with rising CO2 and global warming being twin symptoms of the problem.

> The Government's land-use policy frame is fundamentally erroneous. Native forests, the less efficient resource for forestry industry competitiveness, are tagged for wood production with lost opportunities for the job they do best: carbon storage. Plantations, the less efficient and less reliable resource for carbon storage, are tagged for carbon storage with lost opportunities for the job they do best: wood supply.[52]

The PAR overlooks the relevant policies on Climate Change and Biodiversity Adaptation, and selectively quotes the CSIRO (2008) report to avoid the key finding – that large protected areas are vital to the survival of species in a warming world.[53]

Conditions placed on logging native forests to ameliorate impacts as a result of logging are increasingly inadequate as climate change escalates. Forest authorities' accounting and information systems fail to assess the true value of carbon and water resources that are stored in native forests. There is no reporting on total native forest ecosystem biomass, the figures provided are for plantations only. The value of these stored resources in native forests far exceed the royalties received from logging operations, even when carbon is conservatively valued at a price of twenty dollars a tonne.

To state that there is lack of knowledge is erroneous. The lack of data provision is due to FNSW lack of transparency. The PAR states:

> …knowledge of the implications of alternative forest management regimes, and of the life cycle analysis of carbon in forest products, are generally lacking.

Brendan Mackey et al states:

> Forest protection is an essential component of a comprehensive approach to mitigating the climate change problem for a number of key reasons. These include: For every hectare of natural forest that is logged or degraded, there is a net loss of carbon from the terrestrial carbon reservoir and a net increase of carbon in the atmospheric carbon reservoir. The resulting increase in atmospheric carbon dioxide exacerbates climate change.[54]

And

> The remaining intact natural forests constitute a significant standing stock of carbon that should be protected from carbon emitting land-use activities. There is substantial potential for carbon sequestration in forest areas that have been logged if they are allowed to re-grow undisturbed by further intensive human land-use activities. Our analysis shows that in the 14.5 million ha of eucalypt forests in south-eastern Australia, the effect of retaining the current carbon stock (equivalent to 25.5 Gt [55] CO2 (carbon dioxide)) is equivalent to avoided emissions of 460 Mt[56] CO2 yr-for the next 100 years. Allowing logged forests to realize their sequestration potential to store 7.5 Gt CO2 is equivalent to avoiding emissions of 136 Mt CO2 yr-1 for the next 100 years. This is equal to 24 per cent of the 2005 Australian net greenhouse gas emissions across all sectors; which were 559 Mt CO2 in that year.[57]

The report goes on to state:

> We can no longer afford to ignore emissions caused by deforestation and forest degradation from every biome (that is, we need to consider boreal, tropical and temperate forests) and in

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[52] Ajani J., 'Australia's Transition from Native Forests to Plantations: The Implications for Woodchips, Pulpmills, Tax Breaks and Climate Change Agenda': 15(3) A Journal of Policy Analysis and Reform, [2008].

[53] CSIRO, 'Implications of Climate Change for the National Reserve System,' CSIRO Sustainable Ecosystems to the Australian Greenhouse Office, (2008).

[54] Mackey B et al, above n21 .

[55] Gigatonne (Gt) equals one billion or 1.0 x 109 tonnes.

[56] Megatonne (Mt) equals one million or 1.0 x 106 tonnes.

[57] Mackey B et al, above n21, pg 7.

every nation (whether economically developing or developed). We need to take a fresh look at forests through a carbon and climate change lens, and reconsider how they are valued and what we are doing to them.[58]

Deforestation in 2006 created over seventeen percent of NSW greenhouse gas emissions.[59] Ending native forest logging would assist in reducing the greenhouse gas emissions of the state.

> The clearing of native forests and woodlands and their degradation - mainly through logging - generates a conservatively estimated 18 per cent of Australia's annual greenhouse gas emissions.[60]

Professor Peter Wood and Professor Judith Ajani indicate that at CO2 prices of just ten to fifteen dollars per tonne, which is less than the Garnaut Review's recommended starting price for carbon pollution permits, hardwood plantation owners will receive more money from growing carbon than wood.[61]

Australia is very fortunate. By letting previously logged native forests regrow to their natural carbon carrying capacity, the ANU scientists estimate that they would soak up around 7500 million tonnes of CO2-e over the coming one hundred to two hundred years.[62]

Incredibly we are told:

> Given the lack of available data and the limited time available for this NRC forest assessment, the NRC will not be in a position to fully assess the carbon sequestration values of the river red gum forests or the wood products originating from them.[63]

Who better to assess carbon sequestration values and data than the NRC, a body designated to assess the value of forests with great resources and seemingly no funding issues and have for all accounts been funded to do this assessment. If the time for assessment is too limited then the assessment process must be flawed.

Socio economic benefits?

The only economic benefits of logging is to logging contractors. FNSW is currently running fourteen million dollars in the red.

> I can only see this loss increasing as Forests NSW continues to look for new sources of hardwood timber and the costs of harvest and haulage increase. This will be very difficult to manage.[64]

We note these figures do not delineate between native and plantation sectors. We ask that further detailed reporting be done to allow the public and the Commissioner to understand the true socio-economic 'benefits' of native forest logging.

It should be obvious for FNSW to recognise that there is no socio-economic benefit in logging native forests when consideration of FNSW employee numbers show a drop of 2,183 employees over the period 2002 to 2008.[65]

The losers are the community who have had their forests plundered at a loss. FNSW state it will maximise it's contribution to the social well being of the communities, yet in FNSW Annual reports its shown that FNSW did not make any grants to non-Government community

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[58] Ibid pg 13.

[59] Department of Climate Change 2008 *Australia's National Greenhouse Accounts 2006 State and Territory Greenhouse Gas emissions* p.17, (the figure is 17.2%).

[60] Blakers M., Comments on Garnaut Climate Change Review: Issues Paper 1 Land-use – Agriculture and Forestry, (2008).

[61] Wood P.J. & Ajani J., Submission to the Commonwealth Government on the Carbon Pollution Reduction Scheme Green Paper and Addendum, (2008).

[62] Ajani J., 'Time for a Coherent Forest Policy - Finally' (2008) Centre for Policy Development, http://cpd.org.au/article/time-coherent-forest-policy-finally

[63] PAR above n 3, p118.

[64] The Auditor-General, Mr Peter Achterstraat, Media Release, *Auditor-Generals Report*, Sustaining Native Forest Operations, 29/4/2009, <http://www.audit.nsw.gov.au>

[65] The NSW Forest Agreements Implementation Report (2001/2002) published in 2006, p69 and FNSW Annual report 2007-08, p88.

organisations during 2005-06, 2006-07 and again in 2007-08.[66] We expect the text will remain unchanged in the 2009 Annual report due at the end of the financial year, though still unavailable.

The total employment in the forestry sector in NSW[67] in 2006 was:

841311	Forestry worker	404
841312	Logging Assistant	120
721112	Logging Plant	227
841313	Tree Faller	203
234113	Foresters	358
Total:		1312

The total figures for NSW forestry workers provided by the ABS is 1,695. The reported figure for forestry workers in the area covered by the assessment report is 163. While we question the validity of these figures, as our occular estimates are 136, SEFR requests a fair restructure package for individuals and businesses affected by the changes. Suggested options is the 163 positions are paid for five years at $198 321 per annum. The total package expense would be $161 630 000. Given that tourism income is estimated at $1.197 billion per annum this expense shall be recouped quickly and therefore the five year transition period is very generous.

Analysis of Attachment 6 Case Studies show that tourism benefits are eight times greater than logging revenues.[68] Revenue for tourism per annum is stated as being $258 million as opposed to logging at $32 million per annum. We note this is not including tourism data for the Murrumbidgee Shire which. Further analysis of tourism research information shows that for the Murray River, Riverina and Murray Regions, the areas of assessment focus, the combined tourism revenue is $2.634 billion.[69]

Conclusion

> It is somehow wrong to despoil the environment, to act in ways that waste natural resources and wildlife, and to gratify pleasures of the moment at the expense of living creatures who are no threat to us.[70]

Millions of taxpayer dollars have been funnelled into the PAR to produce an 'up-to-date snapshot' of the whole issue of native forest conservation and timber production in the Red Gum forests and wetlands. Unfortunately the timeframe for the report means that comprehensiveness has become a misnomer and the quality of the report leaves much to be desired from a scientific and social point of view.

Besides the fact that the report begins with a disclaimer that the information therein cannot be relied upon as factual, the key conclusion from the bulk of the report is that there is not enough

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[66] FNSW Annual Reports; 2005-06 p59, 2006-07 p69, 2007-08 p81.

[67] Australian Bureau of Statistics, Cat. No. 2068.0 - 2006 Census Tables, *2006 Census of Population and Housing NSW* Occupation by Sex-Alternative View. Occupation was coded to the 2006 ANZS Classification of Occupations. This has replaced the 1996 Australian Standard Classification of Occupations(ASCO) 2nd Edition, <http://www.censusdata.abs.gov.au>

[68] PAR above n3, p217.

[69] Tourism Research Australia at <http://www.tra.australia.com/content/documents/Regional%20Tourism%20Profiles/2007/NSW/The_Murray_FINAL.pdf>

[70] D'Amato A., 'What Obligation Does Our Generation Owe the Next? An Approach to Global Environmental Responsibility'*American Journal of International Law* [1990] 190.

scientific knowledge available about the Red Gum forests. The report has highlighted some significant areas or species where gaps still exist in quality data. As discussed throughout the report, a large number of the priority fauna species are lacking enough valid systematic records to enable presence-absence modelling and there seems to be insufficient records for valid modelling of any type. Such species tend to be those that are cryptic or difficult to survey. The lack of flora records is even more evident.

The effects and rate of human-induced climate change have increased dramatically in the last ten years. The prediction of the assessment report on the effects of climate change on the Red Gum forests and wetlands is that:

> the majority of the impact of climate change would be borne by the environment.[71]

Further, the significant carbon and water storage aspects of the Red Gum forests have been inadequately or not addressed at all.

Climate change will dramatically increase other threats to species in the region, through increased spread of invasive species, increased fire frequency and severity, increased spread of forest dieback, and reduced stream flows. The cumulative impact of all these threats, plus industrial logging operations, have resulted in a major impact on nationally-listed species.

Conditions placed on logging to ameliorate impacts as a result of logging are increasingly inadequate as climate change escalates. Forest authorities accounting and information systems fail to assess the true value of carbon and water resources that are stored in native forests. The value of these stored resources far exceed the royalties received from logging operations, even when carbon is conservatively valued at a price of twenty dollars a tonne.

Other authorities catchment planning agencies have almost unanimously concluded that forests are more valuable left standing in catchments than sold as timber. The methodology of the report for estimating the effects of logging on catchment water yield provides a reasonable 'best guess' that is unlikely to be much improved even with the expenditure of considerable effort.

The almost complete consensus of public opinion is the requirement to leave the land in a better state than it was found and to eliminate or drastically reduce all native forest logging immediately**.** In concurrence with the Stern Report and the Mackey Report, action to avoid further deforestation should be an urgent priority. Accordingly, if no action is taken, the health of native forests and therefore the Australian public will be severely detrimentally affected.

Extensive new Red Gum National Parks, with Aboriginal ownership wherever sought by Traditional Owners, should be implemented. The Red Gum forests are vulnerable ecosystems that need a 60% reservation target. National Parks are crucial to ecosystem resilience.

We call for an end to the grazing and logging of the Red Gum forests. Due to what is now known of the effects of climate change and what constitutes significant impacts on the Ramsar wetlands, the Commissioner's only recommendation can be the conversion of these forests into national parks.[72] Conservation of the remnant native forest of the Riverina is the only economical, ecological, social and morally viable outcome. Therefore we recommend that the State Forests of the NSW Murray Riverina region be handed back to the Traditional Indigenous Owners.

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[71] PAR above n 3, p125.

[72] *Minister for the Environment and Heritage v Queensland Conservation Council Inc.* [2004] FCAFC 190 Black CJ, Ryan and Finn JJ.