Concerns with IFOA

The NSW government has recently announced its intention to drastically weaken the logging rules (Integrated Forestry Operations Approval - IFOA) for public lands in coastal NSW to remove numerous protections for NSW's threatened species, koalas, oldgrowth & rainforest, habitat trees and waterways. This is a brief summary of concerns with the Integrated Forestry Operations Approval as an aid for submissions: As well as the general submission points, included are IFOA specific submission points and more detailed background for each topic.

Submissions are due by **5pm 13 July 2018**.

People can access the Coastal IFOA consultation web page via the link:
https://engage.environment.nsw.gov.au/forests

Some broad submission points, also for letters to existing and aspiring politicians, are:
I call upon you to stop proceeding with these draconian changes and:

1. Recognise that the Regional Forest Agreements have failed to deliver environmental protection or industry security.
2. Recognise that the benefits of non-timber forest values are vital for the future of regional economies and ecosystems.
3. Establish the Great Koala National Park as an immediate priority.
4. Commit to a just transition out of native forest logging on public land and the transfer of public forests to protected areas when the RFAs expire.
5. Ensure that public forests are managed for the public good (ie: tourism, environmental repair, carbon sequestration and storage, wildlife habitat, provision of clean, abundant water)
6. Stop planning to log areas protected as habitat for threatened species, Koalas, oldgrowth forest, rainforest and stream buffers.
7. Stop increasing logging intensity and legalising clearfell logging along the North Coast of NSW.
8. Stop propping up the rapacious native forest logging industry at the cost of species extinction, logging dieback, reduced stream flows and water quality decline and sustainable forest based jobs.
9. End the logging of public native forest and complete the transition of the timber industry to 100% plantations.
10. Transfer all existing subsidies from native forest logging into native forest restoration.

Some more specific submission points (feel free to modify or adapt), for which Background Information is provided below, are:

1. Informal Reserves and Excluded Areas.

The Minister's promises, reflected in the EPA (2015) promise that "*Existing RFA commitments to the protection of old growth, rainforest, rare non-commercial forest types and the Forest Management Zone (FMZ) layer will be maintained unchanged"* must be honoured. There must be no opening up of Informal Reserves and/or Special Management Zones for logging.

All existing owl landscape areas must be retained and not be allowed to be remapped to move them to areas logged over the past 20 years.

2. Oldgrowth and Rainforest

The intent to log oldgrowth forest and rainforest protected as part of the CAR reserve system for the past 20 years is strongly objected to. The justification for this is fraudulent as the evidence is that there is no reduction in committed timber volumes to justify the need to log currently mapped oldgrowth forest and rainforest.

The revised criteria and methodology being used to remap oldgrowth and rainforest out of existence is inconsistent with the original criteria and methodology applied in the Comprehensive Regional Assessment and the application of these reduced criteria is objected to.

All oldgrowth and rainforest must be assessed based on the full suite of environmental values and reserve targets they contribute to the Comprehensive, Adequate and Representative reserve system, not just oldgrowth targets.

3. Stream Buffers

Adequate stream buffers around the headwaters of our river systems are vital for their health. The scientific evidence is buffers on headwater streams should be increased to 30m. Riparian buffers in the vicinity of threatened species who depend on this habitat must be expanded to at least this width.

The proposal to reduce buffers in headwater catchments down to 5m is strongly opposed.

All riparian buffers, and riparian habitat for threatened species, protected over the past 20years, is vital habitat and must remain protected.

The IFOA must be altered to at least meet the promise that 10m riparian buffers will be implemented on all streams in the intensive logging zone in catchments less than 20ha.

4. Tree Retention

The intent to reduce hollow-bearing tree retention requirements and the removal of requirements for recruitment trees is strongly objected to. The aim should be to restore hollow-bearing trees throughout the forests as quickly as possible, to this end the aim should be to

- retain all hollow-bearing trees throughout forests, and retain the next largest trees to increase the retention rate up to at least 5 of the largest and healthiest trees per hectare where insufficient hollow-bearing trees are available.
- retain two sound and healthy mature/late mature recruitment trees for every hollow-bearing tree retained.

The size thresholds for protecting giant trees are too large. All trees greater than or equal to one metre diameter should be retained and protected as a matter of urgency.

The removal of the need to protect eucalypt feed trees is opposed. The requirement to protect sound and healthy mature/late mature individuals of the most important nectar producing eucalypt species must be restored, with at least 5 per hectare protected thoughout forests and the protection of all mature and late mature eucalypt feed trees within potential habitat of Regent Honeyeaters and Swift Parrots.

5. Threatened Species

The need to undertake pre-logging surveys and apply appropriate protections for all threatened species currently requiring prescriptions must be fully restored. Surveys and the identification of exclusion areas must be undertaken by independent experts.

As a matter of urgency the effectiveness of prescriptions need to monitored and adjusted to achieve explicit performance criteria.

6. Koalas

The removal of the need to look for and protect high quality Koala habitat is strongly objected to. The identification and exclusion of logging from occupied core Koala habitat across all land tenures has to be the highest priority if the ongoing decline in Koalas is to be halted. Surveys to identify occupied high quality Koala habitat needs to be undertaken by independent experts with the full extent of resident Koala home ranges excluded from logging.

In order to reverse the decline it is essential that protection be extended to previously occupied high quality habitat, habitat linkages between core habitat, and present and future climate refuges.

Searches for all trees utilised by Koalas (with observations of Koalas, Koala scats and/or distinctive Koala scratch marks) need to be undertaken ahead of logging, with all utilised trees protected.

7. Bell Miner Associated Dieback

The EPA must heed the evidence and recognise that logging is a primary cause of Bell Miner Associated Dieback.

Logging must be excluded from all forests affected by, and susceptible to, Bell Miner Associated Dieback. Urgent rehabilitation must be required for all forest areas affected by Bell Miner Associated Dieback.

Areas affected by Bell Miner Associated Dieback must be excluded from the FRAMES timber modelling.

8. Logging Intensity

The proposed 140,000ha North Coast Intensive Zone is strongly opposed. Clearfelling must not be allowed.

The proposal to increase logging intensity in the rest of the forests, where the minimal basal area required to be retained is $10m^2$ ha in the "regrowth" zone and $12m^2$ ha in the non-regrowth zone is strenuously opposed.

In accordance with the current rules the minimum basal area retention must be increased to at least 20 m^2/ha across all forests.

9. Logging Volumes

It is reprehensible that NSW Government agencies have intentionally and secretly inflated the current wood commitments from north east NSW in order to fraudulently justify slashing environmental protections, most outrageously the logging of oldgrowth forest and rainforest in the CAR reserve system.

Based on current commitments there is no justification for logging oldgrowth and rainforest, and many other environmental wind-backs can be restored. The IFOA must be renegotiated based on current timber commitments with the restoration of environmental protections.

An inquiry needs to held into why NSW Government agencies were allowed to collude to fraudulently use increased supply volumes to justify the massive wind-back in environmental protections.

How can the NSW Government justify spending $8.55 million in 2014 to buy back 50,000 m^3 per annum of high quality sawlogs, claiming it was necessary to reduce cutting rates down to a long-term sustainable level, and now claim that cutting rates can be increased and still be sustainable? Will Boral be asked to pay back the $8.55 million?

It is outrageous that the IFOA is claiming that 269,000 m^3 per annum of large high quality sawlogs can be logged from north-east NSW, this must be reduced down to, at most, the current supply level of large and small high quality sawlogs from native forests and hardwood plantations.

I strongly object to any new Wood Supply Agreements, including the proposed 416,851 tonnes per annum of low quality sawlogs and residual logs from north east NSW.

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BACKGROUND INFORMATION

The NSW Government promised that the new IFOA would result in "*no net change to wood supply and no erosion of environmental values*", and that they "*will not change the Comprehensive, Adequate and Representative reserve system*".

Since 2013 a succession of Environment Ministers, Robyn Parker (29/10/2013) Rob Stokes (2/6/2014) and Mark Speakman (31/7/2015), have repeatedly reassured environment groups that the IFOA would result in no erosion of environmental values.

As well as re-iterating these promises, the EPA (2015) promised that "*Existing RFA commitments to the protection of old growth, rainforest, rare non-commercial forest types and the Forest Management Zone (FMZ) layer will be maintained unchanged"*

They lied.

1. Informal Reserves and Excluded Areas.

On State Forests there are currently significant areas excluded from logging as Informal Reserves and designated as Forest Management Zones 1, 2 and 3, These are primarily comprised of HCV oldgrowth forest (over 10ha) and rainforest (over 2ha), though also include wilderness, wetlands, major rock outcrops, heathlands, rare non-commercial forest types, and steep unloggable areas.

These are designated as part of the State-Commonwealth Comprehensive Adequate and Representative Reserve System and counted as contributing towards targets for all entities, most notably national targets for forest ecosystems, oldgrowth, wilderness and national estate.

These are mostly designated as Special Management Zones and protected under the NSW Forestry Act, requiring parliamentary approval to undo them.. The SMZ also include 20,000 ha of additional areas of non-HCV oldgrowth nominated by NEFA in 2003.

The FMZ zone 3B is allowed to be logged under special prescriptions intended to protect their conservation values, though in practice there is no consideration of their values and they are treated as just another part of the logging area, including being subject to illegal intensive logging. This was detailed in NEFA's submission to the RFA but was ignored.

The NSW Government is now intending on remapping the oldgrowth forest and rainforest with the intent of removing areas remapped as not being oldgrowth or rainforest from the reserve system and making them available for logging (see section on oldgrowth and rainforest). They are intending on only considering their contributions to oldgrowth targets while ignoring their contribution to other reserve targets.

There are additional areas outside the FMZs that are mapped for protection including: stream buffers, 40m and 80m wide 'ridge and headwater habitat' (wildlife corridors), owl landscape areas (additional areas identified as required as owl habitat), Endangered Ecological Communities, additional areas of rainforest (including unmapped rainforest), unmapped rock outcrops and unmapped wetlands.

There are also requirements to undertake pre-logging surveys for a range of threatened species and either require increased tree retention around records, or most often to establish exclusion

areas around them. Generally these are considered to encompass 3.4% of the loggable area, though more thorough and expert surveys do significantly increase the required retention. It is important to recognise that where exclusion areas are required they can not be counted towards habitat tree retention and other such requirements. A minority of species will still require surveys and habitat protection, and previously protected (carry-over) areas for Squirrel Glider, Brush-tailed Phascogale and Koala high-use areas (where not since logged) are required to be retained.

Existing owl landscape areas are not defined and thus not protected under the IFOA. The EPA have said they will rectify this error, though prompting is required.

As an alternative to most threatened species provisions the Forestry Corporation is required (Protocol 22) to retain 'wildlife clumps' over 1ha encompassing 5% of the loggable area within a 'local landscape area' (an area identified by the Forestry Corporation that is less than 1,500ha). These can include areas that would otherwise be required to be retained such as unmapped rocky outcrops, cliffs, heath and scrub, wetlands, as well as "carry-over" exclusion areas, and habitat trees. As noted by the EPA "*it is anticipated most wildlife clumps will be made up of 'carry over exclusion zone' – being large exclusion zones previously applied for koalas, squirrel gliders and phascogales or the specified habitat features".* So they are not intended to protect anything additional to other requirements. There are a range of selection criteria, though as only one of those needs to be met, it is open to the Forestry Corporation to chose virtually any area they want. With few requirements for surveys for threatened species these in no way compensate for the current needs to identify and protect occupied habitat for a range of threatened species.

In addition to wildlife clumps, there are also requirements to retain 'Tree retention clumps' between 0.1 and two hectares in size encompassing 5% of the loggable area of a compartment in the coastal ('regrowth') forests and 8% of the loggable area of escarpment ('non-regrowth') forests. These must prioritise the retention of hollow-bearing trees and potential future hollow-bearing trees. These can similarly include areas otherwise required to be protected.

So in summary 10 to 13% of the loggable area is required to be permanently excluded from logging, which can include any other areas or trees required to be excluded from logging.. They are meant to improve landscape connections between other retained patches of vegetation or as 'habitat islands' within a large cutover area, though this is not a requirement. The trade-off is to remove most protections for locations of threatened species, remove specific requirements to protect recruitment and eucalypt feed trees, and to increase logging intensity in 87-90% of the loggable area. Note that the current requirement for intensive logging (AGS) is to protect 10% of the area, so there are no real compensatory gains.

The Remake of the Coastal Integrated Forestry Operations Approvals Final Report Threatened Species Expert Panel Review reports the EPA representative Brian Tolhurst (one of the 10 experts who answered questions) as stating:

> *The spacing of clumps across the harvestable area will conceivably be much greater than the distances between scattered individual retained trees and will have a significant impact on many arboreal species. For gliding mammal species these distance will be of critical importance – 30 m is the current reported average glide distance for Squirrel and Yellow-bellied Gliders and canopy gaps over 40 m would start to become barriers for regular and safe movement. For Koalas significantly separating the forest canopy will increase their time spent on ground and thus increase their exposure to terrestrial predation. In areas with records of these and similar arboreal species, wide scale intensive harvesting regimes would*

> *not be appropriate. For many small forest birds and microbats this would also be the case. Additional scattered trees between the clumps to provide some level of forest canopy connectivity would be necessary.*

2. Oldgrowth and Rainforest Logging

Based on their inflated timber commitments, and without accounting for the increasing yields from hardwood plantations, the Natural Resources Commission (NRC) claims there will be a shortfall of up to 8,600m^3 in annual volumes of high quality sawlogs. Based on this misrepresentation the NRC are proposing remapping oldgrowth forest and rainforest to make up the claimed shortfall.

The NRC's claimed need to log rainforest and oldgrowth protected for the past 20 years is based on a lie.

The Natural Resources Commission have dramatically changed both the criteria for identifying oldgrowth forest and rainforest and the methodology for mapping them, with their trial resulting in 88% of mapped HCV oldgrowth and 62% of mapped rainforest being identified for logging. The NRC have particularly targeted stands dominated by brushbox and turpentine for exclusion from both rainforest and identification as oldgrowth (because oldgrowth trees of these species don't typically display senescence).

The NRC fraudulently claim to have identified "new" oldgrowth that was not previously mapped in order to encourage support for their remapping, though most of their "new" oldgrowth was in fact previously mapped as oldgrowth, just that it wasn't included as HCV oldgrowth. It is deliberately deceptive to claim these stands as "new" oldgrowth.

Additional areas of rainforest are identified because of the higher resolution imagery, which allows the rainforest under a eucalypt canopy to be more accurately seen. Though the overall area of rainforest is reduced by 35% because of the exclusion of stands with >30% canopy of Brushbox, Turpentine and eucalypts. Unmapped rainforest is currently required to be protected.

On behalf of the NRC, the Forestry Corporation have identified some 14,600 hectares of oldgrowth they consider they could log under the new rules to realise 212,000m^3 of high quality sawlogs, and some 4,900 ha of rainforest to log for 90,000m^3 of timber.

As noted by the NRC:

> *While technically feasible, remapping and rezoning will be challenging. Nearly all north coast old growth forests are protected by Parliament under a 'special management zone' and are also protected under Forest Management Zones (FMZ) 2 and 3a as informal reserves or exclusion zones. Furthermore, old growth forests under the current HCVOG spatial data set for the upper north east region are listed as a state significant heritage item.*

The NRC proposal is to compensate for reductions in the reserve system with additions of "*steep slopes, threatened ecological communities and other non-commercial forest areas*".

3. Stream Buffers

Headwater streams are of overwhelming importance for catchment health as this is where most of the interaction between the terrestrial and aquatic realms occurs. The science is that we should be establishing buffers at least 30m wide around these headwater streams. The NSW Government's intent is to reduce already inadequate buffers around headwater streams from 10m down to 5m.

It is stated:

> *To ensure this increased protection does not impact on the sustainable supply of timber, the draft Coastal IFOA proposes to reduce the width of protections on headwater streams in some areas from 10 metres to 5 metres. In areas where there is important fish habitat or where more intensive harvesting is proposed, all headwater streams will retain their original 10 metre protection.*

For north east NSW (except possibly the intensive zone) the new rules are that all headwater streams in catchments less than 20ha will have buffers reduced from mostly 10m to 5m (except where it is Class 1 Aquatic Habitat). Class 1 Aquatic habitat will be mapped - it is currently defined as having a threatened fish recorded within 2km upstream or 5km downstream of the site of the proposed works. The current requirement to increase riparian protection within 100km upstream of threatened fish (Class 2 Aquatic Habitat) will be removed.

This will have significant impacts on riparian habitat, stream quality, and aquatic species. For example on State Forests across the Clarence and Richmond valleys, Pugh (2016) estimated that over 7,000 kilometres of vital headwater streams in catchments less than 20ha will have their buffers cut by at least 50% down to 5m wide. With the inclusion of riparian areas protected for threatened animals the reduction is likely to be over 10,000 ha. This is the loss of some 35% of existing riparian buffers (outside 'informal reserves'), a 24% reduction due to changes in stream buffers and an additional 11% reduction due to the loss of protections around records of threatened fauna.

The Remake of the Coastal Integrated Forestry Operations Approvals Final Report Threatened Species Expert Panel Review reports all experts who commented as opposing the opening up of protected riparian areas protected for the past 20 years for logging. For example Brad Law, DPI Forestry, stated:

> *"In some areas where areas once mapped as riparian buffers are no longer identified then there would be a loss of habitat protected for the past 20 year period. Given the intensity of operations over the last 10 years, it would be important to try to ensure these areas remain protected"*

The EPA representative Brian Tolhurst stated:

> *"No further loss or impact on the retained riparian areas that have been protected to date under the existing rule set should occur. The expert panel agreed that these areas were the few areas seen on the site visit that still retained habitat elements and the diversity, form and structure of a native forest.*
>
> *...*
>
> *I am not convinced that the proposed riparian buffers are adequate for ecological protection of these features. The widths seem to have been generated to deliver no net loss of available harvestable area rather than driven by an appropriate buffer for the size/importance of the feature".*

The claim is made that 10m buffers will be retained on headwater streams within the intensive logging zone, but Table 6a only identifies 5m buffers as being required, The IFOA must be altered to meet the promise that 10m riparian buffers will be implemented on all streams in catchments less than 20ha.

4. Tree Retention

The older a tree gets the more browse, nectar and seeds they provide for wildlife. Once eucalypts are over 120-180 years old they begin to provide the small hollows needed by a plethora of native wildlife for denning, nesting and shelter. Though it is not until they are over 220 years old that they provide the larger hollows required by species such as owls, cockatoos and gliders. They may live for 300-500 years, sometimes longer.

To maintain continuity of supply of these resources by such long lived organisms it is essential to ensure that there are enough small hollow-bearing trees to replace the large hollow-bearing trees when they die, and enough strong and health mature trees to develop into the hollow-bearing trees of the future. It needs to be recognised that many trees die along the way, so increased retention of smaller trees is need to ensure that sufficient trees survive into the next age class. The persistence of a multitude of animals, and the health of the forest, depends on maintaining and restoring hollow-bearing trees in perpetuity.

Retention of Hollow-bearing (H) trees and recruitment (R) trees (to grow into the hollow-bearing trees of the future) are key requirements of the Threatened Species Licence to mitigate logging impacts on an array of native animals in eucalypt forests (see nefa.org.au/old_trees). For decades NEFA have been battling to get improved protection for large hollow-bearing trees and the recruitments needed to sustain them, and the vital hollows they provide, into the future. NEFA has identified poor and inadequate selection and protection of habitat trees as a problem in all our audits.

The current habitat tree retention rules per hectare are for the retention of 5 hollow-bearing trees (where they remain), and one of the next largest trees as recruitment trees for each hollow-bearing tree. Natural forests have 13–27 hollow-bearing trees per hectare so this is a major reduction in resources. The retention of just one recruitment tree for each hollow bearing tree means that not enough will survive to replace the hollow-bearing trees as they die. In forests with Greater Glider densities >1 per hectare, and records of threatened owls, 8 hollow-bearing trees per hectare need to be retained, though just 5 recruits. In the non-regrowth zone if there are less than 5 hollow-bearing trees per hectare then the next largest tree needs to be retained and counted as a hollow-bearing tree to make the numbers up to 5.

The intent of the new IFOA is to just require up to 5 hollow bearing trees per hectare (where they survive) and to remove the requirement to retain recruitment trees (except where they fall within habitat tree clumps). This is a significant reduction in hollow-bearing trees (in non-regrowth areas and Greater Glider habitat) and a near total loss of the recruitment trees essential as the hollow-bearing trees of the future. This will have huge long-term impacts on hollow-dependant fauna.

There are currently requirements to retain 3 mature eucalypts per hectare of species known to produce copious nectar as "eucalypt feed trees". This retention increases to 5 'eucalypt feed trees' per hectare in compartments with nectivorous Swift Parrot, Regent Honeyeater or Black-chinned Honeyeater records. These trees provide vital resources to a plethora of nectar-feeders, that are nowhere near as abundant in regrowth stands. The proposal is to remove any need to protect 'eucalypt feed trees'.

The current retention requirements are that recruitment trees are required to be a "*live tree of a mature or late mature growth stage ... that is not suppressed prior to harvesting and appears to have good potential for hollow development and long term survival*", and "*belong to a cohort of trees*

with the largest dbhob" be scattered throughout the logging area, and have "*good crown development*" and "*minimal butt damage*". Similarly eucalypt feed trees are required to be "*mature or late mature individuals*" of select nectar producing species. In practice eucalypt feed trees are often taken to be a subset of recruitment trees, though they come into their own in forests with low numbers of hollow-bearing, and thus recruitment, trees.

While large old hollow-bearing trees are not of much interest to the industry, the recruitment trees and eucalypt feed trees are of the utmost interest as these constitute a high proportion of the remaining large high quality sawlogs. It is therefore not surprising that the most widespread and frequent breaches found by the EPA and NEFA are the logging of the large mature trees required to be retained as recruitment and/or nectar feed trees. Because these represent the best sawlogs the Forestry Corporation does everything they can to avoid protecting them, either by refusing to select any or by selecting trees that are too small, deformed or damaged to meet requirements.

The EPA have proven themselves totally unwilling to take any meaningful regulatory action in response to these most common breaches, meaning that as large sawlogs dwindle the logging of recruitment and/or nectar feed trees has increased. Now the EPA has absolved itself by any liability by removing any requirements to protect recruitment or nectar feed trees.

NEFA has also found that trees required to be retained and protected are also often illegally damaged during logging, though again the EPA refuse to do anything about it. For example, NEFA found that 22% of retained trees were illegally damaged by being sideswiped by machinery or carried logs, or by having trees dropped on them, in Cherry Tree SF. The EPA repeatedly said they would take legal action after their inspection confirmed our complaint, though in the end they did nothing at all on the spurious grounds that they couldn't prove forestry had caused the damage.

Now they have codified this do-nothing approach into the new IFOA. If the Forestry Corporation damage a retained tree they firstly need to try to replace it with a comparative tree, if they can't find one then they need to pick a mature tree with a healthy crown (though it too may be damaged). If they can't find one of them then who knows, but at least the Forestry Corporation can no longer be held to account for their reckless logging.

In addition to these there are requirements to retain Glossy Black-Cockatoo feed trees (Casuarina with chewed cones beneath them), Yellow-bellied Glider and Squirrel Glider sap feed trees (trees where characteristic marks have been chewed through bark for sap collection), and dead standing trees. The feed trees are rarely identified and retained in practice (and the EPA refuses to enforce breaches), though the intent will remain under the new rules.

There are also currently requirements to retain 5 Koala feed trees per hectare in medium quality Koala habitat, which is discussed under Koalas.

Giant Trees

There is a requirement that all "*giant*" blackbutt and alpine ash over a 1.6m diameter at stump height over bark (DSHOB) and for all other species all "*giant*" trees over 1.4m DSHOB be retained. The NRC (2016) again over-rode the EPA who were advocating a "*Minimum 135 centimetres blackbutt, Minimum 120 centimetres all other species*". As noted by the NRC these size thresholds were specifically chosen because "*proposed size thresholds likely to have limited impact on wood supply (**no net change to wood supply**)*".

All such trees are the largest trees and thus should have been retained under the present prescription, though in practice the Forestry Corporation continued to log them whenever they thought they could get away with it. At least this stops such blatant rorting, though all trees over a metre diameter should be retained as such large trees are becomming increasingly rare.

The Remake of the Coastal Integrated Forestry Operations Approvals Final Report Threatened Species Expert Panel Review reports the EPA representative Brian Tolhurst as stating:

> *All trees greater than or equal to 100 cm dbh should be retained and protected as a matter of urgency. Not only do these provide the best opportunity to develop the large hollows required by many species they also provide more flowers, fruit, nectar and seed along with nesting opportunities for large birds such as raptors. At this stage of the harvesting cycles across coastal NSW all remaining large trees are part of a limited resource and are critical for many threatened species and populations to survive. There is known clear deficit of hollow bearing trees in the forested coastal landscapes of NSW.*

5. Threatened Species

Currently, for north-east NSW pre-logging surveys are required to identify locations of 36 threatened animal species, and provide various protection around them - ranging from increased feed trees up to 20ha exclusions for Brush-tailed Phascogale. Pre-logging surveys are also required for 316 threatened plant species, with most species requiring either 20m or 50m exclusion areas around records.

The draft Coastal IFOA proposes to "*reduce the need to locate threatened species through costly and ineffective surveys*", though "*proposes that 'targeted surveys' still be required to cater for some species not suited to the multi-scale landscape approach*".

In north-east NSW the intent is to remove the need to survey for and apply prescriptions to protect 22 threatened animals (9 mammals, 6 birds, 6 frogs and 1 reptile), with prescriptions only retained for 14 species. Some examples of lost protections around records of threatened fauna are:

- 20ha exclusion areas: Brush-tailed Phascogale.
- 8ha exclusion areas: Squirrel Glider.
- 30m riparian buffers on 1st and 2nd order streams within 200m: Golden-tipped Bat, Fleay's Frog, Giant Barred Frog, Stuttering Frog.
- 50m around records or inhabited wetlands: Green and Golden Bell Frog, Littlejohn's Tree Frog.
- 50m around dens and retain 15 mature feed trees within 100m of observations/200m of calls: Yellow-bellied Glider.
- Retain 10 mature eucalypt feed trees per 2ha in compartment: Regent Honeyeater, Swift Parrot, Black-chinned Honeyeater.

In north-east NSW 228 species of threatened plants (72%) will lose all protection and 28 species (9%) will have reduced protection. Most species either required 20m or 50m exclusion areas around records. Of the 91 species currently requiring 50m buffers (ie 0.79ha) around records, 79 will have all protection removed and the rest will have buffers reduced to 20m (i.e. 0.13ha).

A total of 60 threatened plants will still require limited surveys and limited protection ranging from Roadside Management Plans up to 20m exclusions.

Prescriptions were originally determined by negotiations between the NPWS and the Forestry Corporation, with many subsequently removed or reduced (none were increased). Despite claims of adaptive management, over the past 20 years there has been no monitoring undertaken to test the effectiveness of prescriptions. The agencies don't care how well they work, or what will be the consequences of reducing or removing them.

Threatened species exclusions are considered to represent an average of 3.4% of the logging area, though NEFA surveys do find many more locations of threatened species and do significantly increase exclusion areas. Protected areas would substantially increase if independent surveys were required.

Where there are records of previously protected areas for Squirrel Glider, Brush-tailed Phascogale and Koala high-use areas, that have not been subsequently logged, under the new IFOA they are intended to be protected by inclusion in 'wildlife clumps'. Though no new areas will be protected for these species.

6. Koalas

Since 1997 the Forestry Corporation have been required to thoroughly search for Koala scats ahead of logging and establish 20m exclusion zones around Koala High Use Areas (the buffer was reduced from 50m to 20m in 1998). Where some evidence of Koalas are found the compartment is identified as "intermediate use' and 5 Koala feed trees per hectare are required to be retained (though there is no minimum tree size).

In 2012 NEFA caught the Forestry Corporation halfway through logging a Koala High Use Area and about to log 4 others in Royal Camp State Forest. They weren't looking before they logged. When they started logging nearby they still didn't look and logged another high use area.

The Forestry Corporation had been refusing to do the searches with the thoroughness required to identify Koala high use areas for 15 years. After Royal Camp the EPA briefly tried to make the Forestry Corporation do thorough searches, but soon gave up and agreed with the Forestry Corporation to abandon pre-logging searches and rely on modelled habitat instead.

The NRC (2016) identify that only "*Around 200 hectares of koala high use area has been protected over the past 15 years and tree retention requirements have been triggered on around 33 percent of compartments (130,000 hectares)*". NEFA accepts that the relatively low identification of Koala High Use Areas partially reflects the collapse of Koala populations on the north coast, though considers it also reflects the ongoing refusal by the Forestry Corporation to thoroughly search for Koala scats ahead of logging.

In 2016 the EPA undertook a project overseen by an expert panel to review various approaches to map potential Koala habitat, with extensive groundwork to test the mapping. The project found that neither modelling nor ecosystem mapping were accurate enough to identify the "*occurrence of feed trees and therefore habitat class at the level of detail required for management in state forests*", with the panel unanimously agreeing that "*the primary intent and focus should be to identify the location, distribution and extent of areas that are supporting extant/resident koala populations*".

Despite the conclusion from their study that modelling is too inaccurate for regulation at the scale of individual logging operations, the EPA funded DPI Forestry (Law *et. al.* 2017) to develop a model.

This was intersected with an OEH (2016) likelihood model to identify high/high, moderate/high and moderate/moderate quality Koala habitat.

Because of differences between the EPA and Forestry Corporation the Natural Resources Commission (2016) was directed to resolve a prescription based on a "*modest increase in tree retention rates aim to minimise impacts on wood supply to best possible extent while recognising Government's policy initiatives and targeted investment in Koalas as an iconic species (**no net change to wood supply**)*".

The EPA (NRC 2016) proposed a retention rate of "*25 trees per hectare in High/high quality habitat, 20 trees per hectare in High/moderate quality habitat, and 15 trees per hectare in Moderate/moderate quality habitat*". The NRC over-rode the EPA to support a retention rate proposed by the Forestry Corporation specifying "*10 healthy trees per hectare with cell based application in High/high quality habitat, 5 trees per hectare with compartment wide application in High/moderate or moderate/moderate cells over 25 percent or more of compartmen*t".

Under the new prescriptions Koala browse trees are required to be greater than 20 cm diameter at breast height (DBH) (30cm DBH outside the north coast). The EPA (NRC 2016) proposed that "*retain trees with minimum 25 centimetre diameter DBHOB, prioritising primary browse species, then secondary browse species:*". The NRC over-rode the EPA to support the Forestry Corporation, deciding "*retain trees with minimum 20 centimetre diameter DBHOB, retaining trees where available with 50 percent primary browse species*".

The outcome is a map of very restricted highest quality Koala habitat and a broad map of compartments with more than 25% "moderate" quality Koala habitat. In the high quality habitat the requirement is to retain up to 10 browse trees >20cm DBH per hectare in the vicinity, and in moderate quality habitat the proposed requirement is to retain up to 5 browse trees >20cm DBH per hectare.

It is evident that the EPA list of feed species fails to include numerous browse species. This means that where there are less than 5 or 10 browse trees per hectare, alternative unlisted browse trees are allowed to be logged rather than retained.

43% of the mapped high quality Koala habitat on State Forests is within the North Coast Intensive zone and thus intended for clearfelling. Illegal logging in these forests over the past decade has focussed on replacing Koala feed trees with Blackbutt.

The methodology for applying the models is very simplistic and appears intended to reduce the identification of high quality habitat requiring higher tree retention rates. For example, Royal Camp and Carwong State Forests which have been identified by the EPA to be source Koala habitat with Koala occupancy of 58% and 80% respectively, are ranked as being very high on the OEH Likelihood Map, but only Moderate on the DPI Forestry map. So these important Koala habitats will only qualify for Koala Prescription 2 and the retention of 5 browse trees per ha.

In abandoning any measures to ascertain whether Koalas are present in an area, the EPA have deliberately abandoned any measures to identify and protect resident Koala populations and will instead often provide their limited protection to uninhabited and unsuitable habitat while allowing logging of the best habitat left. The Forestry Corporation can now log high-use koala habitat at their whim.

Despite north-coast Koala populations crashing by 50% over the past 15-20 years, in part due to the logging of core Koala habitat and the loss of mature feed trees through logging, the Forestry Corporation and EPA are removing the need to identify and protect occupied Koala habitat. They are prioritising the protection of virtual Koalas over real Koalas, while targeting half of the high quality modelled habitat for the most aggressive logging and conversion into quasi-plantations. This is clearly not compliant with the Commonwealth Conservation and Management Strategy and NSW Recovery Plan requirements.

7. Bell Miner Associated Dieback

Bell Miner Associated Dieback (BMAD) occurs when canopy trees are removed allowing lantana to dominate the understorey. It is logging-induced ecosystem collapse. It was first recognised in the 1940s, though in recent decades has been spreading, along with lantana, at an alarming rate, likely exasperated by increasing water stress due to climate change. In some State Forests up to 60% of the eucalypt forests are affected. It occurs throughout coastal NSW.

When the NSW Scientific Committee listed BMAD as a Key Threatening Process in 2008 they considered it was initiated on sites "*where tree canopy cover has been reduced by 35 – 65 % and which contain a dense understorey, often of Lantana camara".* Many researchers have reached the conclusion that it is initiated by logging.

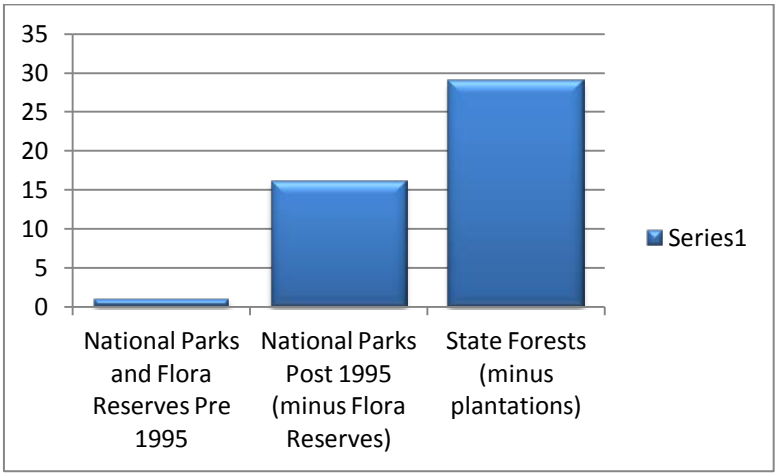
Yet again the most recent review by Silver and Carnegie (2017) for OEH found that the literature supports that logging is primary cause of dieback - without clearly saying so. The process of BMAD has been identified for over 20 years, and the process is once again confirmed to be:

1. Reduction in density of overstorey canopy, or creation of gaps in the overstorey results in an increase in density of understorey plants, particularly the weed lantana **>**
2. Lantana outcompetes and suppresses native species, creating a dense understorey which is ideal for nesting by Bell Miners (Bellbirds) **>**
3. Aided by the open overstorey, Bell Miners aggressively mob other bird species (and predators and diurnal arboreal species) to exclude them from their territories **>**
4. The reduction in predators of the sap-sucking psyllids, coupled with the preferential feeding of Bell Miners on the psyllids sugary coatings (lerps) leaving the psyllids intact, enables populations of psyllids to proliferate **>**
5. Psyllids primarily feed on the leaves of eucalypt trees causing defoliation. The trees use their carbohydrate stores to produce new foliage with the young leaves even more attractive to psyllids **>**
6. Repeated defoliation depletes tree's carbohydrate stores, allowing for an increase in attack by secondary pests (such as wood-borers) and disease, and causing trees to sicken and die. Once a tree's carbohydrate stores are sufficiently depleted they may be unable to recover.

DPI - Forestry recently used helicopter sketch-mapping to identify 44,777ha of BMAD north from Taree. Though comparison with other mapping indicates that there is something like double this area affected.

A major thrust of the Forestry Corporation and the EPA is to create the pretence that BMAD has nothing to do with forestry. One way of doing this is to claim that because BMAD occurs on National Parks, it can't have anything to do with logging. It is a convenient and effective excuse for inaction.

In order to properly consider the tenure claim, for the Border Ranges region a simple comparison was made of National Parks (and Flora Reserves) created before 1995, National Parks created after 1995 (mostly created from State Forests from 1995-1999 as part of the forest reform process) and current State Forests (excluding plantations). It is clear that most of the BMAD on National Parks is in parks that were being logged up until their creation as part of the forest reform process (post 1995). It is also clear that the ongoing logging of State Forests has dramatically increased BMAD over the past 20 years.



Percentage of public tenures now affected by BMAD in the Border Ranges Region. Note the trends of increasing BMAD with increasing logging over time.

The IFOA intends to allow the ongoing logging of BMAD affected forests, subject to some basic simplistic acknowledgement of its presence by FC. It will only require an operational plan to subjectively identify "*the occurrence and susceptibility of the operational area to Bell Miner associated dieback*", and where this is identified "*details of each management action to be implemented in the operational area to mitigate the impact or further spread of Bell Miner associated dieback*". This amounts to nothing more than a subjective cursory assessment and allows for their current protocol of targeting all trees affected by BMAD to be targeted for removal to continue.

Though what is most concerning is that rehabilitation work is only required when forest is on its last legs: "*Regeneration to achieve the standards in this protocol is only required for harvested areas where the natural floristic composition exists at a basal area of less than 14 square metres per hectare (14 m2/ha)*". 14m^2 is bugger all (for example intact high site quality forest can have an average basal area of 47m^2 per ha, and in better forests 60m^2) , and it can be made up of dead and dying trees.

Harvested areas are defined to be "*The portion of the operational area that has been subject to harvesting operations or forest products operations as part of the current forestry operation".* It is only areas subject to "active" logging that require rehabilitation. The extensive areas of degraded forests with no or little millable timber can simply be excluded from "active" logging and will never require rehabilitation.

8. Logging Intensity

Under the current IFOA two logging regimes are allowed: Single Tree Retention (STS) and Australian Group Selection (AGS). STS is the only logging regime currently practiced.

The current intensive logging regime (Australian Group Selection) limits the size of cleared patches to 0.25 hectare (50m by 50m), and requires logging be excluded from 10% of the net logging area.

Current requirements for Single Tree Retention are for 60% of the basal area (area of the cross section of a tree trunk) of the trees in a harvesting area, including all trees under 20cm diameter, to be left after a logging operation.

In a natural forest basal area can vary from as low as 18m^2 ha on a low productivity site, up to 47m^2 ha on a high quality site (Smith 2000), with up to 60m^2 on better quality sites, The NRC effectively identify the basal area range as 17-40m^2 per hectare, identify the current 60% retention requirement as equivalent to the retention of 10 to 24 m^2 per hectare. The classic study on Blackbutt Forests by Florence recommended retention of a minimum basal area of 22m^2 per hectare.

The proposal is to establish 3 zones where logging is only limited by basal area retention. These will be a 140,000ha North Coast Intensive Zone covering Coastal forests south from Grafton to Taree, a coastal "regrowth" zone and an escarpment "non-regrowth" zone.

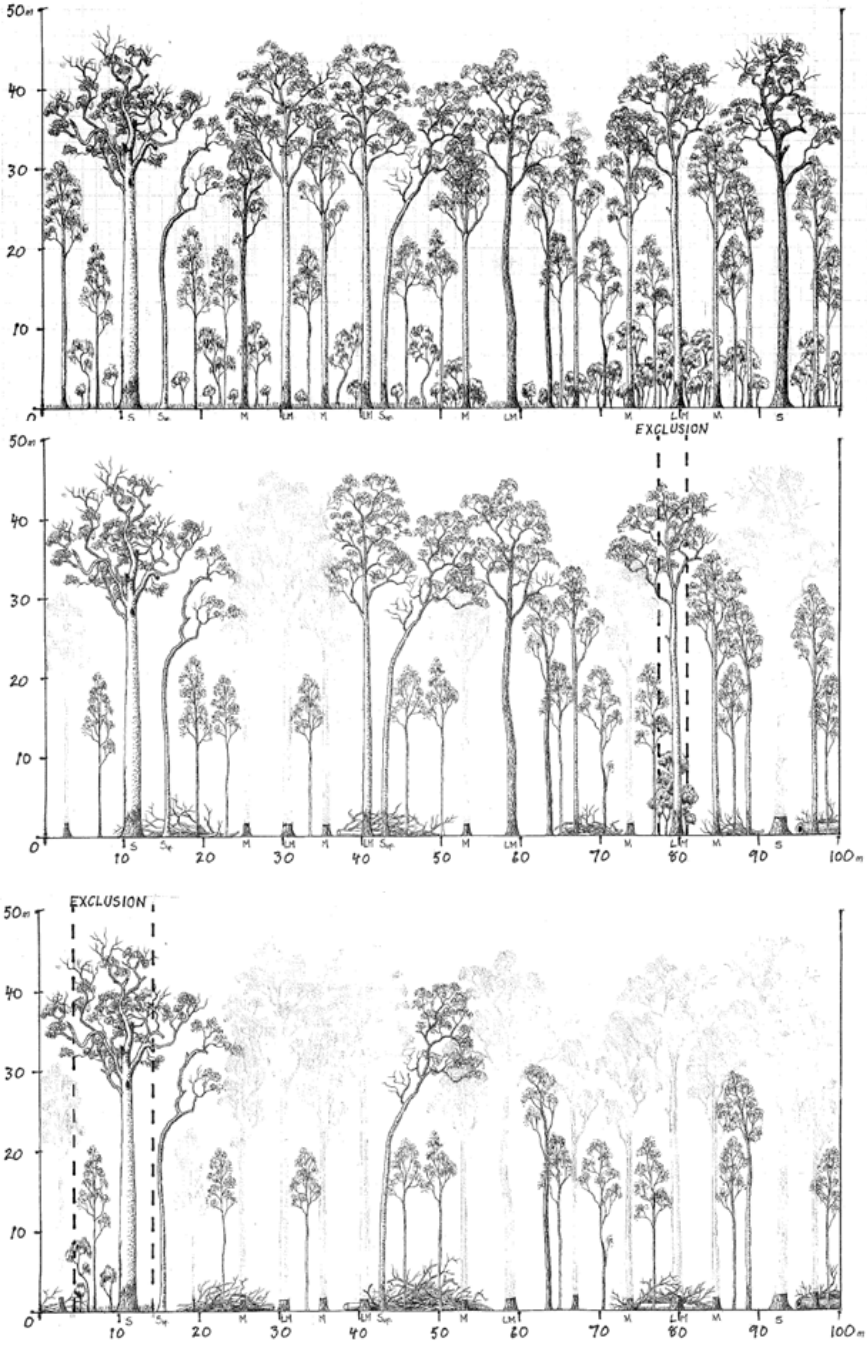
The proposed North Coast Intensive Zone is for alternative coupe logging, with coupes limited to 45ha. 10% of the loggable area is required to set aside as wildlife or habitat tree clumps. For 90% of the loggable area there are no minimum basal area retention requirements. Retention of up to 5 remaining hollow-bearing trees per hectare, and koala feed trees (within modelled habitat) require retention - preferably within wildlife and habitat tree clumps. So if the tree retention requirements have been met in the clumps (which is likely) then they will effectively be no constraints on most of the 90%, meaning that large areas can be clearfelled with at best a few small retained trees. Up to 2,200ha is allowed to be intensively treated each year, with clearfelled patches of 45ha (60 ha clearfells will be allowed for the first 2 years).

The EPA (NRC 2016) argued the baseline for intensive logging should be Australian Group Selection, though never-the-less argued for maximum 30ha clearfells with 21 years between clearfells and 10 years between adjacent clearfells. The Forestry Corporation wanted 60 ha clearfells with 14 year return times and 7 years between adjacent clearfells. The NRC went with 45 ha clearfells, 21 year return times and 10 years between adjacent clearfells. Though the Forestry Corporation will just do what they want.

Since 2006 the Forestry Corporation have been practicing an illegal form of Single Tree Selection called "Regeneration Single Tree Selection" where they have been taking up to 90% of the basal area. NEFA have been complaining about this for years, leading the EPA (2016), on behalf of the Environment Minister, to admit this *"is not consistent with the definition and intent of STS (Single Tree Selection) in the Integrated Forestry Operations Approval (IFOA) as well as FCNSW's own silvicultural guidelines*."

Despite its illegality the NRC (2016) consider that as the Forestry Corporation have been practicing "Regeneration Single Tree Selection" since 2007 they would adopt this as **Current harvesting practice** to reference proposed changes against. They give the parameters as **"***no upper coupe size limit, coupes range in size from 5 hectares to over 100 hectares, 4 harvest cycles, 7 year average gap, 21 years until all harvested*". This is a big difference from 60% basal area retention and retention of all trees <20cm., which is the current regime that the EPA recommended should be the benchmark.

Selective Logging



100mx20m (0.2ha) transect

OLDGROWTH

Range of size classes
Trees over 120 years old with small hollows
Trees over 220 years old with large hollows
Trees may live 500years, some more.

CURRENT LOGGING

Exclude:

- Koala High Use Areas
- Threatened species exclusions

Retain:

- 60% of basal area
- 5 hollow-bearing(H) trees /ha where remaining (increasing to 8/ha where >1 Greater Glider/ha).
- 1 largest recruitment (R) tree for each hollow-bearing tree
- 5 mature Eucalypt Feed Trees/ha.
- 5 Koala feed trees/ha (any size) in "intermediate" habitat.

PROPOSED LOGGING

Exclude:

- Wildlife Clumps (5%)
- Tree Retention Clumps (5-8%)

Retain:

- 10-12m2 basal area
- 5 hollow-bearing (H) trees /ha where remaining.
- 5 Koala feed trees/ha (>20cm dbh) in "moderate" habitat.
- 10 Koala feed trees/ha (>20cm dbh) in "high" habitat.

Differences between logging regimes when applied to a natural oldgrowth forest. Based on a 100m x 20m transect (0.2ha)

Under the new rules 10% of the loggable area in the "regrowth" zone, and 13% of the loggable area in the non-regrowth zone will be required to be set aside in as wildlife or habitat tree clumps. The only limit on selective harvesting in the remaining 87-90% is that in the regrowth zone the minimal basal area required is $10m^2$ ha and in the non-regrowth zone $12m^2$ ha. The EPA (NRC 2016) recommended basal area retention of 12 and $14m^2$ ha respectively though they were over-ridden by the Natural Resources Commission.

The new rules allow for logging intensity to increase on better sites, with as little as 16-25% of the basal area retained in the better quality forests. This is well below expert recommendations.

The Remake of the Coastal Integrated Forestry Operations Approvals Final Report Threatened Species Expert Panel Review reports the EPA representative Brian Tolhurst (one of the 10 experts who answered questions) as stating:

> *Sustainable forest management requires maintenance of forest stand structure complexity and heterogeneity to allow for biodiversity conservation. This key point seems to have been given up on in this review process with harvesting practices proposed that will severely degrade these forests to an artificial and simplified arrangement with severely reduced and limited biodiversity values.*
>
> *I think this remake is an interventionist approach to remedy a situation that has evolved through poor and desperate practices adopted to meet an unsustainable wood supply agreement at significant expense to the environment and the people of NSW. Continuing down this path will have long term deleterious environmental outcomes for the public forests of NSW in order to limp across the line and meet the final years of the wood supply agreements. This will be entirely at the expense of these forests. Recovery to some level of 'natural' ecological function will be decades and centuries, possibly without many species that will not survive this current and ongoing impact.*
>
> *... The intensive harvesting has clearly moved the coastal state forests from being multiple use forests with significant biodiversity values to that of purely production forests more in line with plantations. I don't believe this is an appropriate outcome or use of these crown lands that was ever envisaged.*
>
> *... Removal of standing trees below a basal area of around 18 - 20m2/ha will reduce the structure of these native forests to such a simple form that the ecological processes will be severely diminished or non-functioning. Even in the best case scenario it will take many decades or even centuries of recovery for any level of native forest ecological function to be restored after this intensity and scale of impact.*
>
> *A typical healthily stocked Blackbutt forest could be expected to have a basal area of around 30 - 40 m2/ha. Currently under the IFOA a 40% removal would limit the minimum basal area retention of 18 m2/ha in the worst case scenario.*

9. Logging Volumes

The NSW Government repeatedly promised that the new IFOA would result in "*no net change to wood supply and no erosion of environmental values*",

With the NSW Government now proposing to log oldgrowth forest and rainforest, increase logging intensity, introduce clearfelling, reduce buffers on headwater streams, and remove protections for most threatened species on public land in north-east NSW, it is clear that they lied to us.

The Government justified all these environmental wind-backs on the grounds that they promised the industry that they would not impact on existing wood supply obligations, and it is clear that this took precedence.

It is hard to fathom exactly what the current wood supply from north-east NSW is. Every document relating to current supply levels of high quality sawlogs (m^3 per annum) from native forests and

hardwood plantations in north-east NSW are very different: in 2015 in response to a question to Nick Roberts the Forestry Corporation stated that current allocations were 192,471, in 2017 the EPA reported that as at 2015 they were 179,600, in 2018 the Forestry Corporation released an Expression of Interest that identified current commitments as 168,812 and now the NRC claims they are 220,423.

For most of June NEFA sought replies from EPA, NRC and Forestry Corporation to specific questions about wood commitments from north-east NSW. It wasn't until July that partial responses were put on the EPA's website, we are still waiting for answers to most queries.

Based on claims of resource short-falls the EPA agreed to major wind-backs of environmental protections, including increasing logging intensity, removing protections for mature trees, reducing buffers on headwater streams, and removing protections for most threatened species.

Then, on the grounds of resource shortfalls, the Natural Resources Commission (NRC) intervened to side with the Forestry Corporation against the EPA to further increase logging intensity, increase the size of clearfells, slash retention rates for Koala feed trees, and increase the size of old trees that can be logged.

Even then the NRC claimed that "*it is not possible to meet the Government's commitments around both environmental values and wood supply"* maintaining there would be a shortfall in commitments from north-east NSW of 7,600 to 8,600 cubic metres of high quality sawlogs per annum due to protections for Endangered Ecological Communities and Koalas. To make up this claimed shortfall the Government decided to log oldgrowth and rainforest protected in the reserve system.

Nowhere in their documents do the NRC say what timber volumes they base these conclusions on. In response to enquiries they stated that their considerations have been based on high quality sawlog commitments from north-east NSW's native forests and hardwood plantations of 237,000m^3 per annum.

So, depending on which figure you accept for current commitments of high quality sawlogs, 237,000m^3 per annum represents an increase of somewhere between 17,000 to 68,000 m^3. Whichever figure you adopt, it is clear that according to the Forestry Corporation's figures that there is no need to log oldgrowth forest or rainforest to meet commitments.

In order to help justify their preference for logging oldgrowth and rainforest the NRC had to massage the figures further by excluding plantation timber, in the full knowledge that "*the proportion of high quality timber available from plantations increases over time*", while the proportion from native forests is decreasing. The NRC state "*The Commission used the figure of ~180,000 m3/pa (avg. harvest volumes over 100years) in its analysis based on wood supply volume*". By excluding plantations the NRC concocted a decline in future sawlogs.

It is outrageous that the NRC are using the 237,000 m^3 increased volumes, and excluding plantations from their projections, to justify logging oldgrowth forest, rainforest, koala feed trees, and larger trees, as well as increasing logging intensity. Their pretence of the need to slash environmental protections to satisfy inflated logging volumes is fraudulent. The NRC, EPA and Forestry Corporation have all been asked to explain and none of them will, they are colluding to hide the truth.

The current Wood Supply Agreements have been issued until 2023. In 2014 the NSW Government spent $8.55 million to buy back 50,000 m^3 per annum of high quality sawlogs from Boral *"to reduce the harvest of high-quality saw logs on the North Coast to ensure the long-term sustainable supply of timber from the region's forests".* Their WSA was extended until 2028. Now much of that timber is effectively being given back to the industry according to the NRC figures.

Absurdly the new IFOA is allowing the removal of 269,000 m^3 p.a. large high quality sawlogs per annum from north-east NSW, which was the original 1998 gross over-estimate. Why retain it as it is totally divorced from reality?

The Forestry Corporation have issued an Expression of Interest for new WSAs for 416,851 tonnes per annum of low quality sawlogs and residual logs (logs over 10cm diameter and 2.4m long) from north east NSW's native forests and plantations (58% of the total log resources predicted to be produced), which the EOI sates they intend to issue in June 2018. These volumes assume that the new logging rules have been approved. The NRC (2018) identify that annual salvage log, pulpwood and residue sales average 300,000, so these new WSA represent a 39% increase above current cut.