

Submission on environmental scoping document for next 10-year Forest Management Plan

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Preamble

The process of managing the native forests of Western Australia's south-west has been contentious since at least the early 1970s. This has been largely a political battle between an entrenched development/maximum economic use viewpoint on one side and a conservation/sustainable use viewpoint on the other.

It is time to reconsider the context of the conservation/economic use choices for these forests, to ensure that better decisions are made:

- The State forests lie within Australia's only internationally recognised biodiversity hotspot.
- The State forests are the only large areas of forests remaining in the south-west, which has suffered ca. 80 per cent loss of native vegetation, a remarkably large area in what must be close to record time.
- As State forests are in a landscape that is so largely stripped of native vegetation, earlier EPA policies that such areas (areas in or adjacent to highly cleared landscapes) should have high priority for conservation apply and conservation should be a high priority for State forests.
- There is no adequate baseline vegetation mapping of State forests. What has been done is broad scale and inadequate for environmental impact assessment.
- The knowledge of the flora is inadequate for environmental impact assessment.
- Pre-impact surveys of fauna, site-specific conservation actions and specialist management are not required within the ESD.
- The combined impacts of climate change, fungal diseases and weed invasion on the vegetation and flora of State forests and the surrounding landscapes have been inadequately modelled to provide a proper basis for conservation assessment in the forests.
- The high degree of clearing of the areas surrounding State forests with the fragmentation of much of what is left uncleared into small areas and the way this fragmentation interacts with weed invasion, fungal diseases and species loss means vegetation fragments in these areas will lose much conservation value in the long term. The larger size of State forests can mitigate these impacts, but not under a heavy extractive use regime. This larger size means that conservation should be given a much larger emphasis in State forests than it has been given.

These considerations mean that the review of the Environmental Scoping Document by the EPA should be extremely thorough and should have a significant conservation bias.

Submission

Recommendation The ESD should be re-written to address the community's justifiable concerns.

The EPA released the environmental scoping document (ESD) for the Forest Management Plan 2014-2023 (next FMP) on Monday, 30 April, the same day that it released the 184-page current FMP end-of-term audit of performance report. The public is invited to make submissions on the ESD by 14 May.

Unfortunately, management of State forest in WA is plagued by conflicts of interest, and both the community and the forests are the losers.

It is the governance stipulated by the *Conservation and Land Management Act 1984* that creates these conflicts of interest. The Conservation Commission is the proponent of management plans and in theory the agency that presents both the ESD and the end-of-term audit of performance report to the EPA. But the Commission has no resources, and under the CALM Act, it delegates preparation of management plans and FMP audit reports to DEC. Given the current membership of the Commission, there is no-one on it with the qualifications to challenge what DEC puts to it, so DEC is running the show. There is no independent assessment or control of either the ESD or the end-of-term audit of performance report. Furthermore, under the CALM Act (section 24), the Minister may give directions to the Commission, which must give effect to any such direction. A ministerial direction could subvert the whole concept of ecologically sustainable forest management and make a mockery of any claim to its implementation.

There is a serious conflict of interest having the Sustainable Forest Management (SFM) Branch of DEC prepare the ESD for the next FMP. DEC SFM foresters treat forest primarily as a timber resource and are prepared to promote another 10 years of logging when our forests are dying before our very eyes. In close collaboration with the Forest Products Commission (FPC), which sells native forest products from State forest, DEC foresters do all they can to facilitate logging while at the same time they have the role of auditing and monitoring the FPC's activities and protecting the forests' biodiversity.

As a government agency, DEC may be influenced by government policy, and the Barnett Government has signalled very clearly that it wants native forest logging to continue, in the erroneous belief, reinforced by DEC, that our forests are being managed sustainably. So it has given six sawmills Investment Security Guarantees, under which the sawmills will be paid compensation totalling \$59 million if their log allocation is decreased unless the decrease is due to the spread of *Phytophthora* dieback or climate change. This looks like a deliberate attempt to pre-empt the outcome of the next FMP development process. Furthermore, earlier this year the FPC called for expressions of interest in tendering for 800,000 tonnes per annum of low-grade jarrah logs. This looks like another attempt to influence the outcome of the next FMP development process.

Recommendation The Conservation Commission must provide its advice to the EPA based on independent scientific evidence and proven facts and not be influenced by the Government's, DEC's and the FPC's unethical attempts to pre-empt and control the outcome of the process to develop the next FMP.

INTRODUCTION (pp. 3-7)

The ESD claims that the next FMP will be based on the most up-to-date data, information and knowledge available, including climate information (p. 3). The current FMP is based on rainfall data only up until 1961. Calculations for a sustainable (not sustained) yield and allowable cut for the next FMP must be based on the most up-to-date comprehensive rainfall data, and isohyetal maps must be based on rainfall up to 2011. If the aim is for a genuinely sustainable yield, the draft next FMP must show that the cut can be continued under the rainfall projected for 2023, 2030 and 2070.

Recommendation Calculations for a sustainable (not sustained) yield and allowable cut must use the most up-to-date comprehensive rainfall data, and isohyetal maps based on rainfall up to 2011 must be provided to the public.

Recommendation Projections for climate change, in particular the anticipated amount and season of rainfall for 2023, 2030 and 2070, must be included if the next FMP purports to provide for a genuinely sustainable yield of timber in perpetuity.

ESD PROJECT AND ASSESSMENT SCHEDULE (pp. 7-8)

The ESD project and assessment schedule allows minimal avenues for public participation. There is to be no Public Participation coordinator and no discussion paper as there was for the current FMP. The first substantive document the public will see is the draft FMP, and that is too late for significant changes to be made. The ESD should require the release of a discussion paper as quickly as possible and a re-scheduling of the time-line to allow for this.

Recommendation A Public Participation coordinator independent of government, the Commission, DEC and the FPC should be appointed immediately.

Recommendation The Conservation Commission should prepare and release a Discussion Paper for public comment as quickly as possible and re-schedule the time-line to allow for this.

The ESD schedule allows minimal time for public participation. For example, the Review of Silviculture in Forests of South-west Western Australia is already finished (December 2011) but it is being withheld from the public until the draft FMP is released. Similarly, the ESD proposes to release other important documents such as the socio-economic study and the 'sustained' yield assessment at the same time as the draft next FMP. This is unfair to NGO and community members and gives them too little time to digest and respond to large, specialist documents. The supporting documents are needed for the public to be able to respond to the draft FMP and should be released before it.

Recommendation The Review of Silviculture in Forests of South-west Western Australia (December 2011) must be made available immediately.

Recommendation The socio-economic study and the independent review of the sustainable timber yield must be finalised as quickly as possible and made available before the draft FMP is released.

The list of stakeholders (Attachment 6), while an improvement on a previous list, names mostly agencies and bodies with a vested interest in forests or forested land. It is biased towards the commercial exploitation of forests and forested land. Those with an interest in only the conservation and protection of forests and forested land are poorly represented.

Recommendation Equal time and access must be given to academic, NGO and community representatives to put the case to the Conservation Commission and the EPA for the conservation and protection of forests and forested land.

ACTIVITIES LEADING TO POTENTIAL SIGNIFICANT ENVIRONMENTAL IMPACTS (pp. 9-11)

The activities leading to potential significant environmental impacts are divided into (A) those resulting from human activities that are authorised or managed directly by the plan; (B) those resulting from human activities that are not authorised or managed directly by the plan; and (C) those that are not a result of operations proposed by the plan (pp. 9-10)

Prescribed burning, logging, recreational use and supply of basic raw materials are included in (A); mining, minesite rehabilitation and clearing for infrastructure are included under (B) and inappropriate fire regimes, climate change and weeds, pests and diseases are included under (c). However, as DEC is very much responsible for inappropriate fire regimes, that issue should also be included under (A).

Recommendation Inappropriate fire regimes, for which DEC is largely responsible, should be included under (A), activities leading to potential significant environmental resulting from human activities that are authorised or managed directly by the plan.

As climate change is an issue that impacts of every aspect of forest use and management, it should be dealt with under a separate heading as well as a subset of activities leading to potential significant environmental impacts.

Recommendation Climate change should be addressed as an independent topic as well as under every criterion for ESFM.

OPTIONS AND ACTIVITIES TO BE CONSIDERED IN THE DRAFT FMP 2011-2023 (pp. 11-15)

Biological diversity (pp. 11-12)

FORESTCHECK (p. 12 and elsewhere) is carried out only by DEC staff. Its usefulness is questionable as there are no baseline data from 40 years ago to measure against so it's just someone considering that native vegetation (trees and larger shrubs) looks the same as it did 40 years ago. Baseline data for some biota groups will be much more recent.

Furthermore, even control areas will have been subjected to unnaturally frequent fires, both wildfires and prescribed burns, for up to 60 years (prescribed burning began in WA in 1952), so are unlikely to include long unburnt primary forest. In addition, FORESTCHECK does not cover karri, karri/tingle or tuart forest or the ecosystems associated with forests so it is of limited value.

DEC claims that FORESTCHECK has shown that areas logged 40 years ago are indistinguishable from unlogged forests. This is pure conjecture given the lack of baseline data. It is also irrelevant as far as current logging impacts are concerned because logging regimes that were in place 40 years ago were far less intensive and were occurring when the average annual rainfall was some 25 per greater.

Recommendation All published papers on FORESTCHECK should be reviewed by scientists independent of government, the Commission, DEC and the FPC and their findings released.

Productive capacity (pp. 12-13)

The ESD mentions options for a higher “sustained” timber yield and a lower “sustained” timber yield (p. 12) but not a “no allocation” option. This must be included. Such an option is available under the CALM Act, which says that State forest can be managed for the purpose, or combination of purposes of conservation; recreation; timber production on a sustained yield basis; water catchment protection; or other purpose. Thus State forest could be managed for just conservation, recreation and water catchment. If this is the community’s preference, it should be proposed as the preferred option. During Wafa's only meeting with DEC as a part of the informal consultation process we were told that a zero allocation option would be presented in the ESD. We believe it is imperative for genuine consultation that this option be included.

Recommendation One option presented in the draft FMP should be for “no log allocation”, with proposals for forest management only for conservation, recreation and water catchment purposes.

The EPA stated in its mid-term audit of performance report that logging in the low and intermediate rainfall zones may not be able to occur within the parameters of ESFM. There were strong concerns raised at the time that forests in these areas are not regrowing after logging. The ESD has completely failed to address this major environmental concern and instead makes reference to increasing logging levels.

Recommendation The draft FMP should make no provision for logging in the low and adjacent medium rainfall zones.

A “sustained” timber yield (which occurs some 23 times) is not necessarily a sustainable yield or level (mentioned only four times), and all the evidence shows that both the quantity and quality of native forest logs have declined steeply since 2004 (see attachment 1).

Last year only 15 per cent of the wood in all the jarrah logs and 12 per cent of the wood in all the karri logs sold by the FPC became sawn timber (see attachment 2). Under the next FMP that the Government and its agencies want to impose on us, this would surely get worse. Commercial quantities of good quality sawlogs are no longer available. Just to have an excuse to keep logging, the Government and its agencies now want to log our forests for logs to burn to produce electricity. Since obtaining sawlogs for high value timber products has been the justification for logging our native forests and that justification no longer exists, logging should stop.

Recommendation The word “sustained” must be replaced by the word “sustainable” and a definition must be included saying that sustainable yield means the yield of timber in both quality and quantity that a forest can produce in perpetuity without degrading the forest or the associated ecosystems.

Based on figures provided in the FPC’s 2010-2011 annual report, the annual average area of native forest logged under the current FMP was 8,800 hectares. The ESD proposes that the annual average area to be logged will be 10,000 hectares (p. 9). This is an increase of some 15 per cent, which the forests cannot sustain even in the short term.

Recommendation There must be no increase in the area of forest logged and the preference should be for no logging at all. The baseline position should be that logging should not occur unless it can be proved to be sustainable. The ESD should present two options: (1) no logging; and (2) logging where it can be independently demonstrated that it is ecologically sustainable.

Ecosystem health and vitality (p. 13)

Logging and burning are a threat to the maintenance of self-sustaining ecosystems. Both activities spread pests and diseases. Both kill plants and animals, which may or may not recover between logging and burning cycles. DEC applies fire across the landscape despite the lack of knowledge of its impacts on biodiversity or its usefulness in protecting life, property and biodiversity. DEC's fire management needs a full independent review.

Recommendation DEC's fire management must be subjected to a full review similar to a Royal Commission by independent experts and the outcomes incorporated into the next FMP, not appended as unenforceable policies and guidelines.

Soil and water (p. 13)

The concern of the EPA that under a drying climate, whether management of the forest to promote higher stream flows for water supply is realistic and environmentally desirable (e.g. Wungong catchment trial and research), (EPA mid-term audit report, p. ii) should be fully taken into account.

Recommendation The whole community must be informed and consulted about the full costs and benefits of the proposal to repeatedly kill large numbers of trees and understorey vegetation in forests in water catchments in the hope that more water will run into dams.

Global carbon cycles (pp. 13-14)

This issue was poorly dealt with in the current FMP. Not only must the impacts of climate change on forest ecosystems be fully assessed. The possible contribution to carbon storage of retaining natural forests and allowing them to grow and regrow should be thoroughly and independently researched and the results made public..

Recommendation The possible contribution to carbon storage of retaining natural forests and allowing them to grow and regrow should be thoroughly and independently researched.

Socio-economic benefits (pp. 14-15)

Independent scrutiny reveals that the FPC is making a loss on its native forest operations, which the FPC unconvincingly denies. Since the economic benefit of native forest logging is one criterion of ESFM, community members must be given the opportunity to see the full costs of native forest logging as they relate not only to the FPC but across all relevant government agencies.

Recommendation There must be an independent audit of the FPC's finances and the full costs to the public of native forest logging and the results released before the next FMP is finalised so that they can be taken into account in decisions about continuing this industry.

Both government and industry are very coy about the number of workers employed in the native forest timber industry, which is consistently combined with the number of workers employed in the plantation industry. Separate figures for each sector of the timber industry must be made available to the public and government so that steps can be taken to secure the future of workers in the native forest sector when native forest logging ceases.

Recommendation The actual number of workers employed in the native forest timber industry and the plantation industry must be calculated separately, included in the socio-economic study and published before the draft next FMP is released.

Mining is not a socio-economic benefit of forest. It does not use forest; it destroys forest and should not be included here. The economic benefit of retaining forests and allowing them to grow and regrow naturally should be fully assessed. This will surely outweigh the big and increasing economic loss to the State of native forest logging, which the FPC hides behind creative accounting practices.

Recommendation The economic benefits of retaining forests and allowing them to grow and regrow naturally should be fully assessed.

Plan implementation (p. 15)

Until the CALM Act is amended so that the Conservation Commission can enforce compliance with the FMP and guidelines, implementation of the plan will remain discretionary and substantially fail as it has with the current FMP. Only 12 KPIs have been achieved, with 10 not achieved, three partly achieved and six considered non applicable.

Recommendation Before the next FMP comes into operation, the Government must amend the legislation to give the Conservation Commission the power to enforce compliance with the FMP and its subsidiary guidelines by DEC and the FPC.

Studies and investigations (p. 15)

All the references listed in the ESD (Attachment 4) have DEC staff as at least one of the authors. It appears that there is not one reference from any completely independent source, yet dozens such papers, published in referred journals, are readily available. Review of all DEC policies, guidelines and manuals by internal experts (p. 21) is not sufficient. For the community to have confidence in DEC's research, policies, guidelines and manuals, peer review by external independent experts (not ex CALM, ex DEC or ex FPC personnel) is essential.

Recommendation The Conservation Commission must make use of the full range of scientific reports, including those published by experts other than past and present DEC and FPC staff members.

Applicable legislation (pp. 17-19)

Until WA has a biodiversity conservation act that protects habitat and threatened ecological communities and comprehensively binds the Crown, the State's biodiversity will continue to be threatened, degraded and depleted. The *Wildlife Conservation Act 1950* does not "provide for the conservation of flora and fauna throughout the State" and certainly not in forests and associated ecosystems, where 12 species of flora and six species of fauna have moved closer to extinction since the current FMP came into operation on 1st January 2004.

In its mid-term audit of performance report (p. ii), the EPA noted that:

Governance over forest planning, management and operations – the existing statutory roles and responsibilities of the Conservation Commission, the DEC and the FPC in relation to the FMP need to be reviewed and improved.

It further stated (p. i) that:

The current statutory roles of the Conservation Commission, the Department of Conservation and Environment (DEC) and the Forest Products Commission (FPC) are not effective in ensuring delivery of and compliance with the approved FMP. Key issues are the capacity of the Conservation Commission to require compliance, and the relationship between DEC, FPC and FPC's contractors.

Recent amendments to the CALM Act require improved involvement of Aboriginal people and better protection of their culture and heritage. However, it comes down to interpretation and actions on the part of DEC and FPC personnel, and if their treatment of European cultural heritage is anything to go by, extracting logs and conducting prescribed burns will take precedence over protection of Aboriginal culture and heritage unless the Conservation Commission is given the power and the resources to enforce compliance with the law and implementation of the next FMP.

Community and stakeholder consultation (pp. 19-21)

Allowing just two weeks' public comment on both documents simultaneously shows that the Government and its agencies are treating the community with contempt and working towards a pre-ordained outcome. Typical of their attitude is the fact that the Commission officer named as the key contact for the ESD went on five weeks' leave five days after it was released. This defies the EPA's recommendation for "genuine and effective public involvement in the process".

To date there has been minimal consultation with the WA Forest Alliance – a single meeting, initiated by WAFA. Unlike the process to develop the current FMP, there is no provision for a discussion paper before the proposed FMP is released as a PER.

Recommendation Time (to at least 28 May) must be allowed for submissions on the current FMP end-of-term audit of performance report.

As previously stated A Public Participation coordinator independent of government, the Commission, DEC and the FPC should be appointed immediately and the Conservation Commission should prepare and release a Discussion Paper for public comment as quickly as possible and re-schedule the time-line to allow for this.

11. Peer review (p. 21)

Review by internal experts is not enough. The Conservation Commission must seek independent advice.

12. Study team (p. 21)

The ESD must give the names of the members of the three commissioners who form the Working Group, the consultants and the representatives from DEC and FPC who are preparing the draft FMP.

Community members need to know who they are in order to assess their expertise and independence.

Recommendation The names of all those involved in the preparation of the draft FMP must be published.

Attachment 2 (p. 24)

Criterion 2 contains an interesting Freudian slip. ‘forest ecosystems’ are called ‘forestry ecosystems’.

ESFM criterion 1: Biological diversity (pp. 25-26)

The whole of the forest has been seriously juvenilised by extensive and repeated felling of large old trees and subjected to decades of burning at unnatural frequencies, of unnatural extent and completeness and in unnatural seasons. The second preliminary environmental objective can only be achieved by ending all logging and completely reorganising prescribed burning.

Biological diversity is the primary responsibility of the DEC and Conservation Commission. The ESD should be rewritten to give this first priority. Proponents of logging and burning should be required to independently demonstrate that these activities will not negatively impact on biological diversity.

ESFM criterion 2: Productive capacity (pp. 27-28)

While the second preliminary environmental objective is to limit logging of timber to “the sustained timber yield,” the third is to limit the removal of other forest produce to “a sustainable level”, but as far as practicable to satisfy public demand. Logging should also be limited to a sustainable level, which after 150 plus years of overcutting and other mismanagement is now zero.

The removal of forest produce should not “as far as practicable satisfy public demand”. If it is not ecologically sustainable, it should not be allowed, regardless of “public demand”.

With significant declines in timber quality and reduced capacity for high value products, public demand has fallen away. The FPC is seeking markets for low value logs and is operating at a loss. There is no sense in continued logging in the circumstances. The few remaining areas of forest providing good quality logs are essential habitat for threatened species.

“Inappropriate fire regimes” and “unacceptable fuel loads” are named as an identified threat leading to potential impacts. DEC contributes to the “inappropriate fire regimes” and the ESD references do not include recent research that challenges the “fuel load” paradigm, such as:

More effective fuel management may be achieved by rejecting the assumption that ‘young’ fuels are automatically less flammable and instead using an evidence-based approach to identify and manage for an ideal age range.

Zylstra, Philip J. (2011). Rethinking the fuel-fire relationship. IN Proceedings of Bushfire CRC and AFAC 2011 Conference Science Day., 87-99

ESFM criterion 3: Ecosystem health and vitality (pp. 28-29)

The second preliminary environmental objective is to use and respond to fire in a manner that promotes the maintenance of ecosystem health and vitality and the conservation of biodiversity and mitigates the risk of adverse impacts of bushfire.

Very little is known about the response of flora and fauna to fire so claims that current prescribed burning promotes and maintains ecosystem health and conserves biodiversity are hollow. The precautionary principle should apply, and prescribed burning should be practised very conservatively. Again DEC contributes to the inappropriate fire regimes and the comment on “unacceptable fuel loads” applies to the alleged threat of “high fuel loads”. Studies show that in some ecosystems, over time “fuel loads” reduce on their own and fire hazard diminishes. Long unburnt forests are the only refuges for some species, which require extended periods between fires to reproduce and survive.

Phytophthora cinnamomi is named as an identified threat and mentioned many times in the ESD, in particular in relation to research conducted on it. However, *Armillaria*, which is a serious threat to karri regrowth, is mentioned only once (p. 46, and as a matter the EPA nominated as requiring special attention). Marri canker, which is killing marri across its whole range, is not mentioned at all. This is an alarming omission.

Recommendation Both *Armillaria* and marri canker must be included as identified threats leading to potential impacts.

ESFM criterion 4: Soil and water (pp. 30-31)

The second preliminary environmental objective says to protect water quality and quantity. The same principle must apply to timber, and its quality as well as its quantity would have to be maintained if its production were to be ecologically sustainable.

If protecting the ecological integrity of streams and wetlands and their associated flora and fauna means parkland clearing of forests, it is the forests that must be sustained. Supplying drinking water reservoirs is the not-too-hidden agenda of tree killing exercises, about which the EPA expressed grave concern (see p. 5 above).

Adherence to policies, guidelines, manuals and relevant codes of practice is discretionary. It must be made compulsory, with penalties for non-compliance.

Attachment 5 (p. 46)

The ESD list of 12 matters nominated by the EPA in its mid-term audit report as requiring specific attention is incomplete. The EPA presented this list saying it includes (meaning it is not limited to) the list of 12 matters. Finding 6 in this report noted the failure to complete on time (or at all) some key guidelines even though the current FMP set specific dates for their completion. It further said that the lack of these approved guidelines is a major problem.

Recommendation Strict adherence to timetables in the next FMP must be enforced.

Attachment 8 (pp. 50-55)

The inclusion of a glossary in the ESD is curious and unnecessary. It should not be there. Its inclusion suggests that the proponent wants the ESD to be more than just a scoping document so as to avoid the need to prepare a discussion paper or a proposed FMP, both of which were prepared for the current FMP and both of which contained a glossary whereas it appears that the Conservation Commission's ESD for the current FMP did not.

As usual in CALM/DEC glossaries, the definitions are biased towards a pro-logging and pro-burning world view. One glaring example is the expression 'timber harvesting', which is again defined as follows:

Timber harvesting The cutting, felling, and gathering of forest timber undertaken as part of a planned sequence of silvicultural activities including the regeneration of the forest.

Apart from the fact that you cannot harvest what you did not sow or plant, this is not even the definition given in the *Forest Products Act 2000*, which says that **harvesting** means —

- (a) felling or cutting forest products;
- (b) taking or removing forest products;
- (c) in the case of felled trees, or parts of felled trees, measuring them; and
- (d) delivering forest products to a buyer or transporting forest products to a place where they can be collected by a buyer;

Farmers would be amazed to find that harvest includes both transport of the grain and seeding the next crop. This is an arrogant abuse of the English language.

Failure to give a correct definition creates problems. For example, the word thinning is defined as:

A felling made in an immature stand for the purpose of improving the growth of trees that remain without permanently breaking the canopy and encouraging regeneration.

This definition does not cover reducing the number of trees and shrubs in mature stands with the objective of increasing run-off into streams or where trees and shrubs are killed and left standing or where the objective is to discourage, not encourage, regeneration.

From past experience, any attempt to improve the definitions is futile.

Conclusion

Wafa hopes that the EPA recognises the potential of this proposal to have major impacts on the natural environment and that it will insist that significant changes and inclusions are made, including the zero log allocation option, no logging in the low and medium rainfall zone, the use of up-to-date rainfall data and future rainfall projections, the obligatory protection of threatened species, and a requirement for the use and management of fire to be independently reviewed and reorganised.

Attachment 1

Log removals by product type 2003-2004 – 2010-2011

Beth Schultz on behalf of the South-West Forests Defence Foundation Inc.

Jarrah logs (tonnes)

Year	High quality	1 st and 2 nd grade	Bole sawlogs	Other sawlogs	Sub-total	Fuelwood*	Total
2003-2004	1,415	162,836	19,364	22,192	205,807	112,099	317,906
2004-2005	518	143,272	23,640	28,896	196,326	142,744	339,070
2005-2006	1,152	154,589	33,359	21,805	210,905	162,661	373,566
2006-2007	984	120,351	20,237	20,105	161,677	133,346	295,023
2007-2008	1,433	169,280	33,575	44,334	248,622	132,002	380,624
2008-2009	664	118,315	47,880	25,083	191,942	158,554	350,496
2009-2010	786	70,397	90,635	13,764	175,582	129,730	305,312
2010-2011	742	45,658	64,834	11,690	122,924	179,117	302,041

*It is assumed that fuelwood (firewood logs and charcoal logs) is mostly jarrah.

Annual average yield of jarrah logs under FMP 2004-2013 (tonnes)

1 st and 2 nd grade	Bole sawlogs	Total
170,000	662,000	832,000

Karri logs (tonnes)

Year	High quality	1 st and 2 nd grade	Bole sawlogs	Other sawlogs	Sub-total	Chiplogs	Total
2003-2004	987	91,864	0	8,022	100,873	147,901	248,774
2004-2005	27	72,971	0	7,738	80,736	159,376	240,112
2005-2006	28	65,344	0	5,244	70,616	161,771	232,387
2006-2007	72	72,252	0	5,831	78,155	182,093	260,248
2007-2008	148	56,099	0	3,867	60,114	163,493	223,607
2008-2009	235	60,484	0	3,936	64,655	174,892	239,547
2009-2010	128	57,843	0	3,562	61,533	136,133	197,666
2010-2011	15	55,992	0	3,540	59,547	152,901*	212,448

*increased from 145,000 tonnes per annum in 2011.

Annual average yield of karri logs under FMP 2004-2013 (tonnes)

1 st and 2 nd grade	Bole sawlogs	Total
67,000*	198,000	265,000

Marri logs (tonnes)

Year	High quality	1 st and 2 nd grade	Bole sawlogs	Other sawlogs	Sub-total	Chiplogs	Total
2003-2004	0	0	0	12,942	12,942	46,077	59,019
2004-2005	212	0	0	5,788	6,000	3,600	9,600
2005-2006	523	0	0	11,143	11,666	6,909	18,575
2006-2007	985	0	0	14,566	15,551	12,104	27,655
2007-2008	892	0	0	16,921	17,813	4,905	22,718
2008-2009	144	0	0	4,673	4,817	6,627	11,444
2009-2010	628	0	0	13,264	13,892	2,435	16,327
2010-2011	598	0	0	15,651	16,249	2,865	19,114

Annual average yield of marri logs under FMP 2004-2013 (tonnes)

All bole logs	Total
243,000	243,000

Attachment 2 Where native

Attachment 2: Where native forest timber goes 2010-2011

Prepared by Beth Schultz on behalf of the South-West Forests Defence Foundation Inc
March 2012

The figures below show how little of the timber taken from our forests is sawn timber. The figures do not include the trees killed and left standing in the forest or those felled and left to rot on the ground.

Jarrah logging 2010-2011

Total jarrah logs 302,041 tonnes

Jarrah sawlogs

122,924 tonnes = 41% of total jarrah loges

Sawn timber recovery rate 37%

Value added, structural timber and railway sleepers

45,482 tonnes = 15% of total logs

Sawmill residue, waste and sawdust

77,442 tonnes = 26% of total logs

Industrial firewood and charcoal logs

176,117 tonnes = 59% of total logs

Sawn timber from jarrah logs	45,482 tonnes
Sawn timber as a percentage of total jarrah logs	15%
Wood other than sawn timber from jarrah logs	256,559 tonnes
Wood other than sawn timber as percentage of total jarrah logs	85%

Karri logging 2010-2011

Total karri logs 212,448 tonnes

Karri sawlogs 59,547 tonnes = 28% of total karri logs

Sawn timber recovery rate 43%

Value added and structural timber

25,605 tonnes = 12% of total logs

Sawmill residue, waste and sawdust

33,942 tonnes = 16% of total logs

Chiplogs 152,901 tonnes = 72% of total logs

Sawn timber from karri logs	25,605 tonnes
Sawn timber as a percentage of total karri logs	12%
Wood other than sawn timber from karri logs	186,843 tonnes
Wood other than sawn timber as percentage of total karri logs	88%

In 2010-2011, only 15% of the total amount of all jarrah logs and 12% of the total amount of all karri logs sold by the Forest Products Commission ended up as sawn timber.

Source: Forest Products Commission, Annual Report 2010-2011

*The recovery rates were confirmed by the Forest Products Commission.