

STATE OF THE SOUTH EAST NSW NATIVE FORESTS



Contents

Summary of SEFR’s Findings	4
<i>Brief Historical Background</i>	8
<i>No Environmental Impact Assessment</i>	11
REVIEW OF REGIONAL FOREST AGREEMENT MILESTONES	14
<i>The Results of Monitoring of Milestones and Sustainability Indicators</i>	18
<i>Compliance to the Regulations</i>	19
<i>Breaches</i>	20
<i>EPL Breaches</i>	21
<i>TSL Breaches</i>	22
<i>Paucity and Transparency</i>	25
‘SUSTAINABLE’ YIELD	26
<i>Environmental Management Systems (‘EMS’)</i>	27
<i>Main Indicators for ESFM: Area Available, Growing Stock, Wood Supply and Value</i>	27
<i>Overcutting</i>	29
<i>Removal of Products from Forest Ecosystems</i>	32
<i>Removal of Wood Products Compared with Sustainable Volume</i>	33
<i>Allowable Volume of Logs</i>	34
<i>NSW Forest Agreement for the Eden Region 1999</i>	38
<i>Regional Forest Agreement for the Eden Region 1999</i>	39
<i>Integrated Forestry Operations Approvals</i>	40
<i>Analysis of Sustainability of Eden Timber Yields</i>	40
<i>Conclusion for the Eden Region</i>	45
<i>Conclusion for Both Regions</i>	46
BIODIVERSITY	47
<i>IFOA and PNF Prescriptions for Species</i>	50
<i>Listing Forest-Dwelling Species</i>	52
<i>Status of Threatened Forest-Dwelling Species</i>	52
<i>Species Extent and Abundance</i>	53
<i>Effectiveness of the Threat Abatement Plan</i>	54
<i>Residue versus Habitat Protection – A case study of the conditions of the Threatened Species Licence in the Southern Region</i>	55
<i>Fragmentation</i>	56
ECOSYSTEM Health and Vitality	57
<i>Forest Type by Area</i>	58

<i>Area of Forest Type by Growth Stage</i>	59
Regeneration	59
Post Fire Recovery and Research	60
Fire	61
Soil and Water Resources	66
Socio-Economic Benefits.....	68
CLIMATE CHANGE – or This is What We Don’t Know We Don’t Know	70
<i>Maintaining the Forest Global Carbon Pool</i>	73
FINDINGS	77

STATE OF THE SOUTH EAST NATIVE FORESTS OF NSW RFA SUBMISSION 2018

RECOMMENDATIONS

The creation of a truly genuine comprehensive, adequate, representative and resilient reserve system covering the Southern and Eden Regions native forests by:

- 1. the creation of jointly managed National Parks – transferring all public native forest to registered traditional custodians or native title holders of the area; and**
- 2. real incentives for conservation of private native forest.**

Exit assistance to be provided to support the native forest/woodchipping workers to adapt to a true and real ecologically sustainable plantation based industry.

Summary of SEFR's Findings

On the South Coast of New South Wales thousands of hectares of native forests are being clear-felled every year. The Forestry Commission of NSW, trading as the Forestry Corporation NSW, descriptions for these activities vary from 'Single Tree Selection - Heavy' to 'Australian Group Selection' to 'Modified Shelter Wood', yet they all amount to clear-felling or patch clear-felling on the ground. Old-growth, rainforest and mature age forests are being logged at an unsustainable rate. 85% of trees felled are turned into woodchips, either at the Eden woodchip mill or at the various saw mills on the South Coast and then trucked down to the woodchip mill.

To meet wood supply commitments, the native forest managed by the Forestry Corporation NSW is being cut faster than it is growing back.¹ The Forestry Corporation NSW have continuously logged over ecologically sustainable limits since the implementation of the Regional Forest Agreements ('RFAs'). The RFAs have not ensured sustainability, and in fact have ensured unsustainability.

The RFAs allowed the various woodchipping and logging groups to continue business as usual without any proper oversight or regulation. Logging activities in areas covered by RFAs have not been subject to an independent environmental assessment that is scientifically sound and rigorous. The scientific processes in the RFAs were politically compromised. Established Joint ANZECC/Ministerial Council on Forestry Fisheries and Aquaculture NFPS Implementation Subcommittee (JANIS) criteria for forest conservation were not fully applied. There are large areas of native forest that would have been reserved if the original RFA criteria for forest

¹ NSW Auditor-General, Report to Parliament, Performance Audit 'Sustaining Native Forest Operations' (2009) <http://www.audit.nsw.gov.au/ArticleDocuments/141/185_Sustaining_Native_Forest.pdf.aspx?Embed=Y>.

conservation had been fully applied, particularly in the Southern region.

On our analysis the Forestry Corporation NSW have not completed milestones that were required to be completed within the first five years of enactment of the RFAs, in other words by 2004-5. The *Draft Report on Progress with Implementation of the New South Wales Regional Forest Agreements* alleges that:

If a milestone was due during the first five years, but was completed by 30 June 2008, it is discussed as completed (e.g. even if it was completed after the first review period).²

This statement is erroneous and unsatisfactory in both timeline and content.

The extent to which milestones and obligations have remained uncompleted, the lack of results of monitoring of sustainability indicators, and the Forestry Corporation's lack of adherence to the legislation is disingenuous and exceedingly below satisfactory. The Forestry Corporation's 'implementation' of the RFAs in meeting specific milestones has been an abject failure, consistently late, and professionally inadequate.

There is a dis-connect within the native forest logging and woodchipping groups, in that they have exerted undue influence to ensure desirable outcomes for profit margins at the expense of the current and future generations of the State, with disregard for the law.

The present system of RFA forest management is uneconomical as the supposed 'income' is generated by the depletion of capital assets. The only economic benefits of logging and woodchipping is to the chipmill and a small number of logging contractors. Forestry Corporation NSW is currently suffering losses of between \$11 – \$16 million dollars per year. In our view, it is only the 'Community Service Grant' that enables FCNSW to say it has made a profit in the native forest sector, and FCNSW is again obfuscating the losses by conglomerating plantation and native forest figures.

I can only see this loss increasing as Forestry Corporation 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.³

These vast financial losses cannot be justified, nor can the huge amount of greenhouse gas emissions. The damage to state forests is systematic and routine and the law is disregarded. The unreasonable protection of the native forest woodchipping groups must come to an end.

² Draft Report on Progress with Implementation of the New South Wales Regional Forest Agreements (2009) Resource and Conservation Unit, NSW Department of Environment and Climate Change NSW, Sydney, 22 <<http://www.agriculture.gov.au/SiteCollectionDocuments/rfa/publications/annual-reports/nsw/assessors-report.pdf>>.

³ NSW Auditor-General, Media Release, Auditor-General's Report, Sustaining Native Forest Operations, 29/4/2009.

There are only 53 jobs in question – the on-ground logging workers. The sawmills can and have transferred to plantation only, as can the woodchip mill. The truck drivers can easily be redeployed.

The National Park additions to date, including the recent NSW Riverina Red Gums decision' are a progressive step, even though the Liberal National government opened the park to firewood collection. It must be noted that the benchmark was set by New Zealand in 2002, and Australia has been tardy and negligent in its attempts at meeting this world standard.

We note that from 2003 to 2010 Ian MacDonald was minister for the Forestry Commission. The original Integrated Forestry Operations Approvals ('IFOA') which contain the licence conditions were signed by Eddie Obeid, and six contracts signed by Ian McDonald.

Those who thought that the conversion of Forests NSW into the statutory corporation Forestry Corporation (NSW) would create a higher bar are stunned that the Commissioner for the Forestry Corporation was Richard Sheldrake, who is directly implicated in the latest Obeid scandal.

Tasmanian loggers who have been logging and living in NSW since January 2010 received exit packages to exist native forest logging in Tasmania (Wilson, Kasun) in 2011 from the Federal Government. It is likely that their relocation of machines, utes and accommodation was paid for by the Forestry Corporation.

- Current State management of the native forest estate has gone beyond its scope as the public caretaker, and has broken its pact with the community.
- The RFA regime has not, and is not working.
- The Forestry Corporation and its authorised contractors should be subject the same legislative requirements as the rest of all citizens of the State, and indeed Australia.
- There should be an immediate enactment of cl 8 of the RFAs, for which the grounds have been triggered, giving effect to ending the RFAs as the mode of native forest mismanagement.
- South East Forest Rescue calls for indigenous ownership of all public native forest;
- a complete stop on all logging of endangered ecological communities;
- complete transfer of wood product reliance to the plantation timber industry and salvage recycled hardwood timber industry;

- a single authority for national native forest stewardship modelled on the New Zealand example; and
- an immediate nation-wide program of catchment remediation, restoration, and native habitat re-afforestation.

We assert that urgency is needed in this forest reform. In our view, the RFA experiment has failed.



Gnupa SF – 4 trees per 2 hectares

Introduction

This submission is the result of monitoring and auditing of the ongoing activities of native forestry logging and woodchipping groups since the *Forestry and National Park Estate Act 1998* was voted through the NSW Legislative Council by the Labor and Coalition governments. That evening in November 1998 marked the point where the community lost the right to affect what happened to its native forest environment.

This document has the purpose of reviewing the state of the native forests of the south east of New South Wales. The performance of the RFAs are scrutinised, outcomes examined, and recommendations for action presented.

The conclusions are based on extensive research and on-ground examination of the implementation or more accurately non-implementation of the RFAs and Integrated Forestry Operations Approvals ('IFOAs') on unprotected native forest mainly in the Southern and Eden regions, but also the whole of New South Wales, Victoria, and Tasmania since the year 2000.

Brief Historical Background

The RFAs are widely perceived in the scientific community to have failed to deliver the intended protection for environmental, wilderness and heritage values that state and federal governments committed to when they signed the National Forest Policy in 1992.⁴

The Regional Forest Agreement process, which began in 1996, constituted an abandonment by the Commonwealth of its responsibilities for forests. Under section 38 of the *Environment Protection Conservation and Biodiversity Act 1999* (Cth) ('EPBCA') the Commonwealth undertook to refrain from exercising its environmental legislative powers for the duration of the Agreements (until 2023 if no extensions are granted).

RFAs were endorsed by the Commonwealth on the basis that the States had conducted a thorough environmental assessment of their forests. However, reviews of the data used for the Comprehensive Regional Assessments ('CRAs') reveals the data was either flawed, hastily cobbled together, or non-existent. Areas that fell under these RFAs were made exempt from the EPBC Act on the basis that environmental assessments had already been undertaken and that environmental considerations were contained in the RFAs. However, many areas did not have EIAs undertaken.

Further, the RFA 'negotiations' were flawed. Scientists became increasingly concerned when a

⁴ S Bekessy et al, 'Statement From Concerned Scientists: Statement of Support for Change on Tasmania's Forests' (2004) Protecting Forests, Growing Jobs, Hobart, The Wilderness Society, 601.

political decision was made to further modify the RFA measures so that scientifically-based criteria were no longer independently applied as a first step in establishing an 'Ecological Bottom Line'. This was a crucial decision as it was very unlikely that any RFA would deliver Ecologically Sustainable Development ('ESD'), as the modified criteria allowed ecological values to be traded off against economic values.⁵

The principles of ESD are now widely accepted after their introduction in 1992 through the signing of the Rio Declaration: the *Convention on Biological Diversity*.⁶ Commonwealth, State and Local governments became bound by the *Intergovernmental Agreement on the Environment 1992*, which contains the ratified principles.⁷ These principles are being systematically ignored by the Forestry Corporation NSW.

The RFA 'negotiations' were also flawed from a conflict dispute resolution perspective. When the level of compromise is not active, if the negotiations satisfy processes not outcomes, if the relevant stakeholders have not been identified accurately, if the stakeholders do not have authorisation to speak on behalf of others or make decisions, and if the parties do not come to the table in good faith then the process is flawed.⁸ This was the case with the RFA process.

The RFA process was a political attempt to quash conflict, and as the process progressed it became apparent that the government had not come to the table in good faith, therefore the process was doomed to fail. Environmentalist's energies were diffused through the myriad different committees and processes, plus associated travel burdens, and were often confounded by a lack of relevant data to make proper and frank assessments. This 'settlement' process bypassed the regulatory process in which the public interest, not represented by private parties, could be aired.

Environmental issues have a strong moral dimension. Environmental destruction and pollution is seen as immoral and unethical. Some mediation theories suggest that environmentalists should abandon their moral judgments and principles and acknowledge that the position of industrial polluters is as legitimate as their own.⁹ However, the assumption that business and environmental interests are fundamentally compatible is generally erroneous. In denying there are any serious moral issues involved in the forestry dispute, the mediation of the dispute,

⁵ B Mackey, 'Regional Forest Agreements - Business as Usual in the Southern Region' (1999) 43 *National Parks Journal* 6.

⁶ Rio Declaration, *Convention on Biological Diversity*, Rio de Janeiro 5 June 1992, [1993] ATS No 32 (entry into force for Australia: 29 December 1993).

⁷ *National Environment Protection Council (New South Wales) Act 1995* (NSW) Sch 1.

⁸ L Susskind, A Weinstein, 'Towards a Theory of Environmental Dispute Resolution' (1980) 9 *Environmental Affairs* 311.

⁹ D Amy, 'Environmental Dispute Resolution: The Promise and the Pitfalls' in N J Vigg and M E Craft, *Environmental Policy in the 1990s: Towards a New Agenda* (CQ Press, 1990).

involving moral principles or values, promotes a moral irresponsibility.¹⁰

...as between black and white, grey may sometimes seem an acceptable compromise, but there are circumstances in which it is entitled to work hard towards keeping things black and white.¹¹

The process was presented as negotiation, but the outcomes were finally determined and announced by the Government, with the multinational Harris Diashowa (now South East Fibre Exports/ANWE) coming out the clear winner.

Relevantly, the regulation defining Regional Forest Agreements requires that an RFA:

- (b) provides for the ecologically sustainable management and use of forested areas in the region or regions; and
 - (c) is expressed to be for the purpose of providing long-term stability of forests and forest industries; and
- having regard to studies and projects carried out in relation to all of the following matters that are relevant to the region or regions:
- (e) environmental values, including old growth, wilderness, endangered species, national estate values and world heritage values;
 - (f) indigenous heritage values;
 - (g) economic values of forested areas and forest industries;
 - (h) social values (including community needs); and
 - (i) principles of ecologically sustainable management.

There arises the factual question in all cases as to whether the Forestry Corporation NSW has complied with these requirements. Clearly, and as shown, only ss (c) has been followed.

The Forestry Corporation NSW must exercise its powers in accord with a number of environmental, social and economic objectives. In doing so, it must take into account other matters including preservation and enhancement of the environment. Threatened Species Licences ('TSLs') and Environment Pollution Licences ('EPLs') must be adhered to.

The obligations which arise cannot merely be declared to have been met. The Commonwealth and the various Ministers and departments are required to meet their statutory obligations. 'Provide' and 'must' have the meaning that the regulations must be adhered to. Procedures which are required by law to be observed and are not observed render the action as unlawful. Where there are specific procedures that are required to be followed and those procedures are

¹⁰ B Preston, 'Limits of Environmental Dispute Mechanisms' (1995) 13 *Australian Bar Review* 158; citing D Amy, *The Politics of Environmental Mediation* (Columbia University Press, New York, 1980) 163–87.

¹¹ B Preston, above n 10; citing L Fuller, 'Mediation- Its Forms and Functions' (1971) 305 *Southern California Law Review* 328.

not followed then the legislation could be overturned.

The conditions which are required for RFAs have not been met. There is significant on-ground, historical and contemporaneous evidence available to demonstrate this. It is a myth that illegal logging only takes place in countries other than Australia. Auditing of recently logged native forest areas are certain to find instances of logging which does not comply with the legislated obligations FCNSW and its logging contractors must adhere to. We are of the firm belief, and have amassed substantial supporting evidence to show that the forestry operations undertaken on the South Coast do not conform to the Regional Forest Agreement requirements.

The various governments have not ensured the adoption of ESFM practices, environmental safeguards have not improved and OEH/EPA has not ensured the maintenance of existing regulatory controls.

No Environmental Impact Assessment

In NSW any activity that will have an impact on the environment generally requires a proponent to undertake an environmental impact assessment ('EIA') as required by either the *Environmental Planning and Assessment Act 1979* (NSW) ('EPA Act'), or the *Environmental Planning and Biodiversity Conservation Act 1999* (Cth) ('EPBC Act'). For a brief period, the Forestry Corporation, was required to undertake EIA.

The EPA Act was strengthened and amended in late 1991 by the *Endangered Fauna (Interim Protection) Act 1991* ('EFIP Act').¹²

However, in 1992 the *Timber Industry (Interim Protection) Act 1992* (NSW) ('TIIP Act'), while extending a moratorium on many forests until proper EIA had been conducted, also exempted FCNSW from the EFIP Act.¹³

The TIIP Act suspended the application of Part 5 of the EPA Act in respect of logging activities being carried out in specified forests, and in particular exempted FCNSW from EPA Act ss 111 and 112, though it was still required to produce Fauna Impact Statements ('FIS').¹⁴ In May 1994 the TIIP was amended to extend to the Eden area, however FCNSW discontinued much of its surveying even though this was required as preparation for the development of a FIS.¹⁵ The *Threatened Species Conservation Act* was enacted in late 1995.¹⁶

¹² *Endangered Fauna (Interim Protection) Act 1991* (NSW) assented to 17 December 1991.

¹³ *Timber Industry (Interim Protection) Act 1992* (NSW) assented to 12 March 1992.

¹⁴ See *South East Forests Conservation Council Incorporated v Director-General National Parks & Wildlife Service* (1993) 81 LGERA 288.

¹⁵ *Timber Industry (Interim Protection) Amendment Act 1994* (NSW) assented to 16 May 1994.

¹⁶ *Threatened Species Conservation Act 1995* (NSW) assented to 22 December 1995

The FNPE Act was enacted in 1998, and the RFAs were rolled out. With the enactment of the FNPE Act the TIIP Act was repealed and FCNSW were not required to produce FIS or EIA. Thus, FCNSW were already exempt from any assessment in IFOA areas by the time the EPBC Act was enacted. Therefore, many forests have had no proper EIA.

The FNPE Act has now been overtaken by the *Forestry Act 2012*, which continues to exempt to FCNSW from having to undertake any assessment on the impact logging will have on the areas.¹⁷ Section 40 now 69ZA was brought across unchanged.

NSW: Southern and Eden Region EIA

RFAs were negotiated without minimum standards for environmental impact assessment or public participation.¹⁸ It is stated by FCNSW that under the Southern RFA, signed by the Commonwealth and NSW Governments in 2001, that the whole of the South Coast area state forests were 'not required to meet the regional reservation targets' and accordingly 'the remaining area of state forest is available for harvesting'.¹⁹ The 1998 Senate Inquiry stated 'a comprehensive assessment to address the environmental, economic and social impacts of forestry operations is undertaken in each RFA region prior to the completion of an RFA'.²⁰

The regulation defining Regional Forest Agreements requires that the RFA be: an agreement between the Commonwealth and a State, in respect of a region or regions, that: (a) identifies areas in the region or regions that the parties believe are required for the purposes of a comprehensive, adequate and representative national reserve system, and provides for the conservation of those areas; and (b) provides for the ecologically sustainable management and use of forested areas in the region or regions; and (c) is expressed to be for the purpose of providing long-term stability of forests and forest industries.

It is now quite clear that the committee was wrong. The Comprehensive Assessment Report, showing what was required to be conserved to meet the Joint ANZECC/Ministerial Council on Forestry Fisheries and Agriculture National Forest Policy Statement Implementation Subcommittee ("JANIS") criteria, stated that all but 51 hectares of the state forest area of the

¹⁷ *Forestry Act 2012* (NSW) s 69W.

¹⁸ Environmental Defender's Office NSW, Submission No 15, Senate Environment, Communications, Information Technology and the Arts Committees, *Environment Protection and Biodiversity Conservation Bill 1998 and Environmental Reform (Consequential Provisions) Bill 1998*, (1998);

¹⁹ Letter from Nick Roberts CEO Forests NSW to Dan Nikolin, DSEWPC, 13/05/2011.

²⁰ Senate Environment, Communications, Information Technology and the Arts Committees, *Environment Protection and Biodiversity Conservation Bill 1998 and Environmental Reform (Consequential Provisions) Bill 1998*, Ch 6 Protecting the Environment, (online)
<http://www.aph.gov.au/Senate/committee/ecita_ctte/completed_inquiries/1999-02/bio/report/c06.htm#FOOTNOTE_83>.

Southern sub-region were required to be set aside and protected from logging.²¹ The state and Commonwealth governments ignored this report.

The ‘comprehensive environmental assessment’ for the Southern sub-region consisted of two environmental impact assessments covering Wandella/Dampier and Badja/Queenbeyan.²² As there are 24 state forests in the Southern sub-region, and there seems to have been no other EIA undertaken, it would be remiss to classify that as comprehensive.

The Eden region was subject to an EIA however the critique at the time was less than positive, the main argument being that the assessment was inadequate. The criticisms at the time mirrored common criticism of forestry EIA in that it failed to address environmental impacts adequately, there was a lack of data and scientific research on the impacts of logging to species and ecosystems of the area, and is underscored by parallel criticisms of the fauna impact statement:

I am obliged to note that, in my opinion, the Eden FIS is an appallingly inadequate document, even by Commission standards. It suggests they do not take the Act (and the conservation of endangered fauna) very seriously.²³

While EIA processes were quickly adopted by many countries and Australia was no exception,²⁴ FCNSW were less than enthusiastic.²⁵ The EIA theory at the time suggested the purpose of EIA is:

To ensure, to the greatest extent that is practicable, that matters affecting the environment to a significant extent are fully examined and taken into account.²⁶

²¹ Nature Conservation Council RFA Submission No 2000; New South Wales, *National Park Estate (Southern Reservations) Bill 2000 Second Reading*, Legislative Assembly, Parliament Hansard, 6 December 2000, (Evans); *Nationally Agreed Criteria for the Establishment of a CAR Reserve System for Forests in Australia*, A Report by the Joint ANZECC / MCFFA National Forest Policy Statement Implementation Sub-committee, 1997.

²² *Proposed Foothills Logging Operations Wandella-Dampier, Narooma District*, Environmental Impact Statement, Forestry Commission of New South Wales, April 1983; *Proposed Forestry Operations in the Queenbeyan and Badja Management Areas*, Environmental Impact Statement, State Forests NSW, 1995.

²³ David Papps, Deputy Director (Policy and Wildlife) National Parks and Wildlife Service, 1997 in *South East Forests Conservation Council Incorporated v Director-General National Parks and Wildlife Service* [1993] NSWLEC 194.

²⁴ Andrew Macintosh, ‘The Australian Government’s Environmental Impact Assessment (EIA) Regime: Using Surveys to Identify Proponent Views on Cost-effectiveness’ (2010) 28(3) *Impact Assessment and Project Appraisal* 175.

²⁵ See for example *Jararius v Forestry Commission of New South Wales & Ors* [1988] NSWLEC 11; *J Corkill v Forestry Commission of NSW* [1990] NSWLEC 129; *T R Bailey v The Forestry Commission of New South Wales* [1989] NSWLEC 24; *In The Matter of the Appeal of Giselle Marie Thomas* [1991] NSWDC 90/52/0165; Margaret Young, above n 9; see *Jeffrey Nicholls v Director General National Parks and Wildlife Service and Forestry Commission of New South Wales and Minister for Planning* [1994] NSWLEC 155; Green Left Weekly ‘Forests Logged Without EIS’ (1994) <<http://www.greenleft.org.au/node/6890>>; *Upper Hunter Timbers Pty Ltd v Forestry Commission of New South Wales* [2001] NSWCA 64.

²⁶ *Environment Protection (Impact of Proposals) Act 1974*(Cth); *Kivi v Forestry Commission* [1982] NSWLEC; see Stephen Jay, Carys Jones, Paul Slinn, Christopher Wood, ‘Environmental Impact Assessment: Retrospect and prospect’ (2007) 27 *Environmental Impact Assessment Review* 287.

If assumptions are correct this could give some understanding on why state-run agencies were opposed to EIA. If due process is followed the impacts caused by logging on species and ecosystems would have to be fully examined.

Mechanical logging has become the norm in the Eden and Southern regions, there has been no assessment of this form of logging. In the *Redgums* case DSEWPC provided that this type of logging ‘constitutes an intensification of use and its environmental impacts, if any, require assessment and approval’.²⁷

The closest to an EIA can be found in the ESFM plan for the Southern Region, it provides: ‘Forests NSW has completed an Aspects and Impacts analysis of forestry operations and determined those operations having the greatest potential for environmental impacts to comprise: Timber harvesting involving tree felling, log extraction and log haulage; Road construction and maintenance, particularly drainage feature crossings and side cuts on steep side slopes; Fire management including fuel hazard reduction burning, particularly in ecologically sensitive habitats and streamside buffers: these operations require in-depth planning, supervision and monitoring’.²⁸ It follows that merely having an RFA in place cannot be considered a form of assessment, particularly if no EIA has been undertaken. Therefore this would seem to suggest that if there has been no EIA the state-run agencies are not afforded exemption from requirements of the EPBC Act.

The Hawke report provides that ‘rather than being an exemption from the Act, the establishment of RFAs ... actually constitutes a form of assessment and approval for the purposes of the Act’.²⁹

REVIEW OF REGIONAL FOREST AGREEMENT MILESTONES

To tell deliberate lies while genuinely believing in them, to forget any fact that has become inconvenient, and then, when it becomes necessary again, to draw it back from oblivion for just so long as it is needed, to deny the existence of objective reality and all the while to take account of the reality which one denies—all this is indispensably necessary.³⁰

The bundling of this ‘review’ is a charade. The first review of the RFAs was a sham. The review bundled Eden, signed 26 August 1999, North East signed 31 March 2000, and Southern signed 27 April 2001, into one review. Through cl s 38 and 40 the review for each is required to be within the first 5 years of signing, and five yearly after that. This means the reviews were due for Eden in 2004, the North East in 2005, and Southern in 2006.

²⁷ Rose Webb DSEWPC, letter to Nick Roberts Forests NSW, 01/05/2009.

²⁸ Forests NSW ESFM Plan, Southern Region (2005), 53.

²⁹ Final Report of the Independent Review of the EPBC Act, above n 29.

³⁰ G Orwell, *Nineteen Eighty-Four* (Penguin Books, 1949) 171.

The review began in 2009. Then the review was conveniently rolled into the ‘ten year RFA review’. This resulted in a slim 22 page document entitled ‘*Outcomes from the Review of the NSW Forest Agreements and the Integrated Forestry Operations Approvals: Upper North East, Lower North East, Eden and Southern Regions*’ (DECCW November 2010).

The joint response by the Commonwealth was tabled in 2014. Ignoring the data provided clearly showing that the RFAs had failed, the unlawful behaviour of the Forestry Corporation and their authorised contractors, and in direct conflict with international climate change mitigation requirements, the Commonwealth said:

The Parties remain committed to RFAs as an appropriate mechanism for effective environmental protection, forest management and forest industry practices in regions covered by RFAs.

The RFAs have not provided ‘effective environmental protection’ merely effective protection from due process and prosecution for the damage caused.

The reviews were required to be completed ‘within’ each five year period.³¹ The Oxford definition for the preposition ‘within’ is: Inside the range of, or Inside the bounds of.

*The Commonwealth will table in the Commonwealth Parliament the signed Regional Forest Agreement and, when completed, the annual reports detailing achievement of the milestones for the first four years of the Agreement and the first five-yearly review on performance against milestones and commitments.*³²

The RFA for Southern cl 38 states that:

within each five year period, a review of the performance of the Agreement will be undertaken.

And:

*the mechanism for the review is to be determined by both parties before the end of the five year period and the review will be completed **within** three months.*

The NSW Government’s directive was that there were clear limitations on the scope and purpose of the RFA review, including that the review would not revisit previous decisions. This is in conflict with all RFAs which state:

The purpose of the five-yearly review is to provide an assessment of progress of the Agreement against the established milestones, and will include:

1. the extent to which milestones and obligations have been met, including management of the National Estate
2. the results of monitoring of sustainability indicators, and

³¹ *Regional Forest Agreement for Southern New South Wales between the Commonwealth of Australia and the State of New South Wales April 2001* cl 38.

³² *Regional Forest Agreement for Southern* cl 41.

3. invited public comment on the performance of the agreement: NE RFA cl 40; Southern RFA and Eden RFA cls 38.

In the light of the reviews being incredibly overdue, it is specious that a milestone can be considered completed if it was reached after the due date of the first five yearly review. When milestones that were due years ago are either not completed, or not attempted, an indication is given of the lack of will of legislators and their agencies, both past and present, to adhere to international and domestic obligations.

The annual ESFM Implementation Reports were only publicly available on the DPI website for the years 1999–2009. This was pre the Forestry Corporation website, which only came online in March 2014. The only way for the public to be informed on details of FCNSW activities were to go into the offices or the Annual Reports, which contained minimal details of breaches and compliance with IFOAs for each region.

Tardiness of reporting is in breach of the *Forestry Act*. It is impossible to review the sustainability indicators without annual reports. Yet as the Office of Environment & Heritage ('OEH') showed the last of these reports was two years late, but available only a few weeks before the Independent Assessor gave his report to government for the current review in November 2009. The submission period to comment on the Draft Report closed on Monday 7 September 2009. The reports from 2003 onwards were not available by the submission deadline.

The old Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) website the Southern region annual reports only ranged from 1999–2006. However, the current Department of Agriculture and Water Resources forestry pages are even more minimal.³³

The non-compliance with legislated requirements by the Forestry Corporation NSW and the various legislators is a case in point. The word 'will' in the Oxford Concise Dictionary is defined as:

- 1 (In the second and third persons, and often in the first; see 'shall') expressing the future tense in statements, commands or questions.

Section 9 of the *Interpretation Act 1987* (NSW) states:

- In any Act or Instrument, the word 'shall', if used to impose a duty, indicates that the duty must be performed.³⁴

Thus, the Forestry Corporation NSW have been operating outside the law since 2004.

³³ Department of Agriculture and Water Resources, *Forestry*
<<http://www.agriculture.gov.au/forestry/policies/rfa>>.

³⁴ *Interpretation Act 1987* (NSW) s 9(2).

Whilst some reports were available, none of them were completed and tabled in time annually. The first reports for Eden and the Upper and Lower North East were one year overdue. The next two reports for Eden and Upper and Lower North East were three and four years overdue respectively. The last two reports for those areas were four and five years overdue respectively. Southern Region reports were similarly late. Again, there is no mention of this and to call the review conclusion complete is misleading to say the least.

The long-awaited *Final Report on Progress with Implementation of NSW Regional Forest Agreements*:

Report of Independent Assessor confirms observations that the Regional Forest Agreements are failing to meet their transparency and sustainability obligations.

If as stated, the NSW RFAs were to provide for the 'conservation of areas, for Ecologically Sustainable Forest Management and twenty year certainty for native forest industries', then the results of this report show clearly that the agreements have failed dismally on all accounts.

The Final report, dated November 2009 states:

However, fundamentally, the first reviews should have been completed in the 2004-2006 period, i.e. five years from their initialisation. The fact that these reviews have been delayed 3-4 years is of considerable concern, has reduced public confidence in the outcomes and seriously distorts the process for the future.

And:

Timeframes were included in the RFAs for a reason and the failure to deliver in any reasonable timeframe could have a major impact on both public confidence in the process and the achievement of the basic objectives if the RFAs. Even if it is accepted that, in an undertaking of this nature, some delays are inevitable, delays of three to four years and in at least one case 9 years, indicate a basic problem or problems.

The report goes on to state:

...the significant delays for the Southern and Eden regions reviews (3 years behind schedule) need to be addressed as soon as possible to minimise uncertainty and to allow an accurate picture about sustainability of current harvesting to emerge...No real reason is provided for the delays.

In reply additional information was provided to the independent assessor by the Forestry Corporation NSW which stated:

Monitoring designed to assess performance at a much finer scale (at an operational level)

and/or to determine the causes of detected variation (via post-harvest assessment) would be prohibitively expensive and would involve unsatisfactory occupational health and safety risks.

The Forestry Corporation NSW seems to be arguing that entering post-logged forest to monitor their activities is prohibitively expensive and unsafe for their trained employees. If it is unsafe for Forestry Corporation NSW employees to enter post-logged forest it must be equally expensive and unsafe for their employees to enter forest while logging activities are underway therefore, if it is so expensive and unsafe, the Forestry Corporation NSW should heed conservationists call and end native forest logging.

When RFA reports were tabled in the Senate in 2005 Senator Ridgeway stated:

Essentially what we have is four slim annual reports dated 2001 and 2002 covering New South Wales, Victoria, Western Australia and Tasmania. The considerable time lapse between the date of the reports and the tabling of the reports is of great concern, especially when this is a contentious issue and one that I believe all Australians are certainly interested in, and one that came up during the recent federal election campaign. I hope it is not indicative of the attention to detail that the government is exercising in the management of Australia's forests and forest reserves.³⁵

Therefore, to state 'reports completed' is a misrepresentation of the facts. These reports are required by the *Forestry Act* and are supposed to contain crucial information required for all the reviews.

Thus, termination procedures under clause 8 should be instigated forthwith. Any proposed option to extend the RFAs, given what is now known about climate change, the environment, threatened species decline, and the Forestry Corporation NSW, non-performance of the agreements, is without doubt a fool's errand. The logging and woodchipping group's notion of 'evergreen RFAs' is abominable.

The Results of Monitoring of Milestones and Sustainability Indicators

The Forestry Corporation NSW, regulators and legislators have failed in the performance of meeting their legislated obligations.

Last year we noted some areas of non-compliance with RFA milestones. The Commission advised that it is addressing areas of non-compliance.³⁶

The question becomes how long will this 'addressing' take?

³⁵ Commonwealth, *Parliamentary Debates*, Senate Official Hansard No 5, Monday 7 March, 2005, 71.

³⁶ NSW Auditor-General, Report to Parliament, above n 1.

Compliance to the Regulations

There is now substantial evidence indicating that the Integrated Forestry Operations Approvals ('IFOAs') are inoperable, unenforceable, and FCNSW and authorised contractors are systemically non-compliant.³⁷ Compliance has not been taken seriously by Forestry Corporation NSW or contractors. Non-compliance is situation normal. Auditing reporting on a public level might be provided in the Forest Agreement and IFOA reports, but because these documents are either not tabled or consistently late they are effectively not in the public domain.

The auditing mechanisms of the RFAs are not credible, lack the necessary comprehensiveness, are underfunded and understaffed, systematically abused, lack objective independence, are overly reliant of self-auditing processes, have not utilised, or been excessively weak in the enforcement of non-compliance and have not resulted in demonstrably improved practices. For example OEH condoned breaching the TSL conditions for tree retention by saying:

Forestry Corporation NSW did acknowledge that whilst some of the trees marked for retention did not strictly meet the requirements of hollow-bearing, an adequate number were retained across the landscape when unmarked trees were included in the count.³⁸

Logging and woodchipping groups have eagerly endorsed part of Principle 1 of the UN *Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests* which states:

(a) States have, in accordance with the Charter of the United Nations and the principles of international law, *the sovereign right to exploit their own resources* pursuant to their own environmental policies...

But the Principle goes on to state:

And have responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.³⁹

The strict statutory obligations are such that, arguably, anyone contemplating illegal activities against native flora, fauna or the environment does so at their peril.⁴⁰ Not so the Forestry Corporation NSW for areas covered under the IFOAs and RFAs.

³⁷ All correspondence between SEFR and DECCW from 2001.

³⁸ DECC Ref FIL06/1449 Ian Cranwell 16/2/09.

³⁹ *Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests* (Rio de Janeiro, 3–14 June 1992) A/CONF 151/26 (Vol III) emphasis added.

⁴⁰ A Macintosh, above n 43.

Historic Endemic Disrespect for Regulation

The Environmental Protection Agency ('EPA') is in charge of regulation of FCNSW activities. This regulation has been inappropriate or inadequate in the past. The EPA registers compliant and non-compliant activities. For example, in the financial year 2011–12 it commenced 39 audits of FCNSW pre-activities and activities in regions covered by an IFOA. The audits identified a total of 414 non-compliances with Environment Pollution Licences ('EPLs') and 188 non-compliances with Threatened Species Licences ('TSLs').

When the FNPE Act s 40 (now *Forestry Act* s 69ZA) was introduced assurances were given that the EPA would continue to have enforcement and compliance powers, and 'continue to use them to ensure that the licences are adhered to.' However there were no prosecutions in the Southern Region for 13 years, until 2011. It is possible that the department suffers from 'capture', through the whole of government approach, with the result that FCNSW and their authorised contractors are under-regulated.

Regulation of NSW state forests has historically been problematic. For example, in 1802–03 the government issued orders aimed at controlling the logging of red cedar, and preventing the over-clearing of trees in riparian zones, but logging and clearing 'continued at an accelerating rate.'⁴¹ This lack of respect for regulation was evidenced by a series of official reports in the 1860s which recommended the need for supervision, training, and girth limits.⁴²

Regulatory systems rely upon the enforcement of statutory requirements. When there is little or no enforcement contraventions go unpunished, and the incentive for compliance is nil.⁴³ When penalties are low, and the possibilities of being found out are light, people take the risk that they will not be caught.⁴⁴

Breaches

Despite numerous legitimate breaches referred to OEH/EPA there were no prosecutions for breaches on the South Coast from the signing of the RFAs until 2011, and in fact there has only been five prosecutions in the whole of NSW since the signing of the RFAs.

The output to date of regulatory enforcement actions in no way reflects the rate of non-compliance. On ground assessment evidence suggests that non-compliance rates are now running at four per hectare of forest logged, that is, over ten percent of all areas logged are in

⁴¹ G J Mosley, 'The Australian Conservation Movement' in R L Heathcote (ed) *The Australian Experience: Essays in Australian Land Settlement and Resource Management* (Longman Cheshire, 1988) 178, 179.

⁴² Ibid.

⁴³ A Macintosh, 'Why the Environment Protection and Biodiversity Conservation Act's Referral, Assessment and Approval Process is Failing to Achieve its Environmental Objectives' (2004) 21 *Environment and Planning Law Journal* 288, 302.

⁴⁴ G Bates, *Environmental Law in Australia* (2016).

breach. The Draft Implementation Report states breaches can run up to 91 per audit.⁴⁵

The IFOAs are grey-worded, containing myriad loopholes and allowances in favour of the logging and woodchipping groups, who have white-anted into the prescriptions, making conservation bottom priority and woodchip output high priority.

For instance, there is no clause in the Southern Region IFOA allowing unmarked trees to be used in habitat tree retention counts. However, as a justification for breach FCNSW said:

Forestry Corporation NSW did acknowledge that whilst some of the trees marked for retention did not strictly meet the requirements of hollow-bearing, an adequate number were retained across the landscape when unmarked trees were included in the count.⁴⁶

It is evident that the Department of Fisheries compliance role has been relegated to rubberstamping with only one reporting non-compliance for the whole period the statistics cover, although recently the Department of Fisheries issued Forestry Corporation NSW with a \$1000 fine.

The Forestry Corporation NSW has seriously dropped the ball on operating within its legal framework. To deem this milestone completed is a blatant untruth. The ‘accounting report for breaches and audit results’ in the Draft Report is mistaken. Table 4.2 Audit results in the lower North East Region 2002/03 notes there were no complaints for breaches of the EPL and no Clean-up notices issued. SEFR has documents and correspondence between the Black Bulga Range Action Group and the EPA during that year regarding several complaints of non-compliance issues which resulted in the issuing of a Clean-up notice.

EPL Breaches⁴⁷

Forestry activities are bound by the *Protection of the Environment Operations Act 1997* and are licensed under s 55. Under the IFOA these licences provide that FCNSW must comply with s 120 of the POEO Act:

*Except as may be expressly provided in any condition of this licence.*⁴⁸

Under cl 29(3A) and (3B) Forestry Corporation NSW can turn the EPLs on and off depending on whether they want to log unmapped drainage lines with immunity.

During 1999–2000, FCNSW identified 2 039 (875) breaches of EPL conditions for the whole

⁴⁵ Draft Report above n 2, 175.

⁴⁶ Letter: DECCW to SEFR 16/2/09.

⁴⁷ FCNSW, Annual Report to the EPA for the Environment Protection License No 0004022 (2000, 2002, 2003, 2004, 2005, 2006) Appendix 1.

⁴⁸ Southern Region IFOA Appendix A, cl 5 (emphasis added).

estate. Breaches included incorrect felling of trees into filter strips, machine encroachment in filter strips, excessive rutting and inadequate slashing of extraction tracks.⁴⁹

In 2000–01 the number of checks were 3,424 and Forestry Corporation NSW identified 1,538 breaches. There were five fines issued by the EPA for breaches of water regulation.⁵⁰

In 2002 FCNSW allege the number of checks conducted was 3,431. Forestry Corporation NSW identified 1,242 breaches made by internal and external contractors. 66% of these breaches related to accidental felling of trees into filter strips or other exclusions relating to drainage features. Other breaches include damage to habitat or trees to be retained for future habitat. The EPA issued four fines for breaches of water regulation.

In 2003–04 Forestry Corporation NSW completed 3,558 reviews (3,701 in 2004–05), covering items of compliance and identified 565 breaches (1,615) for the whole estate.⁵¹

These figures are provided by Forestry Corporation NSW and as such can be viewed in light of the history of Forestry Corporation NSW provision of data. While the actual figure is much higher, on the above figures there have been 701 breaches of the EPL in this period in the Southern region. Conversely Forestry Corporation NSW states there were 322 breaches for these periods. There is a dramatic difference. The RFA Progress Report 2003-04 states 44 EPL/TSL breaches and 592 Forestry Corporation NSW breaches. The EPL Annual Reports for that year state 108 breaches, the Non-compliance register states 212 breaches.

The telling feature of these statistics is that usually no action is taken against the non-compliance breach and any action taken is administrative. The general decline in statistical information on the occurrence of breaches is either due to vastly improved performance in the field, or a decrease in collection and auditing. The evidence in recently logged compartments suggests the latter.

The excuses for breaches are not only grossly inadequate, they highlight the lack of care by the logging contractors and, in accepting these excuses, the lack of genuine will on the part of the FCNSW to regulate.

TSL Breaches

Threatened species and their habitats are in danger through industrial logging activities. The only protection and conservation is for Australian Natural Wood Exports and Nippon Paper Group,

⁴⁹ NSW Auditor-General, Report to Parliament, Vol 1, 2001.

⁵⁰ NSW Auditor-General, Report to Parliament, Vol 5, 2002.

⁵¹ NSW Auditor-General, Report to Parliament 2007, Volume 1.

trading as South East Fibre Exports, the sawmill owners Boral, and a handful of logging magnates. These businesses have been guaranteed product for twenty years and guaranteed exemption from legislation and regulation.

In the Tumut sub-region very little compliance monitoring is evident. OEH has not undertaken a field audit in the years 2007-09. Annual Implementation Reports (2006-07) no audits, no mention at all in 2005-06, 2004-05, 2003-04. During 2002/2003 two proactive audits were undertaken for the TSL for the Tumut sub-region. Six TSL conditions were investigated in each audit. Clearly the Tumut sub-region has been allowed to run feral with many systemic breaches and non-reporting.

Recent evidence from South Brooman State Forest Compartment 62 plainly shows that the Rainforest Identification protocols are in no way being adhered to. Documented evidence suggests rainforest breaches are systemic in daily logging activities.

Incorrectly, the Forestry Corporation NSW states for the period 2000 to 2006:

No significant non-compliances of the TSL were found.⁵²

The TSL non-compliance register that was held at the Batemans Bay Regional Office has never been completely up-to-date for public inspection, with only up to year 2009 sighted. Registered are thirteen instances of non-compliance in the Eden and Southern regions between 24/309 and 1/12/09. Clause 5.8(f) heads the list of breaches, where a logging machine entered ridge & headwater habitat, because the unnamed operator was working in steep terrain and as a result his machine slipped on loose rock. There were also three breaches of cl 5.7(h) where the machine entered the filter strip either due to lack of care by the operator, or the operator did not see the marking tape, or even due to the operator having to perform an emergency repair to a second machine...which was where?

The classic breach of 2009 was recorded in Yambulla 557, where logging of Mapped Old Growth in contravention of cl 5.3(c) eventuated, due to the GPS batteries going flat.

In 2010 FCNSW logged a gazetted Aboriginal Place on Mumbulla Mountain, and refused to stop even when shown the gazettal map. Despite being told from the first day of logging, FCNSW claimed they did not 'knowingly' log.

Illegal forest activities have far-reaching economic, social and environmental impacts including ecological degradation and exacerbation of climate change. Illegal forestry practice has been defined as:

- logging species protected by national law
- logging outside concession boundaries

⁵² Draft Report, above n 2, 172.

- logging in protected areas
- logging in prohibited areas such as steep slopes, river banks and catchment areas
- removing under/over-sized trees
- extracting more timber than authorised
- logging when in breach of contractual obligations
- restricting information about procurement contracts
- tailoring contract specifications to fit a specific supplier
- failing to meet licence provisions including pollution control standards

Currently in NSW all of the above is occurring.⁵³ Although codes of practice are generally ‘aspirational’ they may be recognised as legal instruments and accorded formal stature as legislative instruments. Where they set out standards for compliance then they create enforceable obligations. We would suggest the IFOAs are such instruments.

The Forestry Corporation NSW, or any other person is subject to the conditions of the IFOAs including the terms of the relevant licences.⁵⁴ Under the Private Native Forestry Code (‘PNF Code’) forestry activities under an approved Property Vegetation Plan (‘PVP’) must be conducted in accordance with all provisions of the Code.⁵⁵ Both the IFOA and the PNF Code contain the precautionary principle and principle of inter-generational equity.

The case as it stands is that in practice either the logging contractors are not reading the legislation, or the drive for financial gain outweighs the need to comply with regulations.⁵⁶ This, combined with the lack of threat of enforcement, and monetary loss being minimal, could be a compelling factor for non-compliance. As the Forestry Corporation NSW and contractors are relatively unrestrained when it comes to regulation and compliance there is therefore little hope that the legislation will have the desired affect regardless of adequacy.⁵⁷

Non-compliance relies on lack or inadequacy of regulatory response. The current ‘whole of government’ approach has resulted in the original regulator being subsumed, the establishment of a ‘forestry unit’ within a government department which regulate another government department, who both seem to have the same goal:

DECCW will continue to work with Forestry Corporation NSW. The State forests of the

⁵³ See all correspondence SEFR to DECCW 2001–2016.

⁵⁴ *Integrated Forestry Operations Approval for the Eden Region 1999*.

⁵⁵ *Private Native Forestry Code of Practice for Southern NSW 2008* cl 1(2).

⁵⁶ See *Minister for the Environment & Heritage v Greentree (No 2)* [2004] FCA 741; see also *Director-General, Department of Environment and Climate Change v Walker Corporation Pty Limited (No 2)* [2010] NSWLEC 73.

⁵⁷ See J Smith, ‘Making Law Work: Compliance and Enforcement of Native Vegetation Laws in NSW’ (2009) 88 *Impact* 3; see C Flint, ‘River Red Gum: Barking Owls and Broken Laws on the Murray River’ (2009) 88 *Impact* 6.

Eden Forestry Region...were set aside by the Eden RFA 1999 to provide a guaranteed timber supply to industry. Please be assured that the NSW Government and DECCW are working to protect the koala population and at the same time promoting regional economic development and employment.⁵⁸

The two strongest forces ensuring environmental compliance are criminal prosecutions and potential clean-up liability.⁵⁹ Regulators in Australia have been accused of not utilising the full scope of the penalty provisions and focusing on the 'less robust options'.⁶⁰ This is evidenced by the current regulatory response practice of relying on 'voluntary agreement'. If regulators continue to implement the softer penalty provisions the deterrence objects of the legislation will be, and have been, greatly undermined.

A successful strategic approach to better law compliance in the forest sector is needed by increasing clarity, transparency and consistency of forest and forest-related legislation. This could be achieved by bringing FCNSW into the same legislative regime as the rest of the State. That is, revoking the RFAs, and strengthening monetary penalties, ensuring accountability and control of forestry activities at the local level, ensuring that in-country industrial capacity does not exceed sustainable supplies, for instance, by conducting feasibility studies and/or closing down mills.

It could also be achieved by promoting the independence of the regulator, giving the regulator and authorised officers stronger enforcement powers and creating transparency of the regulatory processes.

The double standards that have allowed and enabled FCNSW to become 'cowboys' needs to end. By ensuring compliance with legislation that everyone else must adhere to will encourage consistency of the regulatory framework to ensure that laws do not contradict others within the forest legal framework or other sectors.

Paucity and Transparency

State and Federal Governments have a responsibility to fully disclose where money is spent. There is a paucity of detailed information proving that public moneys and grants have been productively used. Insufficient transparency for this milestone signifies that the process is open to corruption. There is strong evidence that logging contractors who were recipients of programs did not purchase machinery that the grants were earmarked for. Cocks Pulp received \$50 190 for

⁵⁸ Letter to L Bower from M Saxon, Acting Director South, DECCW Environment Protection and Regulation, May 7, 2010.

⁵⁹ S L Smith, 'Doing Time for Environmental Crimes: The United States Approach to Criminal Enforcement of Environmental Laws' (1995) 12(3) *Environment and Planning Law Journal* 168; see eg *Chief Executive Officer Department of Environment and Conservation v Szulc* [2010] WASC 195.

⁶⁰ Australian Network of Environmental Defender's Offices, *Independent Review of the Environment Protection and Biodiversity Conservation Act 1999*, Submission 189, 15 <<http://www.environment.gov.au/node/18904>>.

Business Exit Assistance.⁶¹ This company is still logging and hauling pulp to the Eden chipmill. One logging contractor purchased a truck then sold the truck within the week of purchase. Some logging contractors took redundancy/retraining packages and are now back working. A recent situation was exposed in Bodalla State Forest where a Tasmanian logging company was paid \$825 000 to exit Tasmanian native forest logging, now logging NSW native forest.

The NSW Government subsidises FCNSW in the form of a ‘community service grant’. In 2014–15 totalling \$15, 589, 000.

FCNSW incurred a \$15.6 million (2014: \$14.18 million) ‘costs for services’. In our view, it is in this way that FCNSW are yet again obfuscating the losses incurred in the native forest division.

‘SUSTAINABLE’ YIELD

In 1998 Forest Resource and Management Evaluation Systems (‘FRAMES’) data was run using all land tenure, that is, land that would be included in the future reserve system. Later Forestry Corporation NSW hid real data from the Auditor-General audits by amalgamating plantation and native forest volume figures.⁶² Further the native forest logging industry has increasingly been overcutting to meet wood supply agreements and has not undertaken legislated reviews of sustainable yield.

It is clear the intent of all the various Acts and Agreements is the establishment of an ESFM framework as the core principle for the management of the forest estate of NSW. It is also clear that sustainable timber yield is a cornerstone of ESFM. Timber volumes that are unsustainable will have negative implications for not only the environmental values of forests but also for future socio-economic values.

As a requirement of ESFM, NSW agreed to undertake a review of Sustainable Yield every five years using FRAMES and information bases. Results of which would inform the annual volume which could be logged from the Southern region ‘being mindful of achieving long-term Sustainable Yield and optimising sustainable use objectives consistent with this Agreement’.⁶³

⁶¹ New South Wales, *Legislative Assembly*, Questions and Answers No 12, 11 November 1997, Table (b) 183 <[http://www.parliament.nsw.gov.au/prod/LA/LApaper.nsf/0/33A5F8339324F8E0CA256EEB002D4C74/\\$file/A513012S.pdf](http://www.parliament.nsw.gov.au/prod/LA/LApaper.nsf/0/33A5F8339324F8E0CA256EEB002D4C74/$file/A513012S.pdf)>.

⁶² NSW Auditor-General, Report to Parliament, Vol 1, 2009, above n 1.

⁶³ *Regional Forest Agreement for the Southern Region of NSW 2001* cl 8.

Environmental Management Systems ('EMS')

*The EMS shall be the mechanism by which Forestry Corporation NSW will implement commitments and obligations under the NSW forest agreements and RFAs and effectively contribute to Australia's international obligations under the Montreal process.*⁶⁴

Evidence collated clearly demonstrates that the EMS of Forestry Corporation NSW has not improved nor has FCNSW shown responsible forest custodianship, so no wonder it seems to be perpetually under review. In the Eden region it has taken almost ten years to instigate the production of a clear and concise set of identification rules for Rock Outcrops, for use and implementation in the field, and which still are not abided by.

The EMS Manual was not even thoroughly checked for typographical errors before public release, for example on page two the word 'environmental' is misspelt. Page fourteen of the EMS describes a Forest Health Strategy assessment in preparation, these documents were needed when the EMS was released. On page 11 the EMS states that there should be:

Monitoring of disturbance regimes is carried out through the Landscape Biodiversity Monitoring program, piloting in Western Region as of August 2008, and research.⁶⁵

There has been no genuine attempt by the Forestry Corporation NSW to perform to the expectations of their obligations. There is no evidence of monitoring and research output. If this has been undertaken data should be publicly available. Many documents are not available for public scrutiny and therefore any claims of accountability by the Forestry Corporation NSW are simply not credible.

Main Indicators for ESFM: Area Available, Growing Stock, Wood Supply and Value

The ESFM plans for lands under the *Forestry Act* were not completed and published by December 2001.⁶⁶ Eden, Upper and Lower North East, Southern and Tumut became available to the public in 2005, Hume, Riverina, Monaro, Macquarie, Western, Upper and Lower North East in 2008.⁶⁷ There is no evidence to suggest that maps have been kept up-to-date and publicly available. The definition of 'Land for Further Assessment' is opaque. The lack of information suggests a type of numbers laundering, due to the varying figures for hectares in every Forestry Corporation NSW annual report.⁶⁸

⁶⁴ *Southern Region Forest Agreement 2002*, Environmental Management Systems 2.1.

⁶⁵ Forestry Corporation NSW, *Australian Forest Standard (AS 4708:2007) and EMS(ISO 14001:2004) Manual*.

⁶⁶ Southern Regional Forest Agreement cl 47(d).

⁶⁷ Forestry Corporation NSW, ESFM, <<http://www.forestrycorporation.com.au/management/sustainable-forest-management/esfm>>.

⁶⁸ See Forestry Corporation NSW Annual Report 2007, 2008, 2009, 2010.

Data available states a two percent loss of native forest area available for logging during the period 1999 to 2005. There has been no data provided and no information given for total growing stock on timber production land. This is questionable. This is not surprising given the last three Auditor-General's opinions found in Forestry Corporation NSW annual reports.

Wood supply agreements are between Forestry Corporation NSW, various sawmills and the woodchip mill. The new wood supply agreements have no review clause and the authors note the lack of information on what public consultation went into making this decision. Full documentation regarding the 2005 and 2009 wood supply agreements should be made publicly available.

Forestry Corporation NSW give no data on value of logs felled and there seems to have been no monitoring undergone. ABARE collect a large amount of national data on the value of logs.

The Auditor-General stated:

The Commission made various assumptions relating to the valuation of native forests. We were unable to confirm the assumptions used were statistically reliable.⁶⁹

The authors would agree with Mr Scott Spencer in that Forestry Corporation NSW are not aware of the meaning of the term 'required':

It is somewhat concerning that Milestone 41 relating to the requirement (i.e. it is not optional) to produce annual reports of progress on meeting regional ESFM targets in ESFM Plans has not been delivered. This is surely central to accountability under the RFAs.⁷⁰

The statutes provide clear direction and guidance as to their intent for interpretation of supply commitments contained in RFAs. It is provided that Regional ESFM Plans, *Forest Agreements* ('FAs'), and IFOAs will collectively specify the wood supply commitments and their relationship to Sustainable Yield.⁷¹ Further it was stated when the Southern IFOA was in process of enactment:

the IFOA also contains maximum timber volumes allowed to be harvested annually.⁷²

Allowable volume of trees logged is legislated to be based on 'sustainable yield' and FRAMES.

⁶⁹ NSW Auditor-General, Report to Parliament, vol 1, 2009, above n 1.

⁷⁰ *Final Report on Progress with Implementation of NSW Regional Forest Agreements: Report of Independent Assessor*, November 2009 <<http://www.agriculture.gov.au/SiteCollectionDocuments/rfa/publications/annual-reports/nsw/assessors-report.pdf>>.

⁷¹ *Southern Region Forest Agreement 2002* 8(2)(a).

⁷² NSW EPA to DPI, Recommendation letter to enact IFOA, Letter (HOF2042) from David Nicholson, 18 April, 2002, signed by Director Waters and Catchments Policy (signed 18/4/02), Acting Assistant Director General (Water and Air), Director General, 19/4/02.

The volume of pulp removed in the Southern region for the period 2002 to 2007 is equal to twelve percent above the legislated allowable cut.⁷³ This is above the five percent allowed in IFOA clause 5(a) where it provides, in essence, that Forestry Corporation NSW must stay within the five percent range.⁷⁴

It is alleged by FCNSW that allowable volume figures in legislation can be overridden by contractual commitments.⁷⁵ This seemingly defeats the purpose of sustainable yield and indeed legislation. On this assumption terms such as ‘no more than’ and ‘up to’ therefore are taken to mean minimum volumes. If we were to take this erroneous assumption further it would mean the legislation and delegated legislation serves no purpose.

The focus on the one term ‘reflects contractual commitments’ at the expense of remaining legislation is in itself indicium. There are many other clauses in various pieces of legislation, intended to work in conjunction with each other. Assumptions that there is no maximum volume required therefore seems in tension with the objects of legislative instruments.

Lastly, in our view, logging of the South East Forests is pulp driven and thus unlawful. 2015 volume figures provide amount woodchipped:

Sthn 30 329 m3

Eden 222 399 m3

Total 252 728 m3 woodchipped (128 892 m3 other)

Overcutting

Dominating much desktop and woodchipping group documents is claims that strict public forestry regulation and ‘locking up’ of areas has caused the need for private forestry.⁷⁶ However, long before RFAs were enacted, questions of whether native forest logging was sustainable were being asked.⁷⁷ It seems real causes of lack of wood supply are overcutting and erroneous figures of sustainable yield. This has resulted in shortened rotation times. The current rotation times are between 5-15 years; for example, compartment 62 of South Brooman State Forest has had ‘Timber Stand Improvement’ twice and been logged nine times since 1954, which is virtually every six years.⁷⁸

⁷³ Draft Report, above n 2, Appendix 4, 227.

⁷⁴ *Integrated Forestry Operations Approval for the Southern Region* cl 5(a); *Integrated Forestry Operations Approval for the Eden Region* cl 5(a).

⁷⁵ *Integrated Forestry Operations Approval for the Southern Region* cl 5(3).

⁷⁶ *Integrated Forestry Operations Approval for the Southern Region* Note for cl 5(b).

⁷⁷ See *South East Forests Conservation Council Inc v Director-General National Parks and Wildlife and State Forests of NSW* [1993] NSWLEC 194, Deputy Director (Policy and Wildlife).

⁷⁸ See FCNSW, Southern Region - Compartment 62, South Brooman State Forest, Bateman’s Bay Management Area, Harvest Plan approved 8/5/09.

The NSW Scientific Committee suggests a safe rotation period for species conservation is 150–220 years.⁷⁹ Analysis using this rotation period over a fifteen-year timeframe in the Southern region would suggest 50-90 compartments should have been logged, yet more than six times that, a total of 355 compartments, have been clear felled or patch clear felled. Data available shows 680 as the total number of compartments.⁸⁰

In a letter dated 29 October 1998 from Ross Sigley, Forestry Corporation NSW sales manager, Northern Rivers region it states:

It has taken us just 2 years to completely exhaust the quota volume in Casino, Urbenville, and Murwillumbah MA's and Tenterfield is all but finished. It must dawn on our top resources people eventually that stands carrying a level of volume which is only a fraction of their capacity are already seriously in trouble. The only way to realise any of the volume that is there...would be to have an unlimited pulp market and clear fall the forest...

I suspect they [the greens] do know that we are playing the game of Brer rabbit. I hope a re-run of the frames data without using the plots that end up in the reserve system will give a more realistic picture [of the] state of the forests...I wait with hope that the Frames data can deliver some figures, which support what we know to be the case on the ground. We have just one last chance to come clean and be honest about the way things are before this UNE RFA is signed. State Forests will be held accountable for whatever happens as a result of the RFA decision and if the industry has been led to believe that the volume is there in this part of the State then we should be held responsible...⁸¹

A memo from a Forestry Corporation NSW Marketing Manager to then CEO of Forestry Corporation NSW on a meeting with Davis and Herbert in 2001 is revealing.⁸² Davis and Herbert (now Boral) expressed dissatisfaction with Forestry Corporation NSW supply of logs. The company's allocation was 8000 cubic metres. Forestry Corporation NSW stated 'the company is currently undercutting its allocation of high quality large sawlogs'. The company claimed the reason they were undercutting was that the Forestry Corporation NSW had not provided sufficient areas to produce sawlogs. Forestry Corporation NSW denied there were any problems of supply but offered to extend the allocation period and 'let the company cut the 8000cu over two years'. Forestry Corporation NSW also stated Davis and Herbert were at fault because they weren't 'value adding'. The company stated they were unhappy about 'log merchandising' and that timber was being sent 'elsewhere' which could be used by the company. Forestry

⁷⁹ Office of Environment and Heritage NSW, *Loss of Hollow Bearing Trees Key Threatening Process*, NSW Threatened Species, <<http://www.environment.nsw.gov.au/threatenedSpeciesApp/threats.aspx>>.

⁸⁰ Forestry Corporation NSW, Compartment Map and Annual Logging Records for period 1995 to 2010.

⁸¹ New South Wales, *Legislative Assembly*, Forestry and National Park Estate Bill, 17 November, 1998, (Fraser), 10052.

⁸² Forestry Corporation NSW, Internal Memo Ron Wilson to Bob Smith and Gary Keating, 9 October 2001.

Corporation NSW told the company that ‘without a residue market on the south coast the cost of producing sawlogs will be significantly higher’.⁸³

Unfortunately, in the Southern and Eden regions there is an unlimited and voracious pulp market. A rerun of FRAMES was due in 2006 as part of ESFM requirements. No rerun of FRAMES has yet been undertaken. Review or no review, logging more intensively will effect remaining stand condition and ultimately sustainable yield. Given overcutting whether public and private native forestry can ever achieve the ideal of ESFM is doubtful.⁸⁴

The FRAMES industry modelling system used to derive volumes substantially over-estimated available timber volumes. To achieve the unsustainable volumes sought for the first twenty years, the system has had to dramatically over-cut for twenty years and thus result in much decreased volumes available thereafter. This is clearly reflected in the industry modelling, which shows a volume reduction of almost fifty percent after 2018. For example, in the Eden Region, in 2008, Forestry Corporation NSW was over quota and have been over quota for each of the previous nine years.

Notably, in 2003 the NSW Government re-issued timber supply contracts, without conducting the promised review, for a further twenty years (thus extending the contracts out to 2023). Therefore, timber supplies have been committed outside the twenty-year timeframe of the RFAs, without a wood supply review or any required RFA review. These contracts have been extended well past the point at which timber supplies will fall in 2018. The ‘Use or Lose’ 20-year wood supply agreements provides for ‘increased volumes of HQL and small sawlogs at one half of the company’s intake’ as of 2001.

The erroneous audacity of the claim that the review of the FRAMES systems and processes ‘also meets the milestone as it applies to the Southern region’ is obvious. One aspect is applicable:

The robustness of wood supply estimates...are commonly evaluated by conducting large numbers of scenario analyses rather than by consideration of statistical measures....If the level of cut is set at a high level...in the short-term and growth is less than expected, then over-cutting will occur and the predicted long-term cut will not be sustainable.⁸⁵

It was made known by the NSW Auditor-General that the Forestry Corporation NSW does not routinely compare yield results ie actual volume taken, to its yield estimates. However, the

⁸³ Ibid.

⁸⁴ D Lunney et al, ‘The Long-Term Effects of Logging for Woodchips on Small Mammal Populations’ (2009) 36 *Wildlife Research* 691; see P Gibbons, D B Lindenmayer, S C Barry, M T Tanton, ‘The Effects of Slash Burning Trees Retained on Logged Sites in South-Eastern Australia’ (2000) 139 *Forest Ecology and Management* 51.

⁸⁵ Forestry Corporation NSW, ‘A Review of Wood Resources on the North Coast of New South Wales’ September (2004) 12.

authors consider these reviews necessary to test the validity of Forestry Corporation NSWs estimates.⁸⁶ No tangible efforts have been made by Forestry Corporation NSW to ensure sustainability or to produce any reporting showing that efforts are being made. Forestry Corporation NSW are operating in the gloom of uncertainty. For the Upper and Lower North East region the Auditor-General stated:

To meet wood supply commitments, the native forest managed by Forestry Corporation NSW on the north coast is being cut faster than it is growing back.⁸⁷

The authors believe this to be true for the Southern region, if ever real data becomes available. The audit report mentioned for Southern was not completed by June 2009. 'It may not be ready until mid 2010', and 'the report will be ready by June 2010'. The report is still not available as of June 2011.

It is my understanding that the review of the sustainable yield for the Southern Region was expected to be completed by June 2009 but is still being done. Forests have indicated it will take time to check the review and are unlikely to publish the results and methods of calculating the sustainable yield (covered by Milestone 54 in the RFA review report) before mid-2010.⁸⁸

Removal of Products from Forest Ecosystems

The level of firewood removal from the Southern Region is significantly greater than other RFA areas. There is no evidence of studies/reports that have been undergone to review whether this level of removal is sustainable. There have been calls for help to stop the rampant firewood removal from the Goulburn area especially from private land and leasehold land sources.

Honey is one of the few viable products from State forests. Of particular concern to bee farmers is the knowledge that:

forestry activities that remove flowering and/or mature trees are a continuous threat to the floral resources accessed by beekeepers.⁸⁹

The four year study undertaken by Law et al amounts to one page in a report on honeybees. It states:

⁸⁶ NSW Auditor-General, Report to Parliament, Performance Audit in Brief, April 2009, 2.

⁸⁷ NSW Auditor-General, Performance Audit, 2009, above n **Error! Bookmark not defined..**

⁸⁸ Michael Davies, Department of Environment and Climate Change, Environment Protection and Regulation Group, Crown Forestry Policy and Regulation Section (ex-Resource and Conservation Unit) 14/7/09.

⁸⁹ Commonwealth, *Senate Standing Committee, 'More Than Honey: the Future of the Australian Honey Bee and Pollination Industries'*, 48

<http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Beekeeping/Report/c01>.

This project has shown that current logging practices in NSW halve the nectar resource.⁹⁰

Removal of Wood Products Compared with Sustainable Volume

It was said that:

The IFOA provides the mechanism to implement the operational provisions of the Southern Forest Agreement. It contains the Terms of Licences issued by NSW Fisheries and NPWS as well as the EPA's current Environment Protection Licence for the Southern Region. The IFOA also contains **maximum timber volumes allowed to be harvested annually.**⁹¹

Any data given by Forestry Corporation NSW does not describe accurately the relationship to forest cut versus sustainable volume, due to the lack of independent sustainable yield review data. Merely reporting on to what extent wood supply commitment volumes are being met does not address questions of sustainability. Without knowledge of volume and regeneration rates the assurance that wood supply agreements can be met without degrading the ability of the forest to maintain supply in perpetuity is an erroneous assertion.

The information Forestry Corporation NSW has provided does not describe accurately the relationship to forest cut versus sustainable volume, due to the lack of independent sustainable yield review data. Merely reporting on what extent wood supply commitment volumes are being met by providing excerpts of FAs, RFAs and the IFOAs does not address questions of logging over quota.

If this information provided is the best on offer after ten years then the assumption is that this reports assertions are correct. It seems Forestry Corporation NSW are relying on what is 'generally referred to' and one or two clauses without detailed analysis of the whole of legislation approach nor any real evidence of volume figures.

Statutes provide guidance as to their intent at the beginning, usually in an 'objects clause'. Courts prefer interpretation of statutes that promote objects of legislation. At clause 1.4(d) of the *Southern Region Forest Agreement 2002* it states:

In making this agreement we:

d) State that the overriding intention of forest management across all tenures is to maintain and enhance all forest values in the environmental, social and economic interests of the State.

⁹⁰ B Law, and M Chidel, 'The Impact of Logging on Nectar Producing Eucalypts' (2007) Publication Number 07/138, Rural Industries Research and Development Corporation, Canberra <<https://rirdc.infoservices.com.au/items/07-138>>.

⁹¹ Letter to DOPI from Lisa Corbyn and David Nicholson, 18 April, 2002, signed by Director Waters and Catchments Policy (signed 18/4/02), Assistant Director General (Water & Air), Director General (signed Lisa Corbyn 19/4/02), emphasis added.

Clause 7 of the IFOA states:

(1) In carrying out, or authorising the carrying out of, forestry operations SForestry Corporation NSW must give effect to the principles of ecologically sustainable forest management

In the Southern RFA it states NSW agrees to:

undertake a review of Sustainable Yield every five years using enhanced FRAMES systems and information bases. The results of which will inform the annual volume which may be harvested from Southern region (or sub-region) being mindful of achieving long-term Sustainable Yield and optimising sustainable use objectives consistent with this Agreement.⁹²

The fact that the sustainable yield audits have not been undertaken is indicative of the inherent failure of the whole native forest logging industry to abide or adhere to any legislated requirements.

Allowable Volume of Logs

The allowable volume of trees logged was legislated to be based on 'sustainable yield' and FRAMES. Forestry Corporation NSW alleges that the allowable volume figures in the legislation can be overridden by contractual commitments. This defeats the purpose of sustainable yield and indeed the legislation.

To take this erroneous assumption further it would mean the legislation and subordinate legislation serves no purpose. This assumption therefore does not meet the objects of the various Acts and subordinate legislation. In the Southern RFA it states:

7 The Parties confirm their commitment to the goals, objectives and implementation of the *National Forest Policy Statement (NFPS)* by:
(a) Developing and implementing Ecologically Sustainable Forest Management (ESFM);

To focus on one clause at the expense of the remaining legislation is in itself indicium. There are many other clauses in the various pieces of legislation. At Attachment 8 (2)(a) of the Southern RFA:

2. New South Wales will further improve its Forest Management System across forest management agencies and land tenures by:
(a) developing consistent with this Agreement, a Regional ESFM Plan, a New South Wales *Southern Region Forest Agreement*, and an Integrated Forestry Operation Approval.
They will collectively:
specify the wood supply commitments and their relationship to Sustainable Yield;

⁹² *Regional Forest Agreement for the Southern Region of NSW 2001.*

Pulp is defined as being subservient to logging of High Quality Logs ('HQLs'). This is the intent of RFA clause 83 as the volumes referred in RFA cls 80, 81 and 82 are to be as a by-product of logging for the volumes specified in RFA cl 76. These volumes also include the volumes obtained from thinnings and timber products, which are related to the committed volumes and also to sustainable yield.

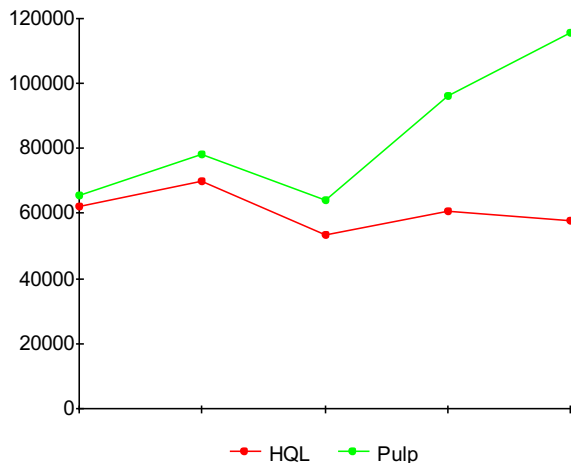
As evidenced by all the figures and amounts shown, pulp can in no way be interpreted to be subservient in either region. It seems the actual volume of pulp removed in the Southern region for the period 2002 to 2007 is equal to twelve percent above the allowable cut.⁹³ This is above the five percent allowed in IFOA clause 5(a). In essence Forestry Corporation NSW must stay within the five percent range.

There is some concern with the differing volumes between the reports and the FOI figures. The difference is too great to be attributed to the averaging of the years. Differing reporting methods and figures are provided to obscure actual volume figures of RFA regions.

Incorrect figures aside, it can also be seen that in all the years the volume of pulp is inconsistent with the volume for HQL. The IFOAs do state that sole purpose pulp activities are disallowed, however Forestry Corporation NSW have a myriad of ways around this. The the main one is to call the activities 'thinning operations' or 'Australian Group Selection' or 'Modified Shelter Wood'. As most logging now is done by mechanical harvesters this renders most logs unfit for being a sawlog and creates pulp.⁹⁴ We would have to strongly disagree that compartments in the southern and Eden regions are chosen 'for the volume of high quality sawlogs they can deliver'. On ground evidence suggests compartments are logged to meet the wood supply agreements for pulp with SEFE.

⁹³ Draft Report, above n 2, Appendix 4, 227.

⁹⁴ M J, Connell, 'Log Presentation: Log Damage Arising From Mechanical Harvesting or Processing' Prepared for the Forest and Wood Products Research and Development Corporation, Project no: PN02.1309, CSIRO Forestry, (2003).



Consistency

Volumes of HQL over the past five years from South Coast sub region have been lower than the committed volume of 48,500m³, ranging from 2,000m³ to 11,000m³ under. In 2006–07 HQLs volumes were 43,314m³. Pulp volumes should also have stayed relatively constant or been ‘consistent’ at around the 2002/03 and 2003/04 volumes, yet the figure was 150,700t.

Continuing supply of *high quality small (HQS) logs* and provision of *residue timber* for charcoal and *pulpwood* **consistent** with the *HQL log* volumes in the Region will also occur.⁹⁵

And:

The harvest intensity will be determined by the 48,500 m³ HQL commitment and not commitments for *residue timber*.⁹⁶

Forestry Corporation NSW have departed from the legislation, evidenced by the dramatic increase in pulp volume logged. Therefore pulp figures are definitely not consistent with the HQL figures.

If there is no maximum figure markets can keep demanding more ad-infinitum, this is impossible when constrained by sustainable yield. The only way volumes can be increased is by logging more area, or by logging more intensively. Both of these outcomes will have an effect on sustainable yield.

If the maximum volume for pulp is 97,000t per year and Forestry Corporation NSW have logged 102,372t on average for the past seven years then, as evidenced, Forestry Corporation NSW are

⁹⁵ *Southern Region Forest Agreement 2002* (NSW) cl 25.

⁹⁶ *Ibid* cl 27.

definitely logging over quota. Unless this figure was deliberately set as a smoke screen to have it seem that the industry was sawlog driven then this figure must stand as a maximum figure.

While RFA clause 82 states that supply of other forest products will be 'in accordance with current and future market demands', this must be taken in context with sustainable yield. Committed volume is already above sustainable yield thus there can be no increased volumes on the basis of market demand without throwing sustainable yield out the window.

The pulp volume in RFA clause 80 is a maximum volume until there has been a recalculation of sustainable yield showing that this can be increased. The volumes for the various timber products in the RFA and FA are the only volumes allowed unless the agreements are amended. There has been no recalculation of sustainable yield nor have the agreements been amended. As these have not occurred there must therefore be a breach of the RFA and FA by Forestry Corporation NSW.

The annual yields currently supplied from the Eden region are not sustainable because:

- * The use of clear-fell logging which converts multi-aged forests into regrowth precludes the maintenance of forest values in perpetuity and breaches criteria for ecological sustainability.
- * The 'sustained yield' volumes included in the Integrated Forestry Operations Approval were not based on a legitimate run from the Forest Resource and Management Evaluation Systems ('FRAMES') software, but were merely derived by applying an inflated mean volume per hectare figure.
- * Data shows that the estimation process that FRAMES was based on – predicting alternate coupe volumes from logged coupes – is unreliable, but estimates have not been updated to account for this fact.
- * The committed annual yield volumes have been consistently overcut by Forestry Corporation NSW in breach of the Forest Agreement and RFA.

The timber volume of 23,000m³ that is common to all Eden agreements is not a minimum volume but a maximum volume. This volume can only be increased by a recalculation of sustainable yield using enhanced FRAMES.

The timber volume allocated in the NSW FA/RFA for the Eden region is not derived from a legitimate FRAMES run and is not a sustainable yield volume. The allocated volume is approximately 2,350m³ above sustainable yield which over the past ten years has seen more than one years' worth of future timber volume already logged. When combined with the actual over cutting of timber volume above that allocated, the future timber supply has been severely compromised.

This situation should have been rectified years ago when the review of sustainable yield was due to be conducted and if OEHL enforced compliance with the allocated timber volumes being logged by Forestry Corporation NSW. It is indicative of the failure of the NSW FA and RFA process and outcomes to deliver truly sustainable forest management.

Even if Forestry Corporation NSW log the contentious areas it will not solve the long-term problems that have already been caused. Therefore, the NSW Government needs to cease all activities in the Eden region due to the unsustainability of these forestry activities. Industry buyouts and a move to the plantation estate are required immediately to protect the remaining multi-aged forests.

The RFA for the Eden Region 1999 has a definition for sustainable yield which ties in with the definition of ESFM:

***Sustainable Yield** means the long term estimated wood yield from forests that can be maintained from a given region in perpetuity under a given management strategy and suite of sustainable use objectives.*

Sustainable yield plays a major role in the credibility and integrity of ESFM and without this core component any claims that forestry activities are in accordance with ESFM are false and misleading.

This report demonstrates that the concept of ESFM and especially ‘sustainable yield’ have been abused during the CRA process by the granting of unsustainable timber volumes and the subsequent over cutting for many years above these timber volumes by Forestry Corporation NSW.

It is for this reason that Forestry Corporation NSW are claiming that timber supply is tight and that they only have ‘2 to 3 years timber supply from the multi-aged forests’.⁹⁷ This situation is of Forestry Corporation NSW own making with OEHL and the government sharing culpability for failing to monitor the sustainability of timber volumes.

NSW Forest Agreement for the Eden Region 1999

Following on from the CRA for the Eden region a NSW *Forest Agreement* came into effect in March 1999. The agreement sets out the principles and strategic framework for the cooperative management of all forests by the government and its agencies.

Section 2 is titled Promoting ESFM in the Eden region. Section 2.2.1 requires the preparation of regional ESFM Plans, and that these plans must have the status of management plans under the

⁹⁷ Ian Barnes, Forestry Corporation NSW Regional Manager, pers com to SEFR.

Forestry Act.

Section 2.10.1 acknowledges that *‘ESFM is the guiding philosophy for forest management’*. Criteria and indicators for ESFM have been developed to evaluate and review the sustainability of forest management activities. Section 2.10.2 lists the ESFM indicators adopted for the Eden region. Under the criteria *The Productive Capacity and Sustainability of Forest Ecosystems*, indicator 2.1b requires reporting on the *‘annual removal of timber and non- timber products from forest ecosystems compared with those estimated to be ecologically sustainable by tenure’*.

Section 3 sets the framework for sustainable timber supply for the region. Section 3.1, *Sustainability strategy for timber supplies*, sets the High Quality Large Sawlog (HQL) timber volume at 23,000m³ from the Eden region, 1,000m³ from Ingebirah and 1,000m³ for the first 5 years from the South Coast region. *‘Any increases to these volumes must be sustainable and consistent with modeling using the Forest Resource and Management Evaluation System (FRAMES)’*.

Section 3.5 *Timber Resource Assessment* requires the refinement of resource availability. This is to be achieved through improvements to FRAMES and resource inventory measurement. Comparison of actual volumes to predicted volumes are to be made. These results must then be used to *‘review the performance in achieving the implementation of sustainable yield of timber products’*.

Regional Forest Agreement for the Eden Region 1999

The RFA is an agreement between the State and Commonwealth Governments to facilitate forestry activities. In the agreement the Commonwealth acknowledges that the State Government has undertaken a CRA and created a CAR reserve system. In return the Commonwealth exempts RFA regions from the EPBC Act and export control regulations.

Developing and implementing ESFM in the Eden region is a fundamental aspect to the RFA and many clauses deal with this issue. Clause 46(c) requires NSW to publish a Regional ESFM Plan under the *Forestry Act* and 46 (f) requires a review of sustainable yield consistent with attachment 11 of the RFA and FRAMES.

While cl 72 notes the NSW FA for Eden *‘establishes the sustainability strategy for timber supplies’*, clause 73 confirms the timber volumes contained in the NSW FA. Clause 76 requires NSW to review timber volumes using processes described in cl 46(f), and only additional sustainable timber volumes are to be made available.

Clause 95.6 requires NSW in accordance with cl 46(f) to review sustainable yield consistent with attachment 11 and FRAMES in time for the first 5 year review. It should be noted that a failure to

comply with cl 46(f) and review sustainable yield by the first 5 year review is a trigger for termination of the RFA: cl 99(iv).

Attachment 11 *Sustainable yield systems and processes* sets out the requirements for reviewing sustainable yield calculations. Point 4 requires any changes to the volumes in clause 73 to be based on sustainable yield and consistent with FRAMES.

Integrated Forestry Operations Approvals

The IFOA brings all the environmental assessment, planning, and regulatory regimes that apply to forestry activities together into one document. There is a general requirements section, called the non-licence conditions, an EPL, TSL and a Fisheries Licence.

It is clauses 5(2) (a) and 5(3) of the non-licence conditions that define the volume of HQL that can be logged each year.

5. Description of forestry operations to which this approval applies

(2) This approval applies to logging operations, being the cutting and removal of timber for the purposes of producing any of the following:

(a) High Quality Logs (including an amount of up to 23,000m³ per year, being a quantity which reflects contractual commitments existing at the date of this approval);

(3) To avoid doubt, the quantities of timber products specified in paragraphs (a) and (b) of subclause (2) do not impose any limitation on the quantities of those products that may be harvested under this approval. The quantities referred to simply reflect contractual commitments existing at the date of this approval.

It is clearly impossible to have a sustainable yield that is based on contractual commitments alone.

Analysis of Sustainability of Eden Timber Yields

FRAMES was designed during the CRA process as a tool to determine the ecologically sustainable timber yield for forest regions under various management systems and NHAs. The Eden FRAMES Report 12/5/98 formed the basis for the timber volumes adopted in the NSW FA and RFA for Eden.

Whilst there are many concerns with aspects of FRAMES methodologies, assumptions and error limitations, the estimates produced by FRAMES are all there is to calculate sustainable yield and FRAMES should be regularly reviewed, updated and adhered to. Any changes in sustainable yield

need to be validated by FRAMES as required by the NSW FA and RFA. However, the yields of timber currently supplied from the Eden region are not sustainable.

Conversion of Multi-Aged Forests to Regrowth

In the period 1997-2019 the majority of the timber volumes will come from the multi-aged forests of the region with the transition from 2016 onwards to full regrowth. Multi-aged forests are clear-felled in the Eden region in 10-100 hectare coupes, in a practice which Forestry Corporation NSW refers to as 'Modified shelterwood harvest system'. The Resource Assessment Commission in 1992 stated that even though some silviculture systems (including Modified shelterwood logging) retain habitat and seed trees these systems are still classified as clear-fell logging. This conversion of multi-aged forests into regrowth forests is against the principles of ESFM and sustainable yield. The Eden region is the only region in NSW that the multi-aged forest is to be converted to a regrowth forest. It is questionable how this management strategy is to maintain all forest values in perpetuity.

The conversion of multi-aged forests into regrowth results in a massive reduction of hollow bearing trees from a sub-optimal 13+ per hectare to 2-6 per hectare. This will have a severe impact on hollow dependent fauna into the future.

It is clear that the sustained Yield Volumes are and were not based on a legitimate FRAMES run and are higher than the sustainable yield. This analysis has at its base a comparison of the differing areas and timber volumes that have been used for different yield estimates, and compares the estimates of sustained yield from three different reserve scenarios that were considered during the development of the forest agreement.

Even though the Actual Reserve Outcome resulted in 12,303 ha less available for logging than that recommended by the Government departments, the estimated timber yield was exactly the same. This timber yield is the volume that has been committed for supply through the Forest Agreements and other regulatory instruments.

The Actual Reserve Outcome estimate appears to be based on application of the average volume per hectare from the Base Case, and not from a legitimate FRAMES run. The NHA for the base Case and RFA were used to calculate the yield. This leads to the conclusion that the current yields were derived by applying the base case volumes per hectare to the area available after the reserves were implemented.

However, this is likely to lead to a major overestimate of sustained yield, because large areas of high yielding forest were reserved, which means that the average yield per hectare can be expected to decline substantially.

Compounding the difference between the RFA and scenario B net areas is the large amount of area allocated to FMZ 3b special prescription zones in the RFA outcome. These areas generally modify the logging activities to 50% canopy reduction instead of the usual 70-90%. The effect of this volume reduction has not been estimated in this analysis.

A more accurate sustainable yield figure for the reserve outcome could be obtained from using the volumes per hectare from the Departmental Position scenario. This holds because the Departmental Position and the Actual Reserve Outcome were much closer in configuration and area than the base case was to either.

The volume per hectare for the Department Position is $0.15018\text{m}^3/\text{ha}$. Applying this to the Actual Reserve Outcome position of 137,510ha results in an estimate sustained yield of $20,651\text{m}^3$.

This shows that the RFA timber allocation of $23,000\text{m}^3$ is completely unsustainable by approximately $2,350\text{m}^3$ per annum. As this situation has been in effect for 10 years approximately $23,500\text{m}^3$ has been extracted from the region which is more than 1 year of supply at the sustainable yield of $20,650\text{m}^3$. These figures are extremely conservative as they do not take into account the volume reduction from increased FMZ 3b areas.

Unreliable FRAMES Estimation Without Proper Review

FRAMES timber volumes have reported confidence limits of $\pm 30\%$. However, there is evidence to suggest that the differences between estimated yields and actual yields are in fact far greater than this.

FRAMES relies on actual timber volumes logged in cut coups to estimate likely timber yields in uncut coups. However, the Eden FRAMES report 1998 noted that post 1994 the yield relationship between cut and uncut coups starts to break down with a subsequent decline in actual volume/ha compared to the estimated volume. The FRAMES report recommended investigation into the declining yields since 1994 as this could have important ramifications to sustainable yield calculations. However, there has been no investigation nor any change in sustained yield estimations in response to this information.

Possible causes for the decline in yield could be increased tree mortality due to Drought Associated Dieback, climate change or Bell Minor Associated Dieback. Even if BMAD or DAD are not the reason for the past decline they will become a concern for future timber volumes as the area of forest affected is increasing. The impact of climate change on future timber yields was not accounted for in the CRA process.

The NSW FA and the RFA require sustainable yield to be reviewed by the first five year review and for an independent review by the second five year review. It has been ten years since the signing of these agreements and there has still been no review of the sustained yield estimates from FRAMES. This is increasingly urgent, as Forestry Corporation NSW is planning to complete the conversion of multi-age forests to regrowth within the next few years.

Consistent Overcut of Committed Yields

SEFR sent a report to OEH on 8/9/08 regarding the over cutting of committed timber yields by Forestry Corporation NSW being in breach of the NSW FA, RFA and IFOA. The information detailed in the legislation section of this report and in the breach report establishes the principles of ESFM and especially sustainable timber yield. SEFR stands by its opinion that Forestry Corporation NSW is in breach of the NSW FA, RFA, ESFM plan and the *Forestry Act* by the over cutting of sustainable timber yield.

While the RFA/FA state 'a minimum of 23,00m³ from the Eden Region' this has to be taken in the context of ESFM and sustainable yield. In both the RFA/FA it also states any increase to these volumes has to be sustainable and consistent with FRAMES. There has been no recalculation of sustainable yield to date for the Eden Region, and so although it says minimum, the 23,000m³ is also a maximum. The whole concept of sustainable yield is the maximum volume that can be logged each year in perpetuity; any other interpretation is completely untenable in the context of ESFM and sustainable yield.

OEHs interpretation of clause 5(3) of the Eden IFOA as to why Forestry Corporation NSW are not in breach of over cutting is shallow reasoning, against one of the core concepts of ESFM, against all other Acts and Agreements and is also demonstrably in error.

While clause 5(3) does seem to negate any limitations on timber volumes there are other clauses in the IFOA which also need to be taken into account and this is what is meant by shallow reasoning on behalf of OEH.

As there are obviously differing requirements and inconsistency between the IFOA and other Acts and Agreements and also within the IFOA itself then clause 44 must have effect and enforce compliance with the concept of sustainable yield.

Section 3.3 *Timber Supply Arrangements* states '*Continuation of arrangements under existing agreements to allow for the carrying forward into subsequent years of volumes of under cut and over cut*'. This clause allows slight variations of over or undercut each year to give some flexibility due to operational constraints. While there are no values for these arrangements for Eden all other IFOA regions have the same specified values and these are applied in this analysis.

The maximum overcut allowed each year is 25% of 23,000m³ (23,000 x 1.25=28 750m³).

Every 5 years the maximum overcut allowed is 5% of 5 x 23,000m³ (5 x 23,000= 115,000m³ x 1.05=120,750m³).

At the end of the RFA period of 20 years the allowable volume logged is to be no more than 20 x 23,000m³= 460,000m³.

The year 2004 was the first 5 year period for which there is available data. The 5 year volume column shows the total volume logged in this period. The volume above 5 years + 5% column shows the volume logged in excess of that which is allowable.

Forestry Corporation NSW are still logging above the FA/RFA allocated volume of 23,000m³ and all 5 year periods are above the allowable volume plus 5%. The total over cut of 17,983m³ is almost one year's supply of the true sustainable yield of 20,650m³.

Inconsistency Between Data Sets

There are three different data sets on timber volumes logged in the Eden region that are in existence. The first data set, the one that SEFR relies upon, are the annual volume reports required by clause 24 of the IFOA. These reports are to be on a calendar year basis. SEFR has been obtaining these reports since 2001.

The second data set is that contained in the annual reports on the NSW FA/IFOA which are also repeated in the Draft Report on Progress with Implementation of the NSW RFA's. These cover the period 1999/2000 - 2006/2007 and are on a financial year basis.

The last data set is from the Auditor-Generals Report- *Performance audit-sustaining native forest operations 2009* Appendix 1. It reports on a financial year from 03/04 to 07/08.

Analysis of Data Sets

There is one obvious difference between the AG report and the FA/IFOA/RFA report for the year 06/07. After comparing the clause 24 reports and the FA/IFOA/RFA reports it is impossible to reconcile the two, with clause 24 reports showing greater timber volumes, to a significant amount in some years. Converting the FA/IFOA/RFA volumes to calendar years, eg (year ab + year bc)/2, and comparing the total volume logged between 2001 and 2006 produces the following figures.

HQL logged adjusted to calendar year

CI 24 IFOA Yr	Volume	FA/IFOA/RFA Report	Volume
01	23,726	01	26,192
02	25,154	02	23,614
03	26,806	03	24,015
04	26,513	04	24,282
05	23,126	05	23,185
06	24,708	06	22,172
Total	150,292	Total	143,460

The difference of 6,573m³ is too great for any slight discrepancies in the averaging method used. Only in year 2005 are the volumes in alignment. The reasons for these differing data sets need to be resolved and the exact volumes logged reported.

Conclusion for the Eden Region

It is clear the intent of all the various Acts and Agreements is the establishment of an ESFM framework as the core principle for the management of the forest estate of NSW. It is also clear that sustainable timber yield is a cornerstone of ESFM which is being neglected. Timber volumes that are unsustainable will have negative implications for not only the environmental values of forests but also for future socio-economic values.

The timber volume of 23,000m³ is a maximum volume. If this volume is taken as a minimum then there can be absolutely no claim that forestry activities are conducted in accordance with the principles of ESFM and sustainable yield.

The timber volume allocated in the NSW FA/RFA for the Eden region is not derived from FRAMES and is not a sustainable yield volume. The allocated volume is at least 2,350m³ above sustainable yield which over the past ten years has seen several years of future timber volume already logged. When combined with the actual over cutting of timber volume above that allocated in the NSW FA/RFA, the future timber supply has been severely compromised.

This situation should have been rectified years ago when the review of sustainable yield was due to be conducted with an updated FRAMES, and if OEH enforced compliance with the allocated timber volumes being logged by Forestry Corporation NSW. It is indicative of the failure of the NSW FA and RFA process and outcomes to deliver truly sustainable forest management.

Conclusion for Both Regions

Forestry Corporation NSW is claiming that timber supply is tight. In our view, the real reasons are that the long term contracts are based on unsustainable yields, and that Forestry Corporation NSW have mismanaged the forest by over cutting.

Statistics on historic yields show that since 1995 Forestry Corporation NSW wood production moved increasingly from native forest to plantation. As the figures show, the plantation estate has been the main timber provider prior and during the RFA period.

Therefore, there really is no bar to the NSW Government ceasing all activities in the region due to the unsustainability of these forestry activities. Industry buyouts and a move to the plantation estate are required immediately to protect the remaining multi-aged forests.

There is no justification for the sharp rise in pulp volumes over the past three years other than trees are being felled specifically for pulp, at a substantial loss to the taxpayer, to subsidise the profits of SEFE.

An analysis of compartments logged shows that the quality of forest has remained relatively constant and therefore volumes should also have stayed relatively constant. The volume figures for pulp have risen dramatically, no matter which figures are used. The only way for this to happen is by logging more intensively, which will affect the remaining stand condition and ultimately sustainable yield.

The following assumptions can be made;

- (a) native forests on the south coast are logged primarily for pulp;
- (b) more money is made from pulp.

Therefore, any claim that FCNSW will or are using is waste is erroneous. It must be remembered that a 'pulp log' by its very definition must be waste.

As stated above there has been no noticeable difference in forest quality and so the only explanation is that pulp activities are the driving force in the region, not HQL as is alleged. At this rate of logging it brings the rotation time down to five to ten years, which is unsustainable.

We would state again, and importantly, the use of mechanical harvesters creates pulp logs.⁹⁸

⁹⁸ M J, Connell, 'Log Presentation: Log Damage Arising From Mechanical Harvesting or Processing' Prepared for the Forest and Wood Products Research and Development Corporation, Project no: PN02.1309, CSIRO Forestry, (2003).

The RFA, FA and IFOA have not been amended over the years. There has also been no recalculation of sustainable yield over this time. Therefore, Forestry Corporation NSW are in breach of these agreements and are acting contrary to the principles of ESFM.

As evidenced FCNSW has not only failed to meet its legislated requirements it has failed to meet the objects of the Corporation and the Act.

BIODIVERSITY

The numbers of threatened species, threatened populations and ecological communities increased significantly since the RFAs were signed and many threatened and endangered flora and fauna species are at extreme risk from current logging activities. The Reserve system gazetted to date, along with the off-reserve protection measures of the IFOAs, are neither comprehensive, representative, nor 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 was 1035, in 2011 it is up again to 1074, in 2012 it was 1100.⁹⁹ These figures, when compared to the 1998 figure of 868 are the most indicative of the RFAs effect on our environment.

A recent report by Professor Richard Kingsford, Professor Brendan Mackey and a think tank of thirteen eminent scientists stated that:

Loss and degradation of habitat is the largest single threat to land species, including 80 percent of threatened species.¹⁰⁰

As evidenced the greatest threats to Australia's biodiversity are caused by broad-scale land clearing and forestry activities including establishment of plantations and fire management activities, yet industrial forestry activities continue to remain exempt from legislation.¹⁰¹

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;

⁹⁹ NSW Government, Office of Environment and Heritage
<<http://www.environment.nsw.gov.au/threatenedspecies/>>.

¹⁰⁰ R T Kingsford et al, 'Major Conservation Policy Issues for Biodiversity in Oceania' (2009) 23(4) *Conservation Biology* 834 <<http://onlinelibrary.wiley.com/doi/10.1111/j.1523-1739.2009.01287.x/abstract>>.

¹⁰¹ See National Strategy for the Conservation of Australia's Biological Diversity (1996).

(vii) consideration of any international or national implications.¹⁰²

The Expert Panel stressed that the persistence and perpetuation of hollow bearing trees is imperative for the survival of forest fauna.¹⁰³ 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 NHA 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.

16 years later the habitat to recruitment ratio is still one to one; the regrowth zone is weaker, because only the hollow-bearing trees present (up to a maximum of 10 per two hectares) are retained - if ten are not present then consequently less recruitment trees are retained; there are no stipulations in any harvest plans to retain previously retained trees and rotation times have shortened. For example compartment 62 of South Brooman State Forest has had 'Timber Stand Improvement' twice and been logged nine times since 1954, which is virtually every six years.¹⁰⁴ Tantawangalo State Forest, dedicated FMZ 3BC, has been logged every five years.

There is no available ESFM data on the marking up of retention trees, both habitat and

¹⁰² *Intergovernmental Agreement 1992* sch 2 (3).

¹⁰³ Ecologically Sustainable Forest Management Group, 'Review of Protective Measures and Protective Measures and Forest Practices - Biodiversity Workshop Southern Region' July 1999, Project No NA45/ESFM, 176–77.

¹⁰⁴ Forestry Corporation NSW, Southern Region Compartment 62, South Brooman State Forest, Bateman's Bay Management Area, Harvest Plan approved 8/5/09.

recruitment trees, and consequently many trees that had been retained have now been logged. Indeed currently there is no available data on past history of retention trees and their location thus previously retained trees are constantly available for logging.¹⁰⁵

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 strangely the stumps are invariably of the largest size class. The sliding scale idea was put in place in Eden 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.

Forestry Corporation NSW have been informed on the extent of threatened species in their region yet could only find fifteen percent of these species in the Eden region and thirteen percent in the Lower North East in the pre-harvest fauna surveys.¹⁰⁶

To obtain data for surveys Forestry Corporation NSW officers conduct ‘nocturnal surveys’. SFOs have often been observed shining their torch on the ground.

A case in point is three years prior to logging Compartment 3046 Forestry Corporation NSW conducted a nocturnal call playback and spotlight survey and South East Forest Rescue observed breaches and inadequacies during this survey. These breaches undermine the, albeit limited, scope for protection of threatened species by the IFOA.¹⁰⁷ This survey stood as the data on threatened species for the Bodalla SF compartment 3046 logging activities three years later.

The lack of care for threatened and endangered species is nowhere more apparent than in the ESFM report which states:

Any change to the number of species recorded on the estate are likely to reflect research and survey effort rather than true species richness of forest areas.¹⁰⁸

Further scientific judgment on surveying runs thus:

Unless the probability of detecting a species when it is present is equal to 1, false negative observation errors will occur in species surveys. The probability of detecting the presence of the case study species in any single standard survey based on spot-lighting and call

¹⁰⁵ P Gibbons et al, above n 84.

¹⁰⁶ NSW Department of Natural Resources, 2006 ESFM ‘Criteria and Indicators Monitoring Report–2001/2002: Upper North East, Lower North East and Eden Regions’ A Supplementary Report to the NSW Forest Agreements Implementation Report, Forestry and Rural industry Policy, 25.

¹⁰⁷ Letter from SEFR to Doug Mills NPWS Southern Directorate, Threatened Species Unit, 23/8/04.

¹⁰⁸ NSW Government 2006, ESFM ‘Criteria and Indicators monitoring Report 2001/2002: Upper North East, Lower North East and Eden Regions’ A Supplementary Report to the NSW Forest Agreements Implementation Report, Forestry and Rural industry Policy, NSW Department of Natural Resources, Parramatta, 37.

elicitation has been found to be very low ($\text{Pr}[\text{detection}/\text{presence}] \sim 0.12\text{--}0.45$); making the reliability of absence data a potentially serious form of uncertainty in our case study. Recent studies have demonstrated the negative impact that false-negative observation error may have on species habitat analyses, meta-population models and monitoring studies.¹⁰⁹

Scientists advocate an approach based on maintaining ecosystem structure and function, and therefore ultimately protecting more species.¹¹⁰ Protecting key functional species and diversity within functional groups is a key way to do this thereby enhancing ecosystem resilience, so that they are able to maintain their functions and processes. It is not enough to merely record species, the impact of the logging must be recorded.

The authors note with great concern that slow growing species such as *Macrozamia communis* (Burrawangs), *Dicksonia youngiae*, and *D antarctica* (Soft Tree Ferns), *Cyathea australis* and *C cunninghamii* (Rough Tree fern) and *Xanthorrhoea spp* (Grass Trees) are particularly vulnerable in logging areas. Most of these plants have been alive long before white settlement, they grow up to one cm of trunk per year, and when young will take up to ten years to start forming a trunk. Research shows that only between two to thirteen percent of tree ferns regenerate after logging and never regrow on snig tracks or log dumps. Tree ferns, which play a vital role in maintaining the moisture of the forest floor and providing protection for the growth of other forest plants, are often casualties of logging.¹¹¹ There are no IFOA prescriptions for these flora even though they are protected under NSW legislation.

IFOA and PNF Prescriptions for Species

In the Southern and Eden regions there are around 22 compartments active in State forest and 46 Property Vegetation Plans which mainly feed the pulp market. All of these contain threatened and/or endangered species. For instance, there are 91 forest dependent species of fauna in the region.¹¹²

Once a species has been listed by the Scientific Committee it triggers numerous obligations for

¹⁰⁹ B A Wintle, J Elith, and J M Potts, 'Fauna Habitat Modelling and Mapping: A Review and Case Study in the Lower Hunter Central Coast Region of NSW' (2005) 30 *Australian Ecology* 719.

¹¹⁰ S McIntyre et al, 'Species Triage – Seeing Beyond Wounded Rhinos' (1992) 6(4) *Conservation Biology* 604; see also B Walker, 'Conserving Biodiversity Through Ecosystem Resilience' (1995) 9(4) *Conservation Biology* 747.

¹¹¹ G L Unwin, and M A Hunt, 'Conservation and Management of Soft Tree Fern *Dicksonia Antarctica* in Relation to Commercial Forestry and Horticulture' in *Pteridology in Perspective*, J M Camus, M Gibby and R J Johns [eds], (Royal Botanic Gardens, Kew 1996) 125–37.

¹¹² NSW Government, National Parks and Wildlife, Atlas of NSW Wildlife, <http://www.environment.nsw.gov.au/atlaspublicapp/UI_Modules/ATLAS_/AtlasSearch.aspx>.

habitat conservation.¹¹³ Thousands of dollars have been spent both State and federally on each species recovery plan and threat abatement plan, yet despite this, and there being a plethora of legislation and regulations to conserve biodiversity, native forestry activities are exempt.

The object of IFOAs are stated as being ‘for the protection of the environment and for threatened species conservation’.¹¹⁴ However, it is the Forestry Corporation’s view that if a species is not contained in the TSL then it is not afforded any protection. In this way the prescriptions have been frozen in time at 1998.

The Scientific Committee’s main recommendations to protect hollow dependant species were to establish appropriate recruitment tree ratios as part of the Private Native Forestry Code under the *Native Vegetation Act 2003* (NSW), and adopt appropriate policies for recruitment tree ratios with a stipulated minimum retention density in areas of State forestry activities.¹¹⁵

Both of these strategies for different land tenures are given High priority, both of these strategies have not been implemented. Given that generally eucalypts form hollows after about 120 years of age a sustainable rotation age would be one that allows forest values to regenerate.¹¹⁶ Reducing forests to a flat rate of 5 or less hollow bearing trees per hectare from an optimum of 27–37 hollow bearing trees per hectare puts at risk expectations that future generations will see fauna such as the Greater Glider in the wild.

Prescriptions for threatened species and habitat conservation in IFOAs and the PNF code are grossly inadequate. Furthermore, neither a FOP nor harvest plan can be classed as a species impact statement.¹¹⁷ It is perfunctory to merely record species. Impacts of logging and post-logging burning on species and their habitat must also be recorded and monitored to ensure due process in achieving conservation objectives.

For instance in the Tumut region, cl 6.8.d does not cover the full spectrum of food resource trees that the endangered population are observed to be utilising. It is regularly found that there are Yellow-bellied Glider feed scars on other Eucalypt tree species including *E. rubida* (Candle Bark), *E. delegatensis* (Alpine Ash), *E. stellulata* (Black Sallee), and *E. pauciflora* (Snow Gum).

¹¹³ See the *Environment Planning and Assessment Act 1979* (NSW); the *Protection of Environment Operations Act 1997* (NSW); the *Threatened Species and Conservation Act 1995* (NSW); the *Environment Protection Biodiversity and Conservation Act 1999* (Cth); *National Parks and Wildlife Act 1974* (NSW).

¹¹⁴ *Forestry Act 2012* (NSW) s 69L(b).

¹¹⁵ *Threatened Species Conservation Act 1995* (NSW) Sch 3 cl 8, *Loss of Hollow Bearing Trees Key Threatening Process*.

¹¹⁶ M J Crane et al, ‘The Characteristics of Den Trees Used by the Squirrel Glider (*Petaurus norfolcensis*) in Temperate Australian Woodlands’ (2008) 35 *Wildlife Research* 663.

¹¹⁷ *South East Forests Conservation Council Inc v Director-General National Parks and Wildlife and State Forests of NSW* [1993] NSWLEC 194, Deputy Director (Policy and Wildlife) Mr David Papps.

A comparison with a species recovery plan and threat abatement plan for species and prescriptions contained within the PNF Code and the IFOA TSLs highlights the inadequacy of these prescriptions. The results of this practice is reflected in numbers of threatened and endangered species rising in line with the increase in forests logged.

The regulators historic misconception of implementation of TSLs prescriptions has ensured that many breaches of licence conditions which have destroyed habitat have gone unpunished. Further, Forestry Corporation NSW have recommended to OEH that many prescriptions be nullified. For example, the original Eden TSL cl 6.6 Southern Brown Bandicoot *Isodon obesulus* provided that an exclusion zone of at least 200 hectares must be implemented around each record of the species; the amended Eden TSL now has very small buffer zone as evidenced by Nadgee SF Cpt 62 harvest plan.

Further the PNF Unit in OEH have shown themselves to be completely incapable of managing and implementing the PNF Code and activities, approving more than 70% of old-growth high conservation value native forest for logging, according to information obtained through Parliament that is 7,898 hectares over a 3 year period.

Listing Forest-Dwelling Species

Forestry Corporation NSW state that the reporting of forest dependent species depends on the reporting of SFOs prior to logging. This does not instil confidence. Forestry Corporation NSW gave no data from the Southern Region to the Independent Assessor. The data appeared to be CRA data which is blatantly untrue. There are Greater Glider and Squirrel Glider habitats within State forests in the Southern region. To base decisions on this type of erroneous data would be unjustifiable. It also seems that the Forestry Corporation pressure the Scientific Committee to change listings of species on bare *ipse dixit*.

Status of Threatened Forest-Dwelling Species

Numerous nationally-listed species in NSW are increasingly threatened by climate change, including species such as the Spotted-tailed Quoll, but the exemptions to the EPBC Act leaves things frozen in time, stopped at 1998, when climate change was not considered, and when it was thought that FCNSW would adhere to prescriptions.

Since 1998 there is a recognised increase in threatened species, endangered populations, endangered ecological communities, and Key Threatening Processes, which is material evidence on the failure of the RFAs. KTPs such as the removal of dead trees and the loss of hollow-bearing trees occur on a daily basis on the State forest estate, creating an ecological desert with impunity.

The *Threatened Species Legislation Amendment Act 2004* (NSW) has enabled the Forestry Corporation NSW to view the IFOA licence conditions as able to be broken with impunity at a

significant cumulative detriment to the forest-dependent threatened species of the state, as long as it was ‘an accident’, which is reportedly 78% of the time. The community was assured that:

The NSW RFAs provide for environmental protection in respect of forestry activities through management prescriptions and the CAR reserve system.¹¹⁸

What the community has seen is that this statement is untrue. Environment in the areas covered under the NSW RFAs is in drastic decline, as evidenced by the evergrowing list of threatened species, the lack of water in all rivers where logging is occurring in their catchments, and the closure of oyster farmers business due to siltation.

As recently as 16 Aug 10 it was reported from the northern forests that:

...a recent NEFA audit of Girard State Forest, near Drake, found numerous breaches of 45 logging prescriptions and the destruction of a stand of high quality oldgrowth forest...

They did not even comply with standard logging prescriptions, let alone any special ones. This is a disgrace and unacceptable treatment of what was meant to be a ‘Special Prescription Zone’ contributing towards our national reserve system.

Recent audits have exposed illegal logging of rainforest, wetlands, endangered ecological communities and now oldgrowth forest. These are what the Regional Forest Agreement was meant to protect. And this is only the tip of the iceberg.¹¹⁹

Species Extent and Abundance

Current RFA mechanisms are not functioning positively. There has been no action on KTP abatement. For example the Southern Brown Bandicoot, for which the Eden IFOA initially stipulated a two hundred hectare exclusion zone, in Nadgee SF compartment 62, SBBs have been given no exclusion zone (see Operational Plan approved 30/06/09). There has been an amendment at Forestry Corporation NSW request of the SBBs prescriptions on the strength of alleged SBB monitoring surveys. The authors can find no documentation to substantiate the claim that the monitoring plans mentioned by Forestry Corporation NSW exist. There is a 2007 species management plan but no further monitoring reports.

The IFOA is a flawed document and the conditions it holds are therefore flawed, it is worded so that carte blanche non-compliance can be explained away as an accident, and is seriously undermining threatened species extent and abundance.

To merely list a threatened species - to ‘take note’ of a species and its location - is not considering

¹¹⁸ Draft Report, above n 2, 45.

¹¹⁹ D Pugh, North East Forest Alliance media release, 15 August 2010.

the impacts of logging on that species or its habitat, nor is that in any way affording protection to these species. These species have been legislated into extinction and Forestry Corporation NSW, the regulatory agency OEH, the State governments and the Commonwealth are all liable under domestic and international obligations. In our view, when the IFOAs are silent on a listed species FCNSW must abide by the *Threatened Species Conservation Act*, and the NPW Act.

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 compounded by industrial logging activities operating under an exemption to the EPBC Act and the RFAs, have resulted in a major impact on threatened species.

Effectiveness of the Threat Abatement Plan

Output from the studies on the effectiveness of the Threat Abatement Plan have not been forthcoming. This plan cannot have proved effective at removing foxes due to the fact that the 1080 baiting program is continuing beyond 2010.¹²⁰ The effect on non-target native species is of concern.

Non-target animals can also be at risk if they consume poisoned animals or their carcasses. Among native mammals, unadapted wombats, macropods, possums and some rodents can be killed by herbivore baits. Birds may also be killed by 1080 baiting. Scavenging species such as magpies and crows have been recorded as occasional casualties, together with some introduced species (sparrow, starlings, doves and pigeons). There are also reports from the early 1990s of crimson rosella (a highly sensitive species) being killed by carrot baits laid for rabbits.¹²¹

Most rodent species that have been tested in Australia and elsewhere are highly sensitive to 1080 poison.¹²²

There is some concern over the effects on Tiger Quoll populations. While Kortner et al state one of the nine deaths of tiger quolls in the study could be directly attributed to 1080 poisoning, the research by Belcher suggests there is grounds for concern.¹²³

¹²⁰ See Narooma News, Public Notices section, 26 August 2009.

¹²¹ Australian Pesticides & Veterinary Medicines Authority, 'The Reconsideration of Registrations of Products Containing Sodium Fluoroacetate (1080) and their Associated Labels' Preliminary Review Findings' (2005) <<http://apvma.gov.au/node/12716>>.

¹²² J C McIlroy, 'The Sensitivity of Australian Animals to 1080 Poison IV Native and Introduced Rodents' (1982) 9(3) *Australian Wildlife Research* 505, <<http://www.publish.csiro.au/paper/WR9820505.htm>>.

¹²³ Gerhard Körtner, Peter Watson, 'The Immediate Impact of 1080 Aerial Baiting to Control Wild Dogs on a Spotted-tailed Quoll Population' (2005) 32(8) *Wildlife Research* 673.

one population in southern NSW declined dramatically, coinciding with 1080 baiting for wild dogs.

Population declines were found to correlate with 1080 poison baiting programmes.¹²⁴

Residue versus Habitat Protection – A case study of the conditions of the Threatened Species Licence in the Southern Region

Late in 2001 the pressure was on agency players to finalise prescriptions of the TSL within the context of the heated issue of a Charcoal Factory proposal. The factory was being promised 200,000 tonnes pa of residue timber feedstock by Forestry Corporation NSW. When the RFA process began, this proposal was not in the mix. Luckily, the factory never received approval, but the ramifications of the threat continue to this day.

It became an over-riding concern for the National Parks and Wildlife Service ('NPWS') that during the negotiations for the TSL the removal of up to 200,000 tonnes a year of residual timber was not considered to be part of Forestry Corporation NSW activities in the South Coast sub-region.¹²⁵

A further concern was that the residual timber supply proposal forecasted the use of mechanical loggers and grapple snagging. These techniques had not previously been used on the South Coast and therefore the impacts, negative or beneficial, of these types of activities in the forests of the region were not fully understood. Consequently, it was difficult for the NPWS to fully anticipate the implications of the residual timber supply proposal for the threatened species of the region. To ameliorate these concerns, NPWS proposed to include a review in the TSL to enable comprehensive assessment of the on-ground implications of the activities and for consideration of these implications in the TSL conditions.

2.1 k) SForestry Corporation NSW must assist the NPWS in a review of the on-ground implications of the removal of residual timber and mechanical harvesting / grapple snagging techniques as they relate to the management of threatened species. This review must commence within 18 months of the start of supply to residual timbers to the charcoal plant.

Forestry Corporation NSW considered this reasonable and agreed to the wording of this proposal.

¹²⁴ C L Belcher, 'Demographics of Tiger Quoll (*Dasyurus maculatus maculatus*) Populations in South-Eastern Australia' (2004) 51(6) *Australian Journal of Zoology* 611 <<http://www.publish.csiro.au/paper/ZO02051.htm>>; see also C L Belcher, 'The Diet of the Tiger Quoll, *Dasyurus maculatus* in South-Eastern Australia' (2007) 55(2) *Australian Journal of Zoology*, <<http://www.publish.csiro.au/paper/ZO06102.htm>>; G Saunders et al, 'Managing Vertebrate Pests: Foxes' (1995) Australian Government Publishing Service, Canberra; quoted in J Marshall, 'Fox in the Hen House' The Introduction of the European Red Fox (*Vulpes Vulpes*) Into Tasmania, and The Potential Threat to the Fauna Biodiversity it Represents' Online Undergraduate Review of Geography and Environmental Studies. Flinders University, Adelaide.

¹²⁵ National Parks and Wildlife Service, letter to Forestry Corporation NSW, 14/10/2001.

However, the condition never made it into the final TSL document. Indeed the current prescriptions include such conditions like:

5.4 g 4) Nothing in this condition (being condition 5.4) prevents the use of a harvesting arm of a mechanical harvester to rehabilitate or reinstate ground or soil in Rainforest or an exclusion zone around Warm Temperate Rainforest or Cool Temperate Rainforest in accordance with another term or condition of this approval.

The NSW Scientific Committee made a determination in 2007 that the loss of hollow-bearing trees is a key threatening process. During forestry activities thousands of hollow-bearing trees per week are routinely destroyed. Representations have been made to the relevant Ministers recommending changes to forestry activities prescriptions to ameliorate this environmental impact but no change has been made to on-ground forestry activities to prevent this on-going loss. This also applies to the Key Threatening Process of removal of dead standing trees.

Fragmentation

There is nothing positive to report. Fragmentation has increased but conveniently no data exists to show this. Scientifically, habitat corridors need to be one hundred to two hundred and fifty metres wide to be beneficial, the current forty to eighty metres is simply not adequate.

Fauna experts consulted during the Response to Disturbance Project have recommended that corridors and riparian buffers be expanded to 200 m for yellow-bellied gliders, 1 km along major rivers for owls, 240 m for fishing bats and golden tipped bats, and 1km (with low-intensity logging) between catchments for stuttering frogs.¹²⁶

Roads bring more people into an area which results in fragmentation of the landscape, but they also have much broader and wide ranging effects. At the landscape scale, roads disrupt ecosystem processes and, at both a fine and coarse scale, cause a loss of biodiversity.¹²⁷

Fragmentation of the landscape and the consequent habitat loss is the major threat to biodiversity.¹²⁸ It has been suggested that fragmentation within a forest will force the inhabitants of the logged forest patch into the surrounding forest, thereby causing dysfunctional behaviour due to higher than normal densities.¹²⁹ This phenomenon is reduced when the remaining forest

¹²⁶ CRA Report 'Draft Assessment of Forest Management Practices for the Eden RFA' CSIRO Forestry and Forestry Products, (1997) 48.

¹²⁷ R T T Forman, L E Alexander, 'Roads and Their Major Ecological Effects' (1998) 29 *Annual Review of Ecology and Systematics* 207.

¹²⁸ J Benson, 'Past, Present and Future: the Role of Scientific Knowledge in Nature Conservation' [1993] *National Parks Journal*, 17; see also D S Wilcove et al, 'Quantifying Threats to Imperilled Species in the United States' (1998) 48 *BioScience* 607.

¹²⁹ J M Hagan, M Vander Haegen, and P S Mckinley, 'The Early Development of Forest Fragmentation Effects on Birds' (1996) 10 *Conservation Biology* 188.

is large and intact.

ECOSYSTEM Health and Vitality

The biggest and most common ‘negative agents’ to the health and vitality of ecosystems are logging contractors and Forestry Corporation NSW. 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 depending on the intensity of logging.¹³⁰

The data shows ongoing areas treated and expenditure on feral animals, but does not indicate what quantities are present, or what quantities have been exterminated, and therefore does not show how effective this program is.

Forestry Corporation NSW stated at Table 5.18 on page 132 of the Draft Report that in 2004-05 in the Southern Region 877,734 hectares of Forestry Corporation NSW forest estate were treated for introduced predators, but earlier on page 101 it states at Table 5.1 that in the same year in the same region there were only 205,545 hectares of forest estate managed by Forestry Corporation NSW.

There is a lack of independent scientific assessment examining the effectiveness of the RFA feral animal and weeds program. An example of weeds control in the Southern region can be found in compartment 516 of Buckenbowra State Forest, an area of unprotected wilderness west of Batemans Bay, where logging machinery introduced Scotch Thistle to the recently logged environment. The famous ring of lantana around Gulaga Mountain in State forest compartments has not lessened in extent yet \$575,965 was spent by Forestry Corporation NSW on weed management during the period 2002-2006.

Hundreds of thousands of dollars was spent in the Southern region but again there is no data on what outcomes or effects this spending had on noxious weeds. We note the whole of this criterion manages to evade mention of climate change, whereas it was stated in the SOFR 2008 that climate change will have a profound effect on forests.

¹³⁰ Mackey et al, above n **Error! Bookmark not defined..**

¹³¹ Commonwealth, State of the Forests Report, 2003 and 2008.

Forest Type by Area

The Commonwealth's State of the Forests Reports quality of reporting is substandard. Basic facts such as the land area of NSW changing between the 2003 and 2008 report where it shrank by 96,000 hectares.¹³¹

There seems to be no data for the Southern Region. Updated information regarding changes to the extent of forest type in the CAR is not available. The Forestry Corporation NSW statement stating the system was established in accordance with the JANIS is erroneous for a number of reasons, mainly due to the lack of willingness by legislators to promote ecology over economy.

Forestry Corporation NSW has stated:

Changes to the extent of forest type on state forests are reported through data obtained from the forest management zoning (FMZ) system. This zoning is based on the nationally agreed JANIS reserve criteria which give effect to the CAR reserve. The system defines a number of zones and specifies what activities are permissible within each zone. The extent of reservation of different forest vegetation communities is a measure of the degree of protection of biological diversity at the species and ecosystem levels. The modelled forest type extents listed in the RFAs are used as the baseline to measure changes to the extent of forest types. The *State of the Parks 2004* report and ESFM annual reports provide further detail on the extent and management of forest ecosystems *in each region*.

This information is vital for proper assessment, yet it is being left aside in Southern, and is lacking to the extent that the regionally produced 'harvesting plans' are not providing any information of how many hectares of each forest type yield association is within the net harvest areas. The information given in the recent Wandera Harvest Plan only gives basic statements such as 'stands of multi-aged regrowth with patches of maturing stands...forest stands of mixed age'.¹³² This implies that previously undisturbed forest is being logged under this plan. This is in tension with the *National Forest Policy Statement (1992)* and the need to preserve old-growth forest.

The ESFM Monitoring Report for 2001/02 tells us that:

any change to the extent of forest ecosystem types can only be presented separately for each tenure, and cannot accurately identify change to the extent of forest ecosystem types across the whole public forest estate. Forest ecosystem type data are currently derived from

¹³¹ Commonwealth, State of the Forests Report, 2003 and 2008.

¹³² See Forestry Corporation NSW, Site Specific Harvesting Plan, Southern Region -Compartments 584, 585, and 586 Wandera State Forest, Batemans Bay Management Area, approved 1/5/08.

different data sets for the national park estate and State forests and therefore cannot be directly compared.

This confounding effect needs to be emended.

Area of Forest Type by Growth Stage

All observations made to date of forestry activities under the RFAs have shown that logging old-growth is a high priority, indeed it is generally recognised that the Forestry Corporation NSW achievement of finalising the removal of unprotected old-growth is less than four years away. Information showing the effect on forest type by area and growth stage (under Forestry Corporation NSW Research Note 17 classification) on the State forest estate is not publicly available. There is a lack of informative data on what type of forest is used as classification and again assert that classification by growth stage is not classifying by forest type.

Unfortunately, RFAs have developed and utilised relatively simple forest ecosystem classifications - note that in my professional estimation even classifications with 100-150 types are inadequate to assess Comprehensiveness.¹³³

Regeneration

The white elephant in the room is the regeneration of native forest after industrial logging. The meaning of Forestry Corporation NSW statement that there is a hundred percent regeneration target set for logged native forest is obscure. The research and data that the forest does regrow after industrial logging and burning is inadequate. The Forestry Corporation NSW publicly available data is cursory to say the least, and even what little forest was surveyed did not equal 'one hundred percent regenerated'.

From the period 2001 to 2006 the number of surveys for the Southern region was twenty one covering a total of 2,176 hectares.¹³⁴ There is no information provided by Forestry Corporation NSW or the RFA regime on the effectiveness of regeneration.

The vascular floristics about a decade after harvesting operations differed significantly from the floristics of similarly aged forest regenerating after wildfire. In clear-felled areas, weed and sedge species occurred more frequently than on wildfire sites and *Acacia dealbata* was much more abundant, whereas resprouting shrubs, tree ferns and most ground-fern species were more abundant in wildfire regeneration sites. The low survival rate of resprouting species reported in an increasing number of studies suggests that soil disturbance is likely to be a major contributor to differences.¹³⁵

There should be full disclosure of the actual results of this monitoring.

¹³³ Mackey, above n 5.

¹³⁴ Southern IFOA Clause 52 Assessment of Regeneration Report 20/6/07, Forestry Corporation NSW Batemans Bay; this 'report' is a thin five line by five column table.

¹³⁵ K Ough, 'Regeneration of Wet Forest Flora a Decade after Clear-felling or Wildfire - Is There a Difference?' (2001) 49(5) *Australian Journal of Botany* 645 <<http://www.publish.csiro.au/paper/BT99053.htm>>.

Forestry Corporation NSW do not ‘replant’ native forest. Once logged and burned the forests may take decades to regenerate or they might not regrow at all and they are altered inexorably.¹³⁶ If Forestry Corporation NSW ever did replant, they’d then fail again as replanting is not sufficient to offset the biodiversity losses created by clearing because of lags in species becoming established and sustained differences in species composition.

The one hundred percent regeneration rate for Southern in 2005-06 stated in the Draft Report is not only erroneous but highly incredible given that there were no regeneration surveys undertaken in the Tumut subregion in that period. There is no data given showing how much area was assessed, except:

In 2005–06 there were no regeneration surveys in the UNE or Eden regions.¹³⁷

Information from Forestry Corporation NSW concerning Southern Region regeneration assessments for the period 2001-02 to 2005-06 stated that a total of 2,019 hectares had been surveyed in the southern sub-region, and only 167 hectares in the Tumut sub-region.¹³⁸ The analysis reports that ‘are available’ on this clause 52 data are actually unavailable. The assessment report completed by 31 December 2006 is similarly ‘unavailable’. There is a lack of comprehensive information available showing the full extent of regeneration surveying efforts and the results thereof.

Comparisons to other reporting is incongruous in relation to effective regeneration. For example, in the State of the Forests Report 2008 (‘SOFR’) at Table 37 on page 67 it is noted that in 2005-06 NSW had 3,870 hectares effectively regenerated; meanwhile in the Draft Report on Implementation on page 129 there were no regeneration surveys in Upper North East and Eden Regions; noted above Tumut also had zero surveys for the year; which means that 3,438 hectares must have been assessed solely in the Lower North East region that year. This seems like an incredible focus of regeneration surveying for the year 2005-06.

Post Fire Recovery and Research

The roll out of RFAs throughout the State’s forested zones was the first step to increasing fire risk for NSW.

One of the major planning constraints associated with thinning is *the higher level of fuel present after the operations*. It is not considered feasible in Tasmania to carry out fuel reduction burns in thinned coupes because of the high fuel loads and the sensitivity of the retained trees to fire. The location of thinned coupes amongst conventionally logged coupes is problematic, as it is not recommended that any regeneration burn take place

¹³⁶ Forestry Corporation NSW, Annual Report 2007.

¹³⁷ Draft Report, above n 2, 129.

¹³⁸ Forestry Corporation NSW, ‘Southern IFOA Clause 52 Assessment of Regeneration’, Batemans Bay Office, 20/6/07.

within two kilometres of areas with high levels of flash fuel within two years of harvest (Cheney 1988).

And:

Tree crowns (heads), bark, and other harvest residue make up the fuel load. The climate on the floor of the forest is altered by thinning, with higher wind speeds and temperature, lower humidity, and lower moisture content in the fuel itself. Understorey vegetation characteristics change because of these changes to the microclimate, especially increased light. Bracken ferns and cutting grass may grow vigorously, each having a far higher flammability than the replaced woody species (Cheney and Gould 1991).

Strangely this is from the Forestry Commissions own data but is only now coming to light and certainly was not mentioned in 1998, when the RFAs were signed.

Native forests can take hundreds of years to recover from Forestry Corporation NSW mismanaged and very hot 'post harvest burns'.

Fire

The fire management regime practised by Forestry Corporation NSW is below standard. For example in 2005-06 seven percent of State forest was burned in wildfire and 38,008 hectares were burned as 'hazard reduction' for a total expenditure of over eight and a half million dollars.¹³⁹ This is a waste of taxpayers money given the concerns citizens are expressing over climate change and biodiversity impact.

An example of these 'mitigation measures' is the incident of 27 August 2009. A 'fuel management' fire that was started by Forestry Corporation NSW in compartments west of Gulaga Mountain, jumped containment lines and 'got away' burning out of control up the mountain and continued burning down the eastern flank threatening the two Tilba villages.¹⁴⁰ Previously communities had called for no burns on the mountain and requested Forestry Corporation NSW to extinguish this fire. This fire had been burning for two weeks. Forestry Corporation NSW ignored community concerns and the severe drought weather conditions. Homes were threatened, sacred sites burnt, rainforest decimated and threatened species like the Long Nosed Potoroo in extreme danger if not exterminated.

The Rural Fire Service states:

In southern NSW (generally from the Illawarra south) bush fire hazard reduction burning is typically conducted in autumn. Burning in spring (after fuels have dried out sufficiently

¹³⁹ Forestry Corporation NSW, Seeing Report 2005–06, 28.

¹⁴⁰ NSW Rural Fire Service, Notification Eurobodalla, Mountain Rd, Bodalla State Forest Central Tilba, Forestry Corporation NSW.

following winter rainfall) is usually avoided because there is potential for re-ignition in summer when rainfall is lowest and conditions are hot and dry. Spring burning in the south should only be carried out by, or with the assistance of, very experienced burning crews and should be avoided in years of below average rainfall.¹⁴¹

The other factor on the South Coast is the high wind season which is in August through to October. They also state:

These conditions will take into account environmental factors such as:
the presence of threatened species or endangered ecological communities;
the risk of soil erosion or mass movement;
fire history and minimum fire frequency intervals for specific vegetation types;
the location of water bodies and waterside vegetation; and
the effect of smoke on the local community.

The conditions may include measures to protect biodiversity by limiting the frequency of burns, or excluding fire from specific areas.

Failure to comply with the conditions will result in fines if damage is done to the environment.¹⁴²

This is not an isolated incident. There have been numerous instances of fires ‘getting away’ from Forestry Corporation NSW and burning out of control. The fines to Forestry Corporation NSW for environmental damage are conversely seldom encountered.

There is a perception among forest fire management that prescribed burning is simply lighting fires to burn-off the undergrowth and that this can be carried out with only a basic understanding of fire behaviour...Indeed where burning off has been carried out this way the results have been less than favourable and has resulted in injury and death. In the eastern states prescribed burning is largely carried out using rules of thumb based on a MacArthur’s original burning guide for dry eucalypt forests produced in the 1960s. (MacArthur 1962)¹⁴³

Forestry Corporation NSW administrative breaches might seem insignificant but they can result in damaging consequences. For instance Forestry Corporation NSW ‘Southern Region Burning Proposals 2007’ contains Burning Plan Number 07BAN3053 (the one that ‘got away’) further stating that the areas last burn was in 1996, yet on the adjoining Burning Plan Number 07BAN3048 parts of the area are mapped as last burned in 2000, 2001 and 2005. These areas have been heavily logged which leaves incredibly high amounts of tree heads, leaves, tree butts and bark. For example post logging fuel loads are said to be fifty to one hundred and fifty tonnes

¹⁴¹ NSW Rural Fire Service, ‘Standards for Low Intensity Bush Fire Reduction Burning’ Step 5, <http://www.rfs.nsw.gov.au/file_system/attachments/State08/Attachment_20060131_C4C3FB83.pdf>.

¹⁴² Ibid Step 2.

¹⁴³ CSIRO, Sub No 434, to House Select Committee, *Inquiry on the Recent Australian Bushfires*, 2003.

per hectare of logging slash and ten to twenty tonnes per hectare in between tree heads.¹⁴⁴

Forestry Corporation NSW states it is committed to the RFA ESFM practices and will ensure that Forestry Corporation NSW will:

Minimise adverse impacts on the environment; Minimise the risk of escape causing wild fire; and Monitor the impacts on the environment.¹⁴⁵

Forestry Corporation NSW has not performed its duty to these principles.

Clearfelling and burning, which is likened by forest industries as akin to the natural disturbance of a high intensity bush fire, causes even-aged forest regrowth, and has been shown to be detrimental to those organisms that rely on successional growth.¹⁴⁶ This is especially true for those organisms that rely on the retention of tree hollows.¹⁴⁷

A failure by Forestry Corporation NSW and their fire management strategies occurred in Nullica State Forest where the regulator successfully prosecuted FCNSW due to torching seventy hectares of Smoky Mouse habitat.¹⁴⁸

Although fire may be a natural disturbance, periodical prescribed burning can alter both long and short-term ecological processes, and irreversibly affect ecosystem diversity and productivity. In particular, prescribed burning may affect natural succession, organic production and decomposition, nutrient and water circulation, and soil development.¹⁴⁹ Current scientific opinion is in conflict with Forestry Corporation NSW fire activities.¹⁵⁰ Noteworthy is the Forestry Corporation NSW knowledge of yesteryear, where it was recognised that an equilibrium of accumulation and decomposition of leaf litter on the forest floor occurs of around 8-14 tonnes

¹⁴⁴ Wandera Cpts 584,585,586 Harvesting Plan, approved 1/5/08, 35.

¹⁴⁵ Forestry Corporation NSW, ESFM Plan, Southern Region 2005.

¹⁴⁶ D B Lindenmayer, and J F Franklin, 'Managing Stand Structure as Part of Ecologically Sustainable Forest Management in Australian Mountain Ash Forests' (1997) 11 *Conservation Biology* 1053; see also D B Lindenmayer, and J F Franklin, 'Re-Inventing the Discipline of Forestry – a Forest Ecology Perspective' (1997) 60 *Australian Forestry* 53; D B Lindenmayer, T W Norton, and M T Tanton, 'Differences Between Wildfire and Clearfelling on the Structure of Mountain Ash Forests of Victoria and Their Implications for Fauna Dependent on Tree Hollows' (1990) 53 *Australian Forestry* 61.

¹⁴⁷ NSW National Parks and Wildlife Service, Land Assessment Unit, 'Reserve Adequacy and the Management of Biodiversity' A Supplement to the Reserve Design Report, Project Undertaken as Part of the NSW Comprehensive Regional Assessments, Project Number NA 43/EH, July, 1999.

¹⁴⁸ *Director-General, Department of Environment, Climate Change and Water v Forestry Commission of New South Wales* [2011] NSWLEC 102.

¹⁴⁹ NSW National Parks and Wildlife Service, 'Reserve Adequacy and the Management of Biodiversity', above n 147, quoting J D Ovington, 'Ecological Processes and National Park Management' National Parks, Conservation and Development: 'The Role of Protected Areas in Sustaining Society' Proceedings of the World Congress on National Parks, Smithsonian Institution Press, Washington DC, (1984).

¹⁵⁰ Lindenmayer et al, 'Fire Management for Biodiversity Conservation: Key Research Questions and our Capacity to Answer Them' (2010) 143 *Biological Conservation* 1928.

per hectare.¹⁵¹

Further, to use ‘grazing’ as a fire mitigation measure is definitely ingenious.¹⁵² The development of cows that eat sticks and leaf litter must be a world first.

The change in species composition of ecosystems due to the preferential grazing of palatable species is only one effect from grazing. Cloven-hoofed animals have contributed to soil compaction and general degradation of ecological processes by causing the loss of leaf litter and the associated loss of soil micro-organisms and available carbon, reduced soil water infiltration rates and an increase in soil erosion.¹⁵³ These effects are particularly pronounced in temperate woodlands.¹⁵⁴

¹⁵¹ Forestry Commission of NSW, Narooma Management Plan (1974).

¹⁵² NSW Forest Agreements Implementation Report (2001/2002), 2006, 63.

¹⁵³ Ibid.

¹⁵⁴ See ‘Reserve Adequacy and the Management of Biodiversity, above n 147.



Dampier SF – 'Habitat Tree'

Soil and Water Resources

'This criterion is concerned with the most fundamental resources of a forest environment: soil and water.'¹⁵⁵

As reported, in the SOFR 2008, NSW has about 200,000 hectares managed specifically for water supply. This equates to 0.24% of the land area of the state, or 0.76% of the NSW native forest area¹⁵⁶.

Many studies have shown that microbial biomass decreases following logging, and that these changes occurred before measurable changes in soil organic matter quantity were found. The decline of microbial Carbon and Nitrogen following tree removal ranged between twenty seven percent and sixty four percent. When bacterial and fungal biomass were determined separately, it was found that fungal biomass declined more sharply than bacteria. The often rapid decrease in fungal biomass may be explained by a reduction in ectomycorrhizal fungi, which decline sharply once the root system of cut stems can no longer support them.

Conventional practices in intensive forest use such as short rotations, use of heavy machinery, harrowing and high intensity burning of slash can be viewed as detrimental to soil health. After burning, the organic content of forest soils can be transformed into ash and mineralised nutrients. This may result in an intense pulse of nutrients that can change the soil pH and can easily be leached, leaving a nutrient and humus poor soil, with a significantly different structure from the original condition.¹⁵⁷

Research by the CSIRO states:

Timber harvesting and its associated activities cause drastic changes in soil physical structures and hydraulic properties. In situ changes of surface soil hydraulic properties using a newly developed disc permeameter are assessed. Five forest sites, two radiata pine forests near Oberon and three native eucalypt forests near Eden NSW, were investigated for the impact of timber harvesting on soil structure and hydraulic properties. On most sites, there was an increase in soil bulk density and a declining trend in sorptivity and hydraulic conductivity associated with logging. Changes in hydraulic properties suggest that the logging and associated activities had resulted in soil compaction, attributable mainly to redistribution of soil pore sizes and with a decrease mostly in pores greater than 3mm in diameter. This reduction in macroporosity suggests a reduction in aeration and a change of water retention characteristics.¹⁵⁸

¹⁵⁵ Bureau of Rural Sciences, *Australia's State of the Forests Report 2008*, Montreal Process Implementation Group for Australia (2008), 87.

¹⁵⁶ Ibid 7, 89.

¹⁵⁷ D Green, P McQuillan, 'The Soil Mites of Warra and their Recovery Under Modern Forestry Practices' (2004).

¹⁵⁸ J Hung, ST Lacey, Ryan PJ, 'Impact of Forest Harvesting on the Hydraulic Properties of Surface Soil' (1996) 161(2) *Soil Science* 79.

Usually the majority of forestry operation non-compliances reported are on EPL breaches and how they relate to soil and water protection practices. One CRA report stated that all impacts of logging were significant at only buffer widths of less than 30 metres.¹⁵⁹

Currently all unmapped, first and second order streams have less than thirty metre buffers, which suggests that current logging adjacent to these streams is having a significant impact. This report went on to say that the methodology used for the EPLs is not scientifically defensible. Even more recent research found in the SOFR 2008 suggests that twenty metre buffers need to be retained to generally reduce turbidity levels.¹⁶⁰

Forestry machinery compacts soil, preventing absorption of rainwater. When it rains the run-off carries a significant amount of sediment into streams. Movement of this machinery and other logging-related vehicles along forest roads raises a large volume of dust (30 -90 tonnes per year for every hectare of unsealed road, compared to 0.3 tonnes for unsealed roads in undisturbed forests). Erosion is the largest contributor to turbid water in Australia.

A study of the Eurobodalla catchments in NSW showed that approximately 905 tonnes of sediment were transported through the river in one four-day storm. This is compared with thirteen tonnes for the previous six-month period.¹⁶¹ Significant sediment loads have also been identified as coming from the 50,000 kilometres of unsealed roads within state forests and reserves.¹⁶² Suspended sediment loads in inland waters caused by gully erosion and degraded flow paths, can have significant impacts such as siltation of river channels, infilling of wetlands, reduced light penetration inhibiting photosynthesis, and loss of habitat and spawning sites for gravel-bed dependent fish.¹⁶³

Water costs have soared since the CRA analysis was done. The price per kilolitre in the Eurobodalla in 2000 was \$0.80.¹⁶⁴ It is currently \$2.40 per kilolitre and \$3.60 for consumption of over one hundred fifty kilolitres. When forests are logged, the amount of water flowing in creeks

¹⁵⁹ CRA Report 'Water Quality and Quantity for the UNE, LNE and Southern RFA Regions' (1998) Project NA61/ESFM, 54.

¹⁶⁰ See the State of the Forests Report 2008, 109.

¹⁶¹ J J Drewry et al, 'An Approach to Assess and Manage Nutrient Loads in Coastal Catchments of the Eurobodalla Region, NSW, Australia' (2005), MODSIM 2005 International Congress on Modelling and Simulation, pp 2658-2664.

¹⁶² J J Drewry, L T H Newham, and R S B Greene, 'An Index-Based Modelling Approach to Evaluate Nutrient Loss Risk at Catchment-Scales' (2008) Integrated Catchment Assessment and Management Centre, Australian National University, Canberra.

¹⁶³ See Monitoring and Evaluation Trials, New South Wales Region, Southern Catchment, Phase 1 Report, (2004) National Land & Water Resources Audit <<http://lwa.gov.au/products/er050846>>; and also NSW Diffuse Source Water Strategy, DECC 2009/085 <<http://www.environment.nsw.gov.au/resources/water/09085dswp.pdf>>.

¹⁶⁴ See Water Use and Allocation in the Eurobodalla <<http://reports.envcomm.act.gov.au/SoE2004/Eurobodalla/wateruse.htm>>.

and rivers, after a short initial increase, can decrease by up to fifty percent. It may even cease to flow in dry periods. Regrowth needs much more water to grow than mature trees.

In 1999 it was estimated that the cost of water lost by the logging of 2000 hectares of native forests in the Eurobodalla catchments in one year to be over ten million dollars. This amount is compounded each year that these catchment forests continue to be logged.¹⁶⁵ Therefore there is a need to independently reassess the economic costs of the RFA as it applies to water quantity and security.

The severity of the prolonged drought and inclement climate change conditions is readily portrayed by the flow recordings of the three rivers, the Tuross, Deua, and Buckenboursa, in the Eurobodalla Shire. The Shire's water supply depends upon these rivers. Logging in these catchments is continuing to compound the negative effects of this form of land use on catchment hydrology.

...it can be estimated that the annual sediment export from the catchment in an undisturbed condition would be of the order of 1,056 tonnes/year, and 2,640 tonnes/year for the existing catchment logging land use scenario.¹⁶⁶

Socio-Economic Benefits

The task was made difficult by the limited time frame and the need to commence and undertake studies without knowledge of the options that would arise from the negotiation process.¹⁶⁷

Forestry Corporation NSW allege that:

Estimated figures provided by Forestry Corporation NSW for the total direct and indirect employment in the forest sector across all regions totalled 6,676 equivalent full-time (EFT) positions for 2005–06. The largest employment sector is primary processing, which makes up 67% of its total employment across all NSW FA regions. Harvesting and haulage accounts for 16% and growing and managing of forests accounts for 8% of employment.

These figure do not delineate between native and plantation sectors. Further detailed reporting should be done to allow the public to understand the true socio-economic 'benefits' of native forest logging.

¹⁶⁵ Atech Group, 'Southern Forests Catchment Values and Threats' (1999) <<http://www.atechgroup.com.au>>.

¹⁶⁶ T McAlister, and D Richardson, 'Wonboyn Lake and Estuary - Estuary Processes Study' (2004) <www.begavalley.nsw.gov.au/page.asp?f=RES-RKN-65-48-21>.

¹⁶⁷ Resource and Conservation Assessment Council, Draft Interim Assessment Report, 'Socio-economic Assessment Framework' Ch 2.7 <http://esvc000759.wic060u.server-web.com/reports/eden_option/>.

It should be obvious for Forestry Corporation NSW to recognise that there is no socio-economic benefit in logging native forests when consideration of Forestry Corporation NSW employee numbers show a drop of 2,183 employees over the period 2002 to 2008.¹⁶⁸ The winners are businesses such as Boral, SEFE and Blue Ridge Hardwoods whose profit driven shareholder reward systems need to consume the environment to perpetuate, the losers are the community who have had their forests plundered at a loss. Forestry Corporation NSW state it will maximise its contribution to the social well being of the communities, yet in Forestry Corporation NSW Annual reports its shown that Forestry Corporation NSW did not make any grants to non-Government community organisations during 2005-06, 2006-07 and again in 2007-08.¹⁶⁹ There is the expectation that the text will remain unchanged in the 2010 Annual Report due at the end of the financial year, though still unavailable.

The present system of RFA forest management is uneconomical as the supposed income is generated by the depletion of capital assets.

Jobs

South Coast employment figures

Place of employment	employees
Blue Ridge	20
Boral Nowra	20
Boral Narooma	20
South East Fibre Exports (now ANWE)	35
Eden logging workers	24
Southern logging workers	24
Tumut logging workers	5
Total	158

¹⁶⁸ NSW Forest Agreements Implementation Report (2001/2002) published in 2006, 69; Forestry Corporation NSW, Annual report 2007–08, 88.

¹⁶⁹ Forestry Corporation NSW, Annual Reports 2005–06, 59; 2006–07, 69; 2007–08, 81.

CLIMATE CHANGE – or This is What We Don't Know We Don't Know

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.¹⁷⁰

There is much uncertainty on the effects of climate change but one of the certainties is that deforestation and forest degradation 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.¹⁷¹

The Stern Review goes on to state in Annex 7f:¹⁷²

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 loss of 400 GtCO₂ (almost 20% of the total stored in vegetation in 1850).¹⁷³ 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.¹⁷⁴ Between 1850 and 1990, there was a net release of around 130 GtCO₂ from soils.

Millions upon millions of taxpayer dollars were funnelled into consultants and workshops to produce a plethora of reports aiming to provide an 'up-to-date snapshot' of the whole issue of native forest conservation and timber production. The timeframe for the CRAs meant that

¹⁷⁰ A D'Amato, 'What Obligation Does Our Generation Owe the Next? An Approach to Global Environmental Responsibility' (1990) 190 *American Journal of International Law*.

¹⁷¹ 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>

¹⁷² The Stern Review, above n 171, 'Emissions From the Land-Use Change and Forestry Sector'.

¹⁷³ Baumert, Herzog and Pershing 'Navigating the numbers: Greenhouse gas data and international climate policy' Washington, DC: World Resources Institute (2005); see also Houghton 'Revised Estimates of the Annual Flux of Carbon to the Atmosphere from Changes in Land Use and Land Management 1850-2000' (2003) 55 *Tellus B* 378.

¹⁷⁴ J T Houghton, 'Tropical Deforestation as a Source of Greenhouse Gas Emissions' (2005) in *Tropical Deforestation and Climate Change*, Moutinho and Schwartzman [eds]; see also Intergovernmental Panel on Climate Change (2001): 'Climate change 2001: the Scientific Basis, Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change' JT Houghton et al (eds), Cambridge: Cambridge University Press; also Food and Agriculture Organization of the United Nations (2005): 'State of the World's Forests' Washington, DC: United Nations.

comprehensiveness became a misnomer and the quality of the reports produced left much to be desired from a scientific and social point of view. Besides the fact that all reports begin with a disclaimer that the information therein cannot be relied upon as factual, the key conclusion from the bulk of the reports was that there was not enough scientific knowledge available about forests. For example:

The modelling project has highlighted some significant areas or species where there still exist gaps in quality data. In the future, it is recommended that further effort is put into systematic targeted surveying of these priority species to enable better presence-absence modelling.¹⁷⁵

And:

The previous report concluded that the methodology for estimating the effects of logging management on catchment water yield provided a reasonable 'best guess' that was unlikely to be much improved even with the expenditure of considerable effort. This statement applies equally well to this study. Within the limitations of current data availability the methodology represents the current best understanding of the different factors that influence water quantity and quality from forested catchments. However, the absolute magnitude of the estimates are subject to considerable uncertainty.¹⁷⁶

The CRA reports makes no mention of climate change, even though nine years earlier the Intergovernmental Panel on Climate Change completed its report on the greenhouse effect.

The effects and rate of human-induced climate change have increased dramatically since the RFAs were signed in 1998. Climate change was not considered at all during the CRA process. Further, the significant carbon and water storage aspects of native 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 activities operating under an exemption to the EPBC Act and the RFAs, have resulted in a major impact on nationally-listed species.

Conditions placed on logging to ameliorate impacts as a result of the RFAs 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

¹⁷⁵ 'Modelling Areas of Habitat Significance for Vertebrate Fauna and Vascular Flora in the Southern CRA Region' project number NS 09/EH February 2000 NSW NPWS.

¹⁷⁶ ESFM Project: 'Water Quality and Quantity for the Southern RFA Region' project number NA 61/ESFM November 1999 Sinclair Knight Merz.

value of these stored resources far exceed the royalties received from logging activities, even when carbon is conservatively valued at a price of twenty dollars a tonne. The RFAs are the result of a flawed and scientifically unsound process that privileged economic concerns over the environment.

Young people from four hundred and fifty nations gathered in Bonn for the UN Talks on Climate Change. Their declaration states:

World leaders and negotiators of the climate deal, our survival is in your hands. We trust that you will take immediate action to stop deforestation, and industrial logging of the world's biodiverse forests. We are depending on you to protect our forests and provide us with a healthy, ecologically sustainable, low carbon future.

They called for:

- Immediately end deforestation, industrial scale logging in primary forests, the conversion of forests to monoculture tree crops, plantations;
- Protection of the world's biodiverse forests including primary forests in developed countries (e.g. Australia, Canada and Russia) and tropical forests in developing countries;
- Respect for the rights of women, Indigenous peoples and local communities and allow them to lead healthy and sustainable lives whilst stopping deforestation and industrial logging of primary forests in their country, and;
- To not allow developed countries to use forest protection and the avoiding deforestation and industrial scale logging of primary forests in other countries as an offset mechanism for their own emissions.

Galaxy Research conducted a public opinion poll in July 2009. The question was:

The Australian National University has found that Australia's native forests contain a large amount of carbon that would be protected by ending forest clearance. In your opinion, do you agree or disagree that the Rudd government should stop the logging of native forests?¹⁷⁷

The results were:

Strongly Agree: 43% Agree: 35% Total Agree: 78%

Strongly Disagree: 3% Disagree: 11% Total Disagree: 14% Don't know/refused: 8%

In 2010 Galaxy conducted another poll. Three in four (77%) Australians want the government to stop the logging of native forests and almost three in four (72%) Australians favoured the Federal Government assisting logging contractors to take redundancies, retrain or move permanently to

¹⁷⁷ Galaxy Research, Sample: 1100 Australians, 24–26 July, 2009, <<http://www.galaxyresearch.com.au/index.php?page=galaxy-omnibus>>; Galaxy Poll, Galaxy Research, 28/30 May 2010, Job:100502A.

a plantation based industry.

Given what is now known, and all that is still yet to learn, about native forest ecosystems and about the effects of climate change, the non-enactment of the precautionary principle verges on the criminal.

Maintaining the Forest Global Carbon Pool

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.¹⁷⁸

Both the State and Federal Governments have expressed the need to have full and frank regard for the urgency of action on climate change. One of the activities that must change is the 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.¹⁷⁹

Conditions placed on logging native forests to ameliorate impacts as a result of the RFAs 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 activities, even when carbon is conservatively valued at a price of twenty dollars a tonne.

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.¹⁸⁰

¹⁷⁸ J Ajani, 'Australia's Transition from Native Forests to Plantations: The Implications for Woodchips, Pulp mills, Tax Breaks and Climate Change' (2008) 15 *Agenda: A Journal of Policy Analysis and Reform* 3.

¹⁷⁹ J Ajani, 'Time for a Coherent Forest Policy - Finally' (2008) Centre for Policy Development, <<http://cpd.org.au/2008/10/time-for-a-coherent-forest-policy-finally/>>.

¹⁸⁰ Mackey et al, above n **Error! Bookmark not defined.**

¹⁸¹ Gigatonne (Gt) equals one billion or 1.0 x 10⁹ tonnes; Megatonne (Mt) equals one million or 1.0 x 10⁶ tonnes.⁷³

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 CO₂ (carbon dioxide)) is equivalent to avoided emissions of 460 Mt CO₂ yr for the next 100 years.¹⁸¹ 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.¹⁸²

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 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.¹⁸³

In NSW forest degradation in 2006 created over 17% of NSW's greenhouse gas emissions.¹⁸⁴ 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.¹⁸⁵

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.¹⁸⁶ The Australian Greens included in their 2010 election campaign a platform of a \$23 per tonne carbon tax levied on the heaviest polluters, as an interim measure 'to a functional and

¹⁸¹ Gigatonne (Gt) equals one billion or 1.0 x 10⁹ tonnes; Megatonne (Mt) equals one million or 1.0 x 10⁶ tonnes.

¹⁸² Mackey et al, above n **Error! Bookmark not defined..**

¹⁸³ *Ibid* 13.

¹⁸⁴ Department of Climate Change, *Australia's National Greenhouse Accounts 2006 State and Territory Greenhouse Gas Emissions*, (2008) 17.

¹⁸⁵ M Blakers, 'Comments on Garnaut Climate Change Review: Issues Paper 1 Land-use – Agriculture and Forestry' (2008).

¹⁸⁶ P J Wood, J Ajani, Submission to the Commonwealth Government, *Carbon Pollution Reduction Scheme Green Paper + Addendum*, 2008.

effective emissions trading scheme’.¹⁸⁷

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.¹⁸⁸

At COP21 in Paris in 2015 international governments including Australia, recognised and acknowledged the key role that resilient forests and landscapes play in climate change mitigation. While imperfect and incomplete, because their role in combatting climate change was formally recognised, in some ways this was a pivotal moment for forests.

Paris Agreement Art 5 provides:

1. *Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4 , paragraph 1(d), of the Convention, including forests.*
2. *Parties are encouraged to take action to implement and support, including through results based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention for: policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks...*

What this means is that Australia will not continue to get away with using dodgy accounting rules to reach emission reduction targets.

Conclusion

Due to failure to enact principles of ESFM, principles of inter-generational equity in meeting the above objective seems in doubt. Further due to current logging activities it is difficult to argue that maintaining environmental values at or above target levels can be achieved. Given current knowledge on causes and effects of climate change it would be difficult to argue that continuance of logging could maintain these levels given the amount of environmental harm caused. Certainly, with regard to climate change and extinction of species it would be very difficult to argue that logging was ‘for the common good’.

Thus far the various RFA legislative instruments regulating forestry activities have proved inadequate to meet standards of nature conservation. Regulatory response has proved inadequate to deter offenders. The combination of non-compliance, inadequate legislation and

¹⁸⁷ *Green Voice*, Winter Edition 2010, 4.

¹⁸⁸ Ajani J, above n 178.

lack of appropriate regulatory response could ensure that extinction of species is a certainty.

On the south coast the distinction between conservation in protected areas in public ownership and conservation on privately owned land is becoming wider as more private native forestry is undertaken. It seems, while there is no guarantee of survival in the coming years, there is more chance for species if they are resident in National Parks, threats of habitat being consumed by 'reduction burns' aside.

Political will is crucial to improving forest law compliance and ensuring that measures taken have positive outcomes for conservation that are long-lasting. As there has been little compliance and continuous over-logging, the only positive outcome for conservation would be to end native forest logging. The challenge now for public native forest conservation is to transfer all State owned land to National Parks co-managed with traditional owners.



Mogo SF – Habitat Tree Retention

FINDINGS

1. That the RFAs did not consider the critical issues of climate change or water and are therefore inadequate instruments to determine forest management.
2. The Regional Forest Agreements are severely inadequate to protect forest species and forest habitats. The conservation targets of almost all nationally-listed fauna species and many nationally-listed flora species were not achieved through the RFAs and substantial additional conservation action is still required to meet minimum benchmarks. Using the NSW government's own conservation analysis and data produced during the CRA, it is evident that only one of the twenty nationally-listed forest fauna species met their conservation targets after the RFAs, and many nationally-listed flora species have fallen dramatically short of their targets. The number of threatened and endangered species has risen since the RFAs were signed and many threatened and endangered flora and fauna species are at extreme risk from current logging activities.
3. Current logging legislated regimes do not adequately protect Australia's native flora and fauna. The threat of native forest logging must be considered a matter of national significance.
4. If logging is to continue s 69ZA must be repealed.
5. In the south east of NSW, covered by the Eden and Southern RFAs, the annual net areas logged have rapidly increased and yields have fallen. In other words, the industry is having to log ever greater areas to maintain the same levels of production. Demonstrably unsustainable timber volumes were committed for twenty years, and these even extend beyond the term of the RFAs. The FRAMES industry modelling system used to derive these volumes substantially over-estimated available timber volumes. Consequently, after the twenty year period of the RFAs, there will be a dramatic short-fall in timber. Royalties in South East NSW are now less, in real terms than they were fifteen years ago and Forestry Corporation NSW is making less in royalty revenue than it expends in managing woodchipping activities. The industrial logging activities in Australia's native forests by Forestry Corporation NSW under the RFAs is unsustainable, economically, culturally and environmentally. The outcomes of the RFAs are not sustainable, even from a timber-production perspective.
6. Private lands were not assessed as part of the RFAs, but they are being logged with very weak regulation at an alarming rate under state and federal exemptions. Current prescriptions and legislation to protect native forests on private land are

extremely inadequate.

7. Other catchment planning agencies have almost unanimously concluded that forests are more valuable left standing in catchments than sold as woodchips or timber.
8. 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 all native forest logging immediately. In concurrence with the Stern Report and the Mackey Report, action to avoid further deforestation and forest degradation 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.
9. The RFAs have not been properly implemented, review timeframes have not been met and key components have not been conducted. The conditions on logging under legislative regimes, on which the RFAs rely to deliver 'ecologically sustainable management', are inadequate, frequently breached and very poorly enforced. In addition, third party appeal rights have been removed in NSW and there is no avenue for the community to enforce the law directly, despite the transparent failure of the NSW Government to enforce it properly itself. If SEFRs recommendations are ignored then there should be no legislative exemptions for RFA forestry activities which are demonstrably unsustainable, for which key agreements relating to sustainability reviews have been ignored and/or wood supply contracts signed outside the timeframe of the RFAs.
10. There can be no support for exemptions for particular activities or areas, unless there is genuine duplication of assessment requirements, and it is guaranteed that best practice assessment will occur. This is not the case under the RFAs.
11. Given that the Forestry Corporation NSW native forest sector suffered many historic million dollar losses at the taxpayers expense, a judicial inquiry should be instigated into the nature, extent and effect of any unlawful appropriation, or inappropriate logging or workplace practice including any practice or conduct relating to, but not limited to:
 - a) the *Forestry Act*, the *Integrated Forestry Operations Approvals*, the *Regional Forest Agreements* and other laws relating to forestry;
 - b) fraud, corruption, collusion, anti-competitive behaviour, coercion, violence, false and misleading statements;
 - c) the nature, extent and effect of any unlawful or otherwise inappropriate practice or conduct relating to:

- i) failure to disclose or properly account for practices and financial transactions;
 - ii) inappropriate management, use or operation of industry funds for redundancy or any inappropriate use of funds.
12. The Forestry Corporation NSW as the agency of the RFAs has shown itself to be a complete economic and environmental failure. The RFAs have not been found to be durable, the obligations and commitments that they contain are not ensuring effective conservation, and suffer chronic under-performance in the achievement of critical action milestones.
13. The RFA regime has already effectively postponed inevitable environmental protection measures for ten years. As a matter of urgency these measures can no longer remain in limbo. There are significant economic, environmental and social benefits to support ending native forest logging and to ensure a swift transition of logging activities into the existing plantation estate.
14. If the Forestry Corporation NSW can prove it has adhered to the RFAs and IFOAs management obligations then the RFAs must be inadequate and flawed instruments with which to protect the environment and community's interests.
15. If, on the other hand, the RFAs are found to be delivering positive environmental outcomes, then the Forestry Corporation NSW must be found to be mismanaging the native forest estate to a very serious degree.
16. State and Federal Governments must have full and frank regard for the urgency of action on climate change and biodiversity protection by ending the rampant degradation of the native forest estate.
17. Clause 8 of the RFAs has been triggered. This is giving effect to ending the RFAs as the mode of native forest management and the end to native forest logging as a whole.

In light of this report's findings South East Forest Rescue calls for indigenous ownership of all public native forest, complete transfer of wood product reliance to the plantation timber industry and 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 re-forestation.