

Santalum spicatum (Sandalwood) Biodiversity Management Programme

Summary of Public Comment

July 2023



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The recommended reference for this publication is:
Department Biodiversity, Conservation and Attractions, 2023, *Santalum spicatum*
(Sandalwood) Biodiversity Management Programme: Summary of Public Comment,
Department of Biodiversity, Conservation and Attractions, Perth.

Disclaimer Discussion and mention of legislation throughout this document is intended for overview and to provide context to proposed management actions. Legislation excerpts are not complete or verbatim. Readers should refer to the legislation for reference in the first instance and exercise their own skill and care in the use of the material.

This document is available in alternative formats on request.

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Summary

The draft *Santalum spicatum* (Sandalwood) Biodiversity Management Programme (Sandalwood BMP) was available for public comment during November and December 2022. Respondents broadly fell into one of two categories. The first group essentially value the existence of sandalwood trees as they stand in the wild with the want for sandalwood harvesting to end; and the second group who additionally value the economic and social importance of the species with the view that harvesting can be sustainably managed. Secondary themes that were also strongly represented were the interests of Aboriginal peoples as traditional owners of the lands on which sandalwood occurs; and the interests of the plantation sandalwood sector.

These differing and often competing viewpoints highlight the importance of implementing a Sandalwood BMP for sandalwood conservation, protection and management. This report summarises the comments and recommendations provided through public submissions with the Department of Biodiversity, Conservation and Attractions' (DBCA) responses to the matters raised. Also discussed are the changes that have been made to the Sandalwood BMP in consideration of the communities' contributions.

Introduction

In accordance with Part 5 of the *Biodiversity Conservation Act 2016* (BC Act), the purpose of a biodiversity management programme (BMP) is to provide for the conservation, protection, and management of native species. Sandalwood is a native species that has remained in commercial demand for over 170 years and as such, requires a BMP to deal with matters that may impact its continued ecologically sustainable use.

In preparing the draft Sandalwood BMP a suite of papers and other documents were critically reviewed in advising appropriate and within-scope management actions.

There is no requirement to undertake broad consultation on BMPs prepared under the BC Act. DBCA considered it would be valuable however to undertake a public comment phase to ensure sandalwood stakeholders had the opportunity to contribute their knowledge, expertise and viewpoints to the finalisation of the Sandalwood BMP.

Note that the term 'sandalwood' throughout this report refers to wild *Santalum spicatum* growing in Western Australia.

Plan distribution

In preparing the draft Sandalwood BMP, drafts were circulated among government agencies identified to have either direct or indirect responsibilities for sandalwood. These were:

- Conservation and Parks Commission;
- Department of Fire and Emergency Services (DFES);
- Department of Mines, Industry Regulation and Safety (DMIRS),
- Department of Primary Industries and Regional Development;
- Department of Water and Environmental Regulation;
- Forest Products Commission (FPC); and
- State Solicitor's Office (SSO).

Comment was received from DMIRS, FPC and SSO; and considered in preparing the draft Sandalwood BMP for public release. DFES provided a response as part of the later public comment process.

One month prior to the public release, all 67 registered native title bodies corporates and native title claimants with traditional lands coinciding with the sandalwood distribution were advised of the consultation process via their contact details as recorded on the Office of the Registrar of Indigenous Corporations or the National Native Title Tribunal databases.

Coinciding with the release, DCBA again contacted the traditional owner entities, as well as sandalwood stakeholder representative groups and government agencies, to advise of the opening of the public comment period. Wider notice of the release was provided through Ministerial media statement and via DBCA's social media. The plan and supporting information was accessible via the webpage: <https://www.dbca.wa.gov.au/draft-sandalwood-biodiversity-management-programme>, with other formats available on request through contacting sandalwood@dbca.wa.gov.au.

The draft Sandalwood BMP was initially open for public comment from 31 October to 9 December, and subsequently extended to 23 December 2022.

During the comment period, three stakeholder groups requested and were provided draft Sandalwood BMP presentations. These were:

- Conservation Council of Western Australia: Environment Matters – Our Declining Sandalwood forum;
- FPC: Sandalwood Forum; and
- Goldfields Threatened Flora Recovery Team: December meeting.

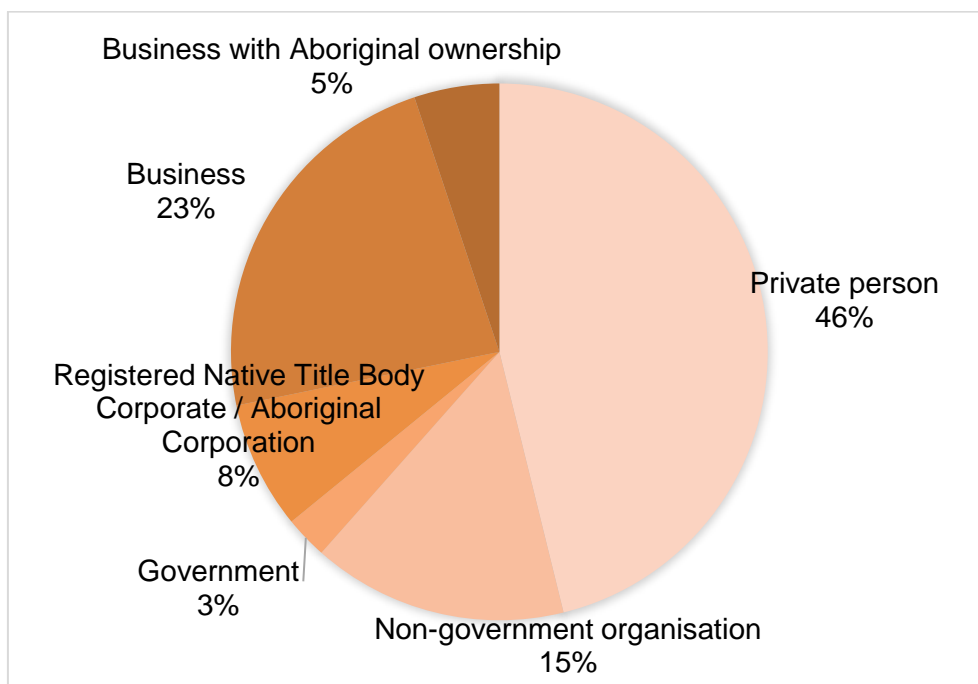
Further discussion of the consultation process in response to comments received is covered in the Detailed issues section: Implementation: 1.5.1 Consultation.

Responses

A total of 44 submissions were received, 32 via the online form, ten by email and two by telephone. Of these, five online responses were either a general enquiry, resubmitted via email or duplicate submissions of the same response. These were removed leaving 39 submissions for analysis. Where people sent more than one submission, either as themselves or on behalf of different groups, these were considered as separate submissions.

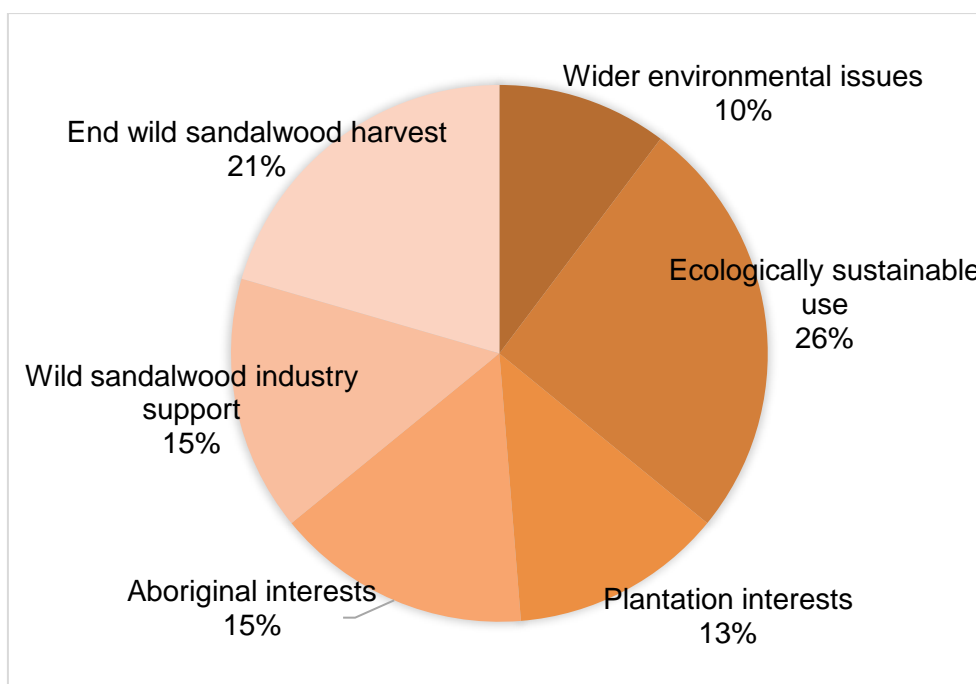
The diversity of respondents provided broad and varied viewpoints on the contents of the draft Sandalwood BMP, and also on wider sandalwood matters. Figure 1 demonstrates the categorisation of respondents.

Figure 1: Respondents



The submissions varied from single-issue points of view, to comment on each of the draft Sandalwood BMP's components and objectives. All submissions, whether single-issue or detailed, tended to present a central theme or promoted outcome as presented in Figure 2.

Figure 2: Submission themes



The 39 submissions contained more than 330 comments of which approximately half were labeled or phrased as recommendations. The remaining were accepted as either critical, neutral or supportive comments. The comments were each assessed against the matrix for considering changes to the draft Sandalwood BMP that was provided in the *'Make your submission count'* instructions of the online form and is included in Appendix 1. The condensed, and paraphrased comments are presented with their matrix rating and a brief response in Appendix 1.

Appendix 1 also records the frequency by which each topic was mentioned. Topics with one or two comments are labelled as low (L) frequency, three to ten as medium (M) and more than ten as high (H) frequency. Frequency indicates the level of interest without necessarily negating the importance of low frequency topics.

One quarter of the comments were considered to have assertions or recommendations requiring modification of the draft Sandalwood BMP. Reasons for alteration were mostly to improve clarity or to adjust proposed approaches to better achieve an identified outcome.

Three quarters of the recommendations/comments did not provide cause for any modification of the draft Sandalwood BMP. These mostly referred to issues outside the scope of a BMP. Refer to section 1.1 for more detailed discussion of scope and out-of-scope matters raised in the submissions. The other prominent matrix rating of comments not leading to modification was due to raising matters that were either already referred to in the draft Sandalwood BMP or considered during its preparation.

Detailed Issues

1.1 Scope of a BMP

1.1.1 Economic sustainability

“ESFM principles would focus on a long term viability of both sandalwood as a species and as a wood resource.” (comment #44)

A number of submissions raised the importance of the three pillars of sustainability being environmental, social and economic. Others, in a similar vein suggested that ecologically sustainable forest management principles (ESFM) would be a more appropriate basis for the Sandalwood BMP than the narrower concept of ecologically sustainable use (ESU).

The BC Act constrains the extent to which social and economic sustainability may be considered. BC Act s69 prescribes the content of a BMP as for the conservation, protection and management of native species and specifically, may deal with the matter of the ecologically sustainable use of native species. Ecologically sustainable use *“in relation to biodiversity components, means use of the biodiversity components in a way and at a rate that does not lead to the long-term decline of biodiversity, thereby maintaining the potential of the biodiversity components to meet the needs of present and future generations”* (BC Act, 2016).

Application of this definition extends to managing human activities that affect native species although not to the extent of managing subsequent industries that seek to produce economic benefits from native species. For this reason, Aboriginal economic development; carbon credits and sandalwood market values are examples of matters that are not within the scope of a BMP.

Ecologically sustainable development as defined by section 4 of the BC Act is broader in scope than ecologically sustainable use and specifically includes provision for economic considerations. While the Programme provides for ecologically sustainable use, DBCA must also have regard for the wider principles of ecologically sustainable development in its functions.

Similarly, ecologically sustainable use does not have the width of scope as ecologically sustainable forest management as defined in the CALM Act and detailed by the Montreal Process and its Criteria and Indicators of Sustainable Forest Management, particularly in reference to economic sustainability.

1.1.2 Threatened species nomination

“there is no mention in the BMP of its threatened species status on the IUCN Red List, in which it is listed as a ‘Vulnerable’ threatened species due to: “Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased OR may not be understood or may not be reversible” (IUCN Criteria A2)” (comment #59)

Many respondents were concerned that the draft Sandalwood BMP did not discuss sandalwood being listed for assessment against threatened species criteria. As outlined in the companion *Draft Santalum spicatum (Sandalwood) Biodiversity Management Programme frequently asked questions document (FAQs)*, the processes for assessing species’ conservation status are separate to the purpose of a BMP, being to set parameters to manage for conservation, protection and ecologically sustainable use.

BC Act Section 69 specifically states that a BMP is not for the management of threatened species: *“Content of biodiversity management programme (1) A biodiversity management programme is a document that provides for the conservation, protection and management of — (a) one or more native species (other than threatened species).”*

DBCA is actively assisting the Commonwealth in their assessment processes, and accordingly, should sandalwood be listed as a threatened species; the situation will be reviewed with the requirements of the BC Act.

1.1.3 Plantations

“like to see the BMP recognise the significant WA sandalwood plantation resource and how a transition from historic government wild sandalwood harvesting to a mostly plantation based resource will decrease pressure on the wild resource” (comment #17)

Sandalwood plantations (specifically of *S. spicatum*) were a subject raised in many submissions and the central theme of 13% of submissions. Plantation proponents largely emphasised the capacity of plantations to replace wild sandalwood and enable wild harvest to be phased out. Divergent views on the issue alternatively suggested that plantation sandalwood had inferior qualities to wild sandalwood and was not (yet) a market replacement.

The draft Sandalwood BMP recognised the plantation sandalwood resource in the Current situation section by stating: *“An estimated total of 25,000 hectares of plantation sandalwood has been established in the State, mainly in the Wheatbelt. The plantation resource is at varying stages of maturity.”*

Concepts to transition from wild to plantation sandalwood are industry strategies for the purpose of sustaining the Western Australian (WA) sandalwood industry into the future. They are not directly for the purpose of conserving and protecting wild sandalwood. Under the BC Act (and prescribed scope of a BMP), decisions for changing the levels of wild sandalwood take must be based on the persistence of the species, not on the maintenance of an industry.

The maturing plantation resource was a component that influenced the settings of *Sandalwood (Limitation on Removal of Sandalwood) Order (No. 2) 2015* (Sandalwood Order). Plantations, with biodiversity elements identified in the Sandalwood BMP, is a consideration within the parameters of the principles of ecologically sustainable development and will be considered in formulating the next sandalwood order as per the revised Strategy 2 management action (a): *“DBCA will determine and recommend a sandalwood take quantity for the Minister to issue an order that will replace the Sandalwood Order in 2027. In limiting the sandalwood take and within the permissible scope of a BMP, recommendations may account for: ... (vi) principles of ecologically sustainable development as defined in Section 4 of the BC Act.”*

1.1.4 Allocation of annual harvest quantities

“All future wild Sandalwood harvesting should remain with the FPC as they have managed this industry successfully since its inception.” (comment #50)

“a key strategy to improve sustainability would be to dramatically reduce the FPC take from now until 2026” (comment #187)

Sandalwood is harvested either under a *Forest Products Act 2000* production contract or a licence issued under the *Biodiversity Conservation Regulations 2018* (BC Regulations). A significant matter of interest in the submissions was to whom the take quantities permitted under the Sandalwood Order are allocated. On one hand respondents stated that the current majority allocation to the FPC was the most appropriate way for sandalwood harvest to be continued. Alternatively, many see that sandalwood harvest is an important economic opportunity for Aboriginal people and promoted that more (or all) sandalwood harvesting quantities be allocated to traditional owners.

The Sandalwood BMP is concerned only with the settings and actions that inform the level of take, not the identity of entities involved in the take. The proportion of the annual harvest quantities of wild sandalwood that is allocated to the FPC and other sandalwood licence applicants is beyond the scope of the Sandalwood BMP.

Outside the processes of the Sandalwood BMP, the *Advancement of Aboriginal Economic Development Using Wild Harvested Sandalwood Report* Recommendation 8 states:

“That the amount of the annual quota allocated to Crown land and private land licences be increased from 10% (250 tonnes) to 20% (500 tonnes) to cater for an increase in Aboriginal groups seeking Crown land licences or successful Aboriginal applicants and operators seeking expanded sustainable harvest amounts.”

The Sandalwood Licensing Guidelines referenced throughout the draft Sandalwood BMP will formalise this recommendation.

1.2 Harvest level

1.2.1 Sandalwood Order

“that the current unsustainable harvest quota be urgently reduced.” (comment #117)

“The current Sandalwood take is more than sustainable, with in most Sandalwood harvest areas, the FPC Sandalwood Harvesting Contractors only harvesting 1 in 3 or 4 trees” (comment #185)

The harvest quantities provided by the Sandalwood Order was the topic of the most impassioned responses received during the public comment period. This topic was also the most divergent in viewpoint with many stating the current harvest was not sustainable and demanding it be significantly reduced or no wild sandalwood harvesting. Responses that supported continued sandalwood harvest valued the social and economic benefits the industry provided and promoted the viewpoint that harvesting is sustainable particularly where supported by regeneration programs.

As outlined in the FAQs, the Sandalwood Order remains in place until 31 December 2026. As such, the Government is committed to the Sandalwood Order’s prescribed quantities through licences and contracts until that time.

Sandalwood BMP Strategy 2 is to review and revise the Sandalwood Order quantities that may be taken while maintaining the productive capacity of sandalwood populations and associated ecosystems. Strategy 2 has been revised to provide direction for the Sandalwood BMP be the framework to inform DBCA in making recommendations to the Minister for Environment on future sandalwood harvest levels.

1.2.2 Deadwood management

“The Sandalwood deadwood harvest should be great expanded and not linked to the greenwood harvest quota.” (comment #48)

A number of responses from an industry perspective were of the view that dead sandalwood had little or no ecological value, was vulnerable to bushfire loss and as such, limiting the take of deadwood had no environmental benefit. This viewpoint was taken further by some who promulgated the idea that dead sandalwood located within the conservation reserve system be available for harvest.

The ecological value of dead sandalwood is undetermined although it is frequently observed to be habitat for many creatures including small reptiles such as the pygmy spiny-tailed skink (*Ergernia depressa*). Aside from that, dead sandalwood is within the legislated definition of ‘sandalwood’ (and ‘flora’) under the BC Act; and ‘specifically controlled sandalwood’ under the BC Regulations. As such dead sandalwood is not able to be managed outside the requirements of the legislation on the basis that it is not living. Commercial extraction of flora from conservation reserves is inconsistent with their legislated conservation purpose.

As some comments referred to a 50:50 ratio of greenwood/ deadwood take, it is noted that the Sandalwood Order states: *“(2) The quantity of sandalwood that may be pulled or removed from Crown land and alienated land during a relevant year is limited to a total of 2500 tonnes, of which no more than 1250 tonnes may be living sandalwood”*. The ratio of greenwood to deadwood may already vary (within the total of 2500 tonnes).

Within the requirements of the legislation, the proportions and quantities of dead sandalwood will be considered in DBCA's recommendations for review of the Sandalwood Order. Sandalwood BMP Strategy 2, management action (a) has added the point: *"living (green) sandalwood having distinct sustainability factors and management requirements to dead sandalwood"*.

1.2.3 Precautionary principle

"That the Precautionary Principle be applied to the current unsustainable harvest quota".
(comment #57)

Several responses referred to applying the 'precautionary principle' to sandalwood management particularly as a mechanism to reduce the harvest level. The precautionary principle as per the Macquarie Dictionary Online (2023) is: *"an ethical and political principle, applying particularly in the environmental context, which states that if there is the risk of serious or irreversible harm occurring to people or to the environment, lack of full scientific certainty about the existence of the risk should not be used as a reason for failing to take or for postponing measures to prevent it."*

DBCA (and a BMP) must both conserve and protect biodiversity and also promote the ecologically sustainable use of biodiversity components within the context of the five principles of ecologically sustainable development that are set out in section 4 of the BC Act (below).

"4. Principles of ecologically sustainable development"

The principles of ecologically sustainable development are as follows —

(a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;

(b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;

(c) the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;

(d) the conservation of biodiversity and ecological integrity should be a fundamental consideration in decision-making;

(e) improved valuation, pricing and incentive mechanisms should be promoted."

The precautionary principle is just one (b) of the principles. The suite of principles are not applied individually, nor without regard for the objects of the BC Act. As the draft Sandalwood BMP is consistent with the requirements of the BC Act, no change has been made to the draft on this matter.

In anticipation of improving understanding of sandalwood and its environments, the Sandalwood BMP is to be reviewed every five years and the Sandalwood Order reviewed every ten years. This is to enable adjustments based on new learnings, increased scientific certainty and the continuous improvement philosophy.

1.2.4 Regeneration programs

“Operation Woylie has been a huge success initiated by the FPC about 10 years ago. They are sowing over 20 tonne of seed in 10 different locations per annum and the average success rate over this period is over 46,000 seedlings surviving per annum after the first summer. This more than replaces the number of green trees harvested per annum. This is all paid for by the FPC from harvesting proceeds. This information is in the public domain. We don’t believe the population is declining and without Operation Woylie it would be declining.” (comment #128)

Comment on sandalwood regeneration programs, particularly FPC operations, were prominent in many submissions. Generally, comments promoted that sandalwood regeneration was: funded by the sale of harvested sandalwood (and would not occur otherwise); and was sufficient to replace harvested trees. Several responses also commented on the success of hand seeding programs completed by traditional owners. In contrast a minority viewpoint challenged the success of current regeneration programs and their contribution to sandalwood sustainability.

DBCA notes that the *Forest Products Commission Annual Report 2021-2022* reports a cumulative average of 46,000 seedlings established each year over 11 years. The FPC’s Annual Report is independently audited for compliance to the *Financial Management Act 2006*.

Sandalwood BMP Strategy 10 has been reviewed to include more commentary regarding current regeneration programs and their importance to sandalwood biodiversity. This includes increasing regeneration operations in locations within the conservation reserve system.

1.3 Climate change

“ The average annual rainfall for Carnegie Station (BOM site data) is now 311 mm/year, having improved from 1980 to the present by between 10 and 20 mm in each of the four decades.”

cont. “This improving rainfall pattern is seen across almost all of the inland country supporting sandalwood. Climate change has not yet proven to be a threat to sandalwood in the arid zone.” (comment #217)

Climate change was a topic that received broad commentary varying from the value of carbon credits and climate change policy; to the impact of changing rainfall patterns on sandalwood establishment. The comment above was one of two that provided a similar viewpoint on increasing rainfall that is important to consider closely.

Using the comment’s example location, more than 75% of the annual average rainfall at Carnegie since 1980 has been recorded in the months from September to March. While summer rainfall may have been observed to have increased over recent decades, Watterson et al. (2015) forecast that summer rainfall changes are possible, however the direction is not able to be reliably predicted. Whether summer rainfall is increasing or otherwise, summer rainfall has not been observed to stimulate sandalwood germination (Brand, 2017).

April to August rainfall is critical for sandalwood germination and establishment. Projected winter rainfall declines of up to 45% (Watterson, et al., 2015) will decrease the frequency of winters with sufficient winter rainfall for sandalwood establishment. To account for declining winter rainfall, seeding programs are required to be sustained over the long-term to respond to fluctuating occurrences of winter rainfall by *boom* seasons establishing sufficient seedlings to offset increasingly frequent *bust* seasons.

This requires assessments of the success or failure of sandalwood seeding programs to account for long-term results as conclusions deduced from evaluating single or small clusters of years in isolation are misleading.

Sandalwood BMP Strategy 7 has been reviewed to contain comment around threshold levels of winter rainfall. Management action a) has been split and adjusted to: “a) *DBCA will maintain currency in knowledge and contemporary management approaches in relation to climate change and its possible impacts on sandalwood*”; and “b) *Future planning for the management of sandalwood, particularly establishment programs, will adapt to authoritative climate change predictions and data generated from the species response to actual conditions.*”

Strategy 7 has also added management action c) “*Aligned with Strategy 12, DBCA may undertake and encourage research into innovative practices for reducing the reliance of sandalwood germination on the winter threshold.*”

1.4 Implementation

1.4.1 Consultation

“Consultation, in a culturally appropriate way, with Aboriginal groups hasn’t happened and 6 weeks to comment on the draft is insufficient time for most groups.” (comment #321)

A regular comment from respondents promoting the interest of Aboriginal people was that the public comment period was insufficient time for consultation with Aboriginal people, most specifically traditional owner communities. Other comments were more broadly critical of the public comment process being considered ‘consultation’.

‘Consult’ and ‘consultation’ are not defined terms in the BC Act or *State Interpretations Act 1984*. Requirement for consultation under the BC Act (where “Commission” is the CPC) is prescribed by Section 71: “*Consultation on draft programme. When preparing a draft programme the CEO — (a) must consult with the Commission if the programme relates to land vested in that body or is otherwise relevant to the functions of that body; and (b) may consult with any other person or body who or which appears to the CEO to be likely to be affected in a material way by the programme.*”

The public comment opportunity was a process supporting preparation of the draft programme (the Sandalwood BMP is a draft until gazetted), and as such, satisfies the consultation requirements of the BC Act.

In preparing the draft Sandalwood BMP and with reference to Section 71; consultation expectations; and the spectrum of public participation, the open for comment process included:

- Ministerial Media Statement (subsequently picked up by several media agencies including the ABC);
- DBCA webpage and social media;
- intra-government liaison;
- three rounds of offers to traditional owners to provide in-person consultation*;
- writing to sandalwood conservation and industry representative groups;
- presentations to conservation and industry forums; and
- extension of the public comment period from six to eight weeks.

*DBCA contacted all traditional owners whose lands coincide with the distribution of sandalwood prior to and during the release of the draft Sandalwood BMP. There was initially little interest expressed by traditional owners in DBCA's offers to meet about the Sandalwood BMP. The Sandalwood BMP in itself is not a future act as per the *Native Title Act 1993*, nor does it impact the native title rights and interests of traditional owners.

With reference to Strategy 14, the Sandalwood BMP commits to further and ongoing consultation on the implementation of many management actions including for DBCA *"to consult, partner and empower Traditional Owners in on-Country sandalwood management and joint land management"*. DBCA is open to facilitating open respectful communication through consulting with traditional owners at their request and convenience.

1.4.2 Resources

"... 'within available resources' which indicates that DBCA is not committed to achieving results of adequately mitigating the threats to achieving successful sandalwood regeneration" (comment #226)

The most frequent critical comment through the submissions regardless of other viewpoints was that words such as *"may"* in management actions indicate DBCA to be uncommitted or unfunded to achieving Sandalwood BMP outcomes.

As stated in the draft Sandalwood BMP Purpose section: *"Management actions proposed under the Programme are specific to the management of wild sandalwood and are in addition to routine activities undertaken by DBCA."* Where funding is not dedicated and full implementation cannot be guaranteed, actions are written as *"may"*, *"will seek to"* and *"within available resources"*, rather than 'will'. This is not an indication of a fundamental lack of commitment but a reflection of competing funding priorities at a department and government level.

DBCA will prepare a budget for implementation of the Sandalwood BMP for submission to the Expenditure Review Committee. Funding is then a matter for government to consider with other competing priorities.

1.4.3 Delaying implementation

“It is recommended that the finalisation of the BMP be delayed until after the determination of sandalwood’s threatened species status at the federal and state levels.” (comment #22)

Within the conservation perspective, there were divergent views on the implementation of the Sandalwood BMP. Several respondents complained that the Sandalwood BMP had not been developed sooner, while others campaigned for its finalisation to be delayed.

Santalum spicatum is currently listed on the Commonwealth Threatened Species Scientific Committee’s Proposed Priority Assessment List with a completion date of 30 October 2024. Delaying finalisation and implementation until this time will not enhance the conservation, protection and management of the species.

References

- Brand, J. (2017). Report on sandalwood seeding at Lorna Glen station, in the arid northern Goldfields, 2013-16. Forest Products Commission unpublished report.
- Forest Products Commission. (2022). Annual Report 2021-2022.
<https://www.wa.gov.au/system/files/2022-09/FPC-Annual-Report-2021-22.pdf>
- ‘precautionary principle’. (2023). In Macquarie Dictionary Online, accessed 17 February 2023. https://www.macquariedictionary.com.au/features/word/search/?search_word_type=Dictionary&word=precautionary+principle
- Watterson, I et al. (2015). Rangelands Cluster Report, Climate Change in Australia Projections for Australia’s Natural Resource Management Regions: Cluster Reports, eds. Ekström, M et al., CSIRO and Bureau of Meteorology, Australia.

Appendix 1: Comments and DBCA response.

Matrix for considering changes to the draft Sandalwood BMP			
The Sandalwood BMP may be modified (M) if a submission:			
<ol style="list-style-type: none"> 1. provides additional information of direct relevance to management; 2. indicates a change in (or clarifies) government legislation or management policy; 3. proposes strategies that would better achieve management objectives; or 4. indicates omissions, inaccuracies or a lack of clarity 			
The Sandalwood BMP may not be modified (X) if a submission:			
<ol style="list-style-type: none"> 1. clearly supports proposals in the BMP; 2. makes general or neutral statements; 3. refers to issues beyond the scope of the BMP; 4. refers to issues that are already noted within the SBMP or already considered during its preparation; 5. is one among several widely divergent viewpoints received on the topic but the approach in the BMP is still considered the best option; 6. contributes options that are not feasible (generally due to conflict with legislation or government policy); or 7. is based on unclear or factually incorrect information. 			
Acknowledgement, introduction, purpose, legislative framework and sandalwood biodiversity			
Freq	Comment	Mtx	Response
M	The list of Aboriginal Peoples named in the acknowledgement is not complete.	M4	Mentioning all the 80 Aboriginal Clans within the distribution is difficult for text readability. The intent was to be respectful of Aboriginal Peoples within the distribution and included specific group titles such as 'Noongar' in place of specifically listing all 14 clans within that group. The acknowledgement has changed to the wider 'Aboriginal' grouping to avoid causing offence through omission.
L	Information in the FAQs be incorporated into the Introduction section.	M4	An appendix has been added to the Sandalwood BMP to provide information on specific topics that are outside the legislated scope of a BMP.

L	The Legislative Framework section of the document focuses on the regulation of sandalwood take, supply, processing, export and dealing rather than conservation and protection.	M4	The Legislation Framework section has added an opening paragraph to summarise legislation for the conservation and protection of sandalwood/native flora.
L	The two sentences beginning: “Sandalwood is culturally, medicinally and nutritionally important to the Aboriginal Peoples ... use” (p. 5) be moved into the Introduction.		The Sandalwood BMP has been adjusted as per the recommendation.
L	Expansion of the Current situation section is required, to provide more information for the current population condition, effect of regeneration initiatives and trajectory of the population with reference to historic data.	M4	The Current situation section was reviewed with reference to the comment’s suggestions.
L	Longstanding, scientific research of Owen Loneragan (1990) demonstrated the time for sandalwood to reach maturity is 59-115 years.	X4	The draft Sandalwood BMP accurately paraphrased Loneragan (1990) in stating: “ <i>The length of time required to attain commercial size (127 mm diameter at 150 mm above ground) varied from 32 to 59 years at Dryandra to 59-115 years at Kalgoorlie</i> ”. To provide clarity, sandalwood being reproductively mature from ten years (Brand et al, 2014) has been added to the Biology section.
L	There are 5 species of <i>Santalum</i> growing in Western Australia.	X4	Florabase lists four <i>Santalum</i> species in Western Australia: <i>S. acuminatum</i> , <i>S. lanceolatum</i> , <i>S. murrayanum</i> and <i>S. spicatum</i> . The WA Herbarium advises that <i>S. leptocladum</i> is a “taxonomic synonym” of <i>S. lanceolatum</i> , and not a species or subspecies in its own right.
L	The <i>Native Title Act 1993</i> and associated native title determinations are more important than the extent to which it is mentioned in the Sandalwood BMP.	X4	Discussion and mention of legislation throughout the draft Sandalwood BMP is intended for overview and to provide context to proposed management actions. Legislation excerpts are not intended to be complete or verbatim as it is not possible to faithfully condense the application of legislation such as the <i>Native Title Act</i> . As such, it was determined to not do so. Readers must refer to the legislation for reference in the first instance.
L	Apply the precautionary principle to sandalwood management.	X5	Refer to the 1.1.3 scope of a BMP: Precautionary principle.
L	There is more up-to-date research and survey work to base sandalwood distribution than the 1995 work of Thackway and Cresswell.	X5	The IBRA bioregions and sub-regions are the most appropriate foundation to define sandalwood management regions due to being the basis for conservation reserve system objectives; and as the nationally agreed basis for biogeographical regionalisation.
L	Ensure the Wheatbelt is included in the definition of the natural distribution and not all the management focus is on the Rangelands and desert areas.	X4	Refer to: Sandalwood BMP Table 2, Appendix 1 and Strategy 10: “ <i>Conservation reserves throughout the rangelands and wheatbelt have strong potential to be sandalwood establishment areas.</i> ”

Objective: Manage sandalwood take for ecologically sustainable use' objective?			
L	The first objectives be about the conservation and protection of the species and not: " <i>Manage sandalwood take for ecologically sustainable use</i> ".	X5	With reference to BC Act s5(1), ecologically sustainable use does not equate to the narrow concept of "take". " <i>Manage sandalwood take for ecologically sustainable use</i> " is the first objective as the topic that receives the highest interest.
L	The BMP chooses to be in accordance with 'ecologically sustainable use' rather than 'ecologically sustainable forest management principles'.	X4	Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
L	The BMP doesn't address the 3 pillars of sustainability i.e. social, economic and environmental.	X6	Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
Strategy 1: Protect and manage sandalwood populations throughout its Western Australian distribution through a Comprehensive, Adequate and Representative (CAR) reserve system.			
M	In the absence of natural regeneration vectors, conservation estate will not generate sandalwood recruitment without seeding programs and sandalwood will disappear within 200 years from these locations.	M3	Strategy 10, Management action (a) i. has been adjusted to now read " <i>identifies priority establishment locations that may include the CAR reserve system</i> ".
L	Indigenous protected areas contribute to the sandalwood conservation while being different CAR reserve lands.	M1	The Sandalwood BMP has been reviewed regarding IPAs. Strategy 1 has added: " <i>d) Explore opportunities with IPA managers for sandalwood conservation, protection and management.</i> "
L	Native title recognises traditional owners' rights to both exclusive and non-exclusive land possession. In almost all cases, native title includes rights to take resources (including sandalwood).	M4	Comments regarding native title rights have been closely reviewed and adjusted to avoid broad commentary on determinations that must be accounted for on a case-by-case basis.
M	Creating conservation reserves may have a negative impact on sandalwood sustainability.	X5	There is no empirical evidence to conclude sandalwood regeneration has not improved in reserves (or otherwise). Strategy 13 seeks to address this.
L	Strategy 1 almost appears to problematise First Peoples' rights. Given the State's investment in ranger programs this would appear to be an opportunity to highlight the potential for working together under a variety of cooperative and joint management mechanisms.	X4	Strategy 1 was carefully reconsidered due to this comment. It was concluded that the wording seeks only to respect native title rights and interests and that no change was required. DBCA is committed to working with traditional owners as set out in Strategy 14.
L	Commonwealth National Reserve System funded up to 50% of the G-M Strategy.	X2	The past funding of the CAR reserve system to date isn't relevant to the Sandalwood BMP.

Strategy 2: Review and potentially revise lawful sandalwood take quantities to maintain productive capacity of sandalwood population and associated ecosystems.			
Traditional owner commercial sandalwood interests			
M	The future management of wild sandalwood rests with Aboriginal people and increasing their involvement is both critical and essential due to native title determinations.	X4	Working with traditional owners is central to the success of the Sandalwood BMP.
L	Conservation, management and production of sandalwood has both medium and long term potential for economic development.	X4	Working with traditional owners is central to the success of the Sandalwood BMP.
L	Traditional Owners involvement be embedded in Sandalwood BMP processes with decisions on allowable take advanced to the Minister.	X3	The Sandalwood Licensing Guidelines propose to provide for traditional owners and allowable take. Section 187 of the BC Act prescribes the responsibilities of the Minister in limiting the quantity of sandalwood take.
L	The recommendations of <i>the WA Sandalwood Taskforce Recommendations for Advancement of Aboriginal Economic Development Using Wild Harvested Sandalwood</i> and the WA Sandalwood Advisory Group be included in the plan.	X3	The Taskforce recommendations are centred on business, employment and enterprise support and therefore out of scope. Recommendations that include measures for resource inventory, sustainable silviculture and quota allocations complement the Sandalwood BMP and will be accounted for in its implementation. Refer to: Scope of a BMP: Economic sustainability.
L	More focus and support for independent indigenous sandalwood business is needed.	X3	Business, employment and enterprise support is beyond a BMP's scope. Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
L	FPC programs like Operation Woylie and Sandalwood Dreaming provides resources and skill development opportunities to Aboriginal peoples to harvest and reseed native title land for their and industry future supply.	X3	Business, employment and enterprise support is beyond a BMP's scope. 1.1.1 Refer to: Scope of a BMP: Economic sustainability.
L	Any future licences to take (for commercial purposes) only be allocated to Aboriginal-owned and operated sandalwood enterprises.	X3	Refer to: 1.1.4 Scope of a BMP: Allocation of annual harvest quantities.
L	Traditional owners request notification of any acts including the issue of such permits or licences that may affect native title rights.	X3	Processes to issue licences are beyond the scope of a BMP.
L	The Aboriginal procurement Policy might be incorporated into policy considerations for take limits.	X3	The WA Government policy to mandate progressive targets for the award of contracts to Aboriginal businesses is beyond a BMP's scope.

Harvest level			
H	The current wild sandalwood annual allowable take as set down in the Sandalwood Order be immediately amended with the harvest level reduced/ended.	X5	Refer to: 1.2.1 Harvest level: Sandalwood Order.
L	Legal, wild harvest be added to the list of threats.	X5	Legal, wild harvest that abides ecologically sustainable use principles is not a threat to sandalwood. If, through the actions of the Sandalwood BMP, it is determined that there isn't a sustainable level of harvest (regionally or state-wide), the harvest level will be reviewed as per Strategy 2.
L	The current sandalwood take is sustainable within most harvest areas. FPC sandalwood harvesting contractors only harvest one in three or four trees. The removed trees are compensated by seeding operations.	X2	The silvicultural effect of harvest size is an extremely important consideration in Strategy 2, management action (b).
L	Reconciliation of the amount of sandalwood harvested by the FPC be calculated over the term of the Sandalwood Order not on an annual basis.	X3	Beyond the Sandalwood BMP's scope, however, may be considered in recommendations for the review of the Sandalwood Order.
L	The sandalwood resource be permitted to be harvested from the pastoral leases purchased under the SCARP and Gascoyne Murchison Strategy with reseeded funded by the proceeds.	X6	The conservation purpose of locations purchased for inclusion in the CAR reserve system is inconsistent with harvesting. Purchase of leases as <i>sandalwood production reserves</i> may be a consideration for industry.
Dead Sandalwood			
M	Take proportions of green to dead sandalwood not be 50/50. The annual allowable harvest of dead sandalwood be determined through a formula based on total resource and longevity of deadwood in the wild coupled with approved regeneration programs.	M3	Refer 1.2.2 Harvest level: Deadwood management. Strategy 2, Management action (a) has added the point: <i>"living (green) sandalwood having distinct sustainability factors and management requirements to dead sandalwood"</i> .
M	Dead sandalwood and be available for take from lands within the CAR reserve system.	X6	Refer 1.2.2 Harvest level: Deadwood management.
M	Dead sandalwood not be overly protected/ harvest be expanded /not subject to the Sandalwood Order.	X6	Refer 1.2.2 Harvest level: Deadwood management.

Industry			
M	Wild sandalwood harvest has supplied local oil and international agarbati markets for over 180 years and is very important in economic and spiritual requirements.	X2	Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
L	Supporting the domestic oil-processing market is priority over direct export of sandalwood due to the overall value-add to the WA economy.	X3	Industry and downstream processing is out of a BMP's scope. Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
L	Economic sustainability be included within the programme.	X3	Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
Objective: Manage and mitigate threats to sandalwood and sandalwood populations			
Strategy 3: Limit the impact of pests, feral animals and diseases on sandalwood.			
L	Prescribed Bodies Corporate and ranger programs have access to a variety of different funding sources for invasive species management, biosecurity and land management. The Sandalwood BMP can embed the State's Aboriginal Empowerment Strategy by establishing the basis for DBCA engaging with and contracting to Aboriginal Community Controlled Organisations to implement management and mitigation strategies.	M4	<p>DBCA has an Aboriginal joint management policy that includes a commitment to: <i>“foster and facilitate Aboriginal involvement in the planning and management of lands and waters managed under the provisions of the CALM Act”</i>; and an implementation strategy to: <i>“work with its joint management partners to seek external resources to support existing management activities”</i>.</p> <p>Strategy 3 management actions has added <i>“c) Through its Aboriginal joint management policy, DBCA will investigate opportunities for traditional owners to control pests in on-Country sandalwood restoration projects.”</i></p>
L	Strategic fencing of conservation estate within the sandalwood distribution will protect sandalwood from feral herbivores.	M3	Strategy 3 management actions d) has included reference to strategic fencing within the CAR reserve system.
M	The BMP mentions control of feral herbivores, however camels are not given enough importance.	X4	Refer to: Strategy 3: <i>“Camels, donkeys, horses and pigs are also present in parts of the sandalwood distribution; however, are not considered to cause the same level of impact to sandalwood as goats and rabbits.”</i> Comments on camels did not provide sufficient evidence to conclude otherwise.
L	Fauna re-introduction is important as part of wider land care management practices.	X3	The Sandalwood BMP is not a fauna reintroduction plan.
L	Expand Strategy 3 management actions to better address predation of marsupial species. Management actions can contribute to the protection and population increase of threatened native fauna species.	X3	The recovery of marsupials lost to regional environments from predation is a far broader issue than can be dealt with by the Sandalwood BMP. Programs of this nature are undertaken on their own merit and sandalwood is one of many beneficiaries.

L	No contemporary relevance to feral predators and baiting as the critical mammals (woylies and boodies) are extinct over most of the sandalwood distribution.	X2	Discussion of feral predator impact on woylies and boodies provides context for why regeneration is low and the need for strategies to address their absence in sandalwood establishment. Discussion of the merits of wild dog control is also relevant due to their importance in controlling feral herbivores.
L	Encourage no wild dog control (baiting) in sandalwood regeneration areas.	X4	Refer to Strategy 3 management action (b). Control (or not) of wild dogs is contentious and an issue of high interest to stakeholders of divergent views.
L	Feral herbivores need more controls over a whole landscape.	X4	The Sandalwood BMP is not a feral control plan. Feral herbivore reduction is an outcome that may be prescribed for sandalwood population health, however it is not a function of the Sandalwood BMP. Refer to: 1.5.2 Implementation: Resources.
L	Very little is actually being done to manage weeds throughout the range of sandalwood and resources are very limited.	X4	Weeds are included for totality reasons. As noted in the Sandalwood BMP, weeds <i>“are not thought to have a direct impact on sandalwood”</i> .
L	There has been little recent attention to the sandalwood populations in the Gascoyne and Murchison due to feral goat pressures. As these appear to be controlled perhaps an effort needs to be made to look at the regeneration of these regions.	X4	The regional protocols will address the differing issues and conditions of sandalwood in each biogeographical region.
Strategy 4: Establish sandalwood in locations not grazed by domestic ungulates.			
L	The Strategy 4 heading: <i>“establish sandalwood in locations not grazed by domestic ungulates”</i> does not convey the contents adequately.	M4	Heading has been changed to <i>“Manage sandalwood in locations grazed by domestic ungulates”</i>
Strategy 5: Provide effective compliance and enforcement to combat sandalwood trafficking across the supply chain from the point of origin.			
L	Explore options for Aboriginal employment to monitor and prosecute sandalwood trafficking.	M3	Strategy 5 management actions has added <i>“c. Explore options with traditional owners to protect sandalwood from trafficking”</i> .
L	Rather than focus on licensees and production contractors, Strategy 5 management action (c) be replaced with combatting laundering through plantations.	M4	The Sandalwood BMP text has been adjusted to provide more clarity and distance between the concepts of poor workmanship and theft. Discussion and management actions for sandalwood take subject to BC Act licences and FP Act production contracts has been moved to Strategy 8. Laundering through plantations is actioned through Strategy 5, Management action (a).
L	Without the wild harvest, enforcement will reduce and allow the return of unsustainable illegal harvesting.	X4	Refer to Strategy 5.

L	Illegal wild sandalwood in the market devalues WA sandalwood. Higher enforcement levels will restore market confidence and assist industry.	X3	The Sandalwood BMP intends to protect sandalwood for conservation purposes.
Strategy 6: Use and respond to fire to mitigate the impact on sandalwood populations.			
L	DFES can strengthen processes to complement the Sandalwood BMP by: <ul style="list-style-type: none"> • integrating sandalwood occurrence in DFES' spatial systems such as Mitigation Mapper so it can be considered during bushfire mitigation and response. • providing training for DFES personnel and contractors on how to identify and survey for sandalwood in the wild. • including sandalwood information in communication materials related to bushfire management and mitigation. 	M3	Strategy 6 management actions has added <i>"(c) DBCA will develop a 'sandalwood and fire' document to assist fire management agencies account for sandalwood in fire planning and suppression activities"</i> .
L	To guide future management, it would be useful for DBCA to include some more detail on preferred fire regime to ensure sustainability of sandalwood (in natural state, not established plantations). Ideally it would be useful to include preferred inter-fire period for areas containing predominately mature established sandalwood, some guidance on planned fire application techniques as well as guidance for land managers for areas that have been subject to regeneration.	M3	Strategy 6 management actions has added <i>"(c) DBCA will develop a 'sandalwood and fire' document to assist fire management agencies account for sandalwood in fire planning and suppression activities"</i> .
L	Traditional owners must be consulted for fire management across all Australian lands, not just where they are responsible. The sandalwood stands beyond the pastoral country tend to be on sites that are protected from fire. However, it would be useful to expand the mosaic cultural burning that is occurring on other Indigenous controlled lands.	X2	The Sandalwood BMP is not a broadscale fire management plan. Development of a 'sandalwood and fire' document as above, must include mosaic burning and as such, traditional owner knowledge and empowerment is critical.
L	Every effort be taken to directly control major wildfires where wild sandalwood grows.	X4	DBCA will continue discussions internally and with DFES to promote protecting wild sandalwood from wildfire.
L	Recently burnt areas be open for opportunistic harvesting and seeding operations to salvage fire killed sandalwood and replace impacted trees.	X3	Sandalwood must not be removed from burnt landscapes for a minimum of 24 months to enable living trees to reshoot and recovering vegetation to consolidate bared soils. Fire prone locations are not a priority for sandalwood establishment.

L	Sandalwood populations must not be exposed to any prescribed burns.	X4	With reference to Strategy 6 management action (a), sandalwood generally isn't exposed to prescribed burns although may be indirectly and modestly impacted by mosaic burning.
L	Lands due for prescribed burns be cleared of wild dead sandalwood prior to burning.	X7	With reference to Strategy 6 management action (a), sandalwood generally isn't exposed to prescribed burns.
L	Clearing of wild dead sandalwood in areas prone to bushfire would reduce the fuel load for bushfires.	X7	Dead sandalwood likely contributes <1% of available biomass as fuel i.e. is insignificant in fuel loads.
Strategy 7: Adapt sandalwood management to climate change			
L	There is an observable trend that desert and northern rangelands summer rainfall is increasing with a possible positive impact on sandalwood.	M4	Refer to: 1.4 Climate change.
L	Aboriginal people must be included in climate change management of sandalwood as they have been adjusting to climate factors for thousands of years.	X4	Strategy 12 seeks to ensure the integration of available traditional knowledge of sandalwood biology into decision making including aspects of adapting management to climate change.
L	Establishment of sandalwood in new locations can complement native title holders' efforts to generate revenue through Australian Carbon Credit Units.	X3	The carbon credit value of sandalwood is outside the scope of the BMP. Refer to: Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
L	Climate change actions advocate for a rapid transition to a low emissions / high carbon drawdown economy.	X3	The Sandalwood BMP is not a climate change action plan. Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
L	Climate change actions require sandalwood operations to minimise emissions and maximise carbon sequestration.	X3	The Sandalwood BMP is not a climate change action plan. Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
L	Due to projected increases in heat and drying in the north of the distribution, keeping the well-established northern trees is vitally important to supply seeds of the northern genetic group for use further south.	X5	Protection of genetics and regenerating with appropriate provenance is very important. Strategy 7 management action (a) is worded to provide for flexible response to climate change that, while not currently recommended, would allow re-considering the appropriate seed provenance for future establishment operations.
Strategy 8: Minimise the impact on sandalwood from lawful clearing.			
L	PBC's generally carry out heritage surveys for cultural and archaeological heritage but not, to date, explicitly for environmental assets. Sandalwood may be incorporated into current heritage survey activities with technical support from DBCA.	M3	Strategy 8, Management action (a) has been moved to (f) and amended to include " <i>involvement of traditional owners</i> ".

Strategy 9: Protect soil and water quality as fundamental to sandalwood biodiversity health.			
L	The heading that protection of soil and water quality is fundamental to sandalwood biodiversity health is not supported by facts.	X7	The opening statement of Strategy 9 is fundamentally correct without the need to cite empirical evidence.
L	There is no consideration in the BMP of flora species and communities that support and host sandalwood.	X4	While a BMP providing for conservation of native species is supported by BC Act s69(1), it was decided to focus the BMP on sandalwood alone.
L	A high level of vegetation (including rare flora) and soil is disturbed by sandalwood harvesting and is not rehabilitated.	X4	This is an important matter however, the BMP is focussed on sandalwood rather than impacts of harvesting on other biodiversity elements.
Objective: Maintain sandalwood's natural distribution and sandalwood populations			
Conservation status			
L	Sandalwood is in serious decline across much of its present, now substantially reduced distribution.	X5	The Sandalwood BMP notes that sandalwood occurrences across its distribution have variably, and in some cases, significantly changed in some biogeographical regions to fragmented populations within conservation reserves. The level of decline and distribution is subject to divergent views. Strategies 10-13, seeks to address this.
M	The Sandalwood BMP address sandalwood's listing as 'vulnerable' on the International Union for Conservation of Nature's red list and assessment of sandalwood as a threatened species at Commonwealth and state government levels.	X3	Refer to: 1.1.2 Scope of a BMP: Threatened species nomination.
L	Sandalwood be classified under the <i>Biodiversity Conservation Act 2016</i> either as a species that is conservation dependent or a species of special conservation significance.		Sandalwood may to some extent be already considered 'specially protected' due to it having specific provisions under the BC Act and Regulations.
Strategy 10: Establish sandalwood seedlings to maintain wild sandalwood populations in the long term.			
Natural recruitment			
L	Sandalwood is failing to regenerate in the wild at levels capable of replacing the projected decline of mature sandalwood plants over the next 50 to 100 years.	X4	In the absence of seed caching marsupials (and management of other threats listed in the Sandalwood BMP), the insufficiency of the current cohort of natural sandalwood regeneration to replace older cohorts is concerning and likely to result in reduction of the species' occurrence in locations where there are rare winter threshold rainfall events; no seed dispersing water waterflow vectors across and through the landscape; and no artificial seeding programs. However, natural regeneration has been recorded in small creeks, washes and tributaries and as a result of seeding programs.

L	Woylie and boodie population decline and their role in sandalwood germination be factored in.	X4	Strategy 10 accounts for the regional extinction of woylies and boodies and proposes intervening artificial measures such as seeding programs to replace their role as a sandalwood seed dispersal vector.
Regeneration programs			
M	Large scale seeding operations such Operation Woylie where >10 million seeds are sown each year with a cumulative average annual establishment of 46,000 seedlings replaces the number of green trees harvested.	M3	Refer to: 1.3 Regeneration programs. More commentary regarding regeneration programs has been included in Strategy 10 text.
M	Sandalwood seeding operations can only achieved at the required scale if completed by machine. Hand seeding programs are complementary to broadscale machine operations.	M3	Strategy 10 Management action a) <i>has added “applies appropriate processes and quantities that are scaled to the vastness of the sandalwood landscape”.</i>
M	Sandalwood harvesting provides the funding for Operation Woylie and other sandalwood seeding operations.	M3	Strategy 10 Management action a) <i>has added “forecasts sustained funding requirements”.</i>
L	Strategy 10, management action include reporting sandalwood seeding outcomes against set targets.	M3	Strategy 10, Management action (a) added <i>“requires sandalwood seeding outcome to be reported against targets”.</i>
L	Machine/human cultivated sandalwood plants are not ‘wild’. They are the product of a farming/forestry operation.	M4	<p>BC Act s5(1)</p> <p><i>“cultivated flora means flora that has been intentionally sown, planted or propagated unless —</i></p> <p><i>(a) it has been sown, planted or propagated as required under this Act or another written law; or</i></p> <p><i>(b) it is of a class declared by the regulations to be excluded from this definition;</i></p> <p><i>BC Regulation 4. Cultivated flora: excluded classes of flora</i></p> <p><i>The following classes of flora are excluded from the definition of cultivated flora in section 5(1) of the Act —</i></p> <p><i>(a) sandalwood that is sown or regenerated in connection with sandalwood being lawfully taken (whether at the same place or at another place)”</i></p> <p>For the purpose of clarity, Strategy 10 has included a paragraph regarding the status of planted sandalwood being wild sandalwood as determined by the provisions of the BC Act and Regulations.</p>

L	What is the future access and availability (for commercial purposes) of “cultivated” sandalwood in Government owned / managed and Freehold remanent bushland.	M4	For the purpose of clarity, Strategy 10 has included a paragraph regarding the status of planted sandalwood being wild sandalwood as determined by the provisions of the BC Act and Regulations.
L	The sandalwood regeneration program be overseen by a WA Government department.	M4	Strategy 10, Management action (a) adjusted to compel DBCA (as the regulatory and compliance authority) to set sandalwood regeneration requirements in the Sandalwood Licensing Guidelines.
L	In addition to the formal CAR reserve system, informal reserves within harvesting areas may contribute to sandalwood conservation.	M1	Strategy 10 text amended to reflect opportunity for informal reserves to be managed protect existing trees from threats as well as zones for establishment.
M	Operation Woylie has been a success in creating a sustainable industry.	X5	The FPC’s annual reports indicate that Operation Woylie is establishing sufficient young plants to compensate (in number) the trees harvested. The plants established will need to survive circa 2100 CE for this to be reasonably considered full replacement of the commercial size trees harvested.
L	FPC programs to regenerate sandalwood have registered limited success and are unlikely to address the ongoing decline of the sandalwood population in the wild.	X5	The FPC’s reported cumulative average number of 46,000 seedlings established against its target of 50,000 seedlings is a strong accomplishment and demonstrates techniques and processes for further refinement and continued endeavour.
L	Expand seeding beyond the harvested areas.	X4	Refer to Strategy 10: <i>“Conservation reserves throughout the rangelands and wheatbelt have strong potential to be sandalwood establishment areas.”</i>
L	Plant seed in wheatbelt reserve systems and fragmented remaining populations.	X4	Strategy 10 management action (a) is to develop a sandalwood establishment strategy that will consider wheatbelt locations in prioritising sandalwood establishment locations.
L	Licences awarded to non-FPC entities will need to be carefully managed by DBCA to achieve similar regeneration outcomes.	X2	Will be considered in the Sandalwood Licensing Guidelines.
L	This evidence shows that in north-east areas of the distribution, sporadic harvest with artificial burial of seed in carefully targeted sites with adequate rainfall is a successful technique for regenerating sandalwood.	X1	Anecdotal descriptions of successful establishment from seeding programs supports Strategy 10 to establish seedlings (and indicates potential for that strategy to succeed). DBCA would appreciate the supply of empirical evidence such as numbers of: trees taken; seeds sown; and trees established.
L	Establishment along water courses is mentioned, however degraded rangelands systems and altered hydrological function is not addressed.	X2	Continuing degradation of lands within the distribution is concerning. Sandalwood establishment is best prioritised for locations with highest chance of success (not likely to be in highly degraded lands).

Strategy 11: Set regional protocols for sandalwood conservation, protection and management.			
L	Issue of a licence requires a sustainable sandalwood management plan specific to harvest application area. The plan may include inventory baselines with regrowth estimates supported by integrated land care and pest management programs.	M3	Strategy 11 responds to the need for specific sandalwood requirements in each biogeographical region rather than a broad State-wide approach. As a subset of the protocols, requirement for a location specific <i>sandalwood establishment and sustainability plan</i> is now set out in the Sandalwood BMP.
L	It may be valuable to consider Native Title Determinations as a regional level of governance for the protection of environmental assets like sandalwood.	X2	Each area of claimed or determined native title must be considered in its own right. As the IBRA sub-regions are not aligned with native title boundaries, the regional protocols are not able to account for native title.
L	The regional protocols for sandalwood conservation, protection and management must be broader than the actions of managing the take. Issues of recruitment, weather, grazing and fire are not improved or managed by changing the take.	X4	The protocols are to be broader than take. The Sandalwood BMP and Sandalwood Licensing Guidelines are the management apparatus rather than the protocols in isolation.
Objective: Inform conservation through research and knowledge acquisition strategies			
Strategy 12: Identify knowledge gaps in existing research relevant to sandalwood biodiversity conservation.			
M	The Sandalwood BMP does not include some recent published papers.	X4	A BMP is not a literature review. In preparing the draft Sandalwood BMP a suite of papers and other documents were critically reviewed for relevance and contribution to developing the draft Sandalwood BMP.
L	Most of the required research has been done. Providing funding for more research is no longer needed.	X2	The Sandalwood BMP seeks continuous improvement in sandalwood conservation, protection and management as informed by rigorous and authoritative knowledge acquisition.
Strategy 13: Quantify and improve sandalwood inventory and population condition monitoring			
L	This objective could provide more of the current population condition information.	M4	The Current situation section has added more discussion of the current population condition.
L	Technology (drone surveillance and plant recognition) will continue to evolve and requires more resources. Remote sensing tools may build knowledge of distribution.	M4	Strategy 13, management actions have added: “e) <i>Tools and technologies associated with remote sensing will be explored for application to sandalwood inventory and population condition monitoring</i> ”.
L	Not enough weight is given to the FPC’s sandalwood population modelling that were submitted to inform the 2015 Sandalwood Order review and EPA. Specifically, inventory of existing populations and modelling of their decline shows the urgency of the requirement for a massive regeneration program.	X4	An important consideration of the Sandalwood BMP is that much of the data used for modelling past sandalwood orders is dated and it is highly likely that the condition of sandalwood populations has changed since that data was collected. Refer to Strategy 13.

L	Sandalwood inventory; population and regeneration data; and harvesting spatial data form part of a public database or be published.	X4	The DBCA sandalwood population review is proposed to be a public/published document. However, availability of detailed sandalwood inventory and spatial information can facilitate sandalwood trafficking and is not supported.
L	Traditional owners prefer not to publicise their knowledge of sandalwood locations.	X2	The Sandalwood BMP is respectful of traditional owner's knowledge and the extent to which it may (or may not) be shared.
L	DBCA to work with the traditional owners in resource assessment programs on traditional lands utilising cultural knowledge.	X4	The Sandalwood BMP supports partnering and empowering traditional owners in all aspects of on-country sandalwood management.
L	That a new sandalwood inventory be undertaken involving independent assessors. This would determine a sustainable level of harvest for the revision of lawful sandalwood take quantities.	X3	DBCA is the agency responsible for all elements of improving understanding and modelling of sandalwood population condition. The comment does not state what 'assessors' are required to be independent of.
L	That DBCA value traditional knowledge and pay for it at rates comparable to those paid to persons educated in Western academic disciplines. Aboriginal traditional knowledge rights ownership be protected by way of formal agreements between DBCA and the peoples whose knowledge it relies on.	X3	DBCA is a signatory to the Noongar Standard Heritage Agreement and follows similar principles across the sandalwood distribution. Remuneration for, and protection of knowledge is not a topic for a BMP.
L	Existing inventory seems to focus on yield (for commercial purposes) rather than the more critical regeneration recruitment and biodiversity management perspectives.	X4	Past inventory has largely focussed on harvestable quantities and sustained yields. Strategy 13 seeks to focus the intent of DBCA's population information gathering and modelling on health and condition. This will be used to inform the review of the Sandalwood Order and to quantify harvest proponent's inventory and yield projections.
L	The FPC has conducted extensive sandalwood research over many years however, has not effectively communicated their results.	X3	This is a matter for the FPC.
L	Formalise the collection of relevant research projects and reports including a formal data sharing relationship with the FPC and other government agencies.	X4	Refer to Strategy 12 management action (a). A data sharing agreement is in place between government agencies.
L	Research referenced in the formulation of current and future management plans be independent of industry.	X7	The inference is that all industry research is biased and false. This is not substantiated.
L	Does Strategy 11 allow for 'no take' to be imposed in some IBRA regions or sub-regions within the sandalwood distribution?	X4	The regional protocols will set evidence-based take restrictions that may include 'no take' where appropriate.
L	It is critical that any future licences issued to the FPC are held to the same standards of inventory capture as those required of licensees.	X2	Management level inventory from all harvest proponents requires continuous improvement.

Objective: Engage, implement and review the Programme			
Strategy 14: Provide opportunity for stakeholder and public engagement and participation			
M	The public consultation period was insufficient time for meaningful consultation within Aboriginal groups and for them to make a submission.	X4	Refer to: 1.5.1 Implementation: Consultation.
L	The government establish a facilitated 12-month dialogue involving TO's, ecological scientists, plantation and processing industry reps, other land managers and conservation reps leading to: a. Initial agreement on an interim reduced allowable wild take (green and dead); b. An agreed longer term management plan for the ecologically sustainable future of sandalwood in the wild, including an expanded Indigenous sandalwood products sector and a fully funded sandalwood restoration program across its range.	X4	In actioning the <i>Advancement of Aboriginal Economic Development Using Wild Harvested Sandalwood Report</i> Recommendation 8, an industry advisory body has been established. Section 187 of the BC Act prescribes the process for: " <i>Orders limiting the quantity of sandalwood take.</i> " A BMP subject to Part 5 of the BC Act is the appropriate management mechanism (plan).
M	The wider public through the media need to be informed of positive sandalwood information such as Operation Woylie.	X3	This is a matter for the FPC.
L	Industry needs to be involved/consulted in the formulation of future regional protocols for licensing guidelines.	X3	The regional protocols will be prepared under ecologically sustainable use principles. There is no requirement to consult under the BC Act.
L	Lack of awareness of the Sandalwood BMP among 'sandalwood people' (harvesters) in the Goldfields. The existing sandalwood industry needs to be consulted in the final formulation of the Sandalwood BMP.	X4	The draft Sandalwood BMP was presented to the FPC Sandalwood Forum for sandalwood contractors on 23 November 2022. Industry people were invited to contribute to the public comment process.
Strategy 15: Define agency responsibilities for implementation of the Programme			
H	The BMP is very general and does not commit to the management actions. The BMP outline a ten-year program of funding to achieve the objectives.	X6	Refer to: 1.5.2 Implementation: Resources
L	A sandalwood restoration fund with at least \$10 million each year for ten years to be allocated to Aboriginal rangers groups to establish and protect seedlings and manage threatening processes.	X3	Traditional owner ranger programs have access to existing funding streams that may integrate sandalwood conservation. Refer to: 1.5.2 Implementation: Resources.

M	DBCA needs dedicated resources with teams of wildlife officers equipped to travel and camp in remote areas; and skilled and trained staff, inventory, monitoring, research and implementing sandalwood management actions.	X6	Refer to: 1.5.2 Implementation: Resources.
L	The Sandalwood BMP commit public authorities to actions, i.e. in assessing, managing and compensating for sandalwood subject to clearing permits.	X6	The BMP cannot override legislation such as the <i>Mining Act 1978</i> or the <i>Environmental Protection Act 1986</i> .
M	The Sandalwood BMP does not have actions to manage the grazing of domestic herbivores such as reducing the carrying capacity on pastoral leases.	X3	Managing industries such as pastoralism is outside the scope of a BMP. Refer to: 1.1.1 Scope of a BMP: Economic sustainability.
L	The Sandalwood BMP sets a huge task that will be too expensive to manage and fail.	X3	Refer to: 1.5.2 Implementation: Resources.
L	The Sandalwood BMP needs to demonstrate DBCA's commitments to management activities that do not rely on licence holders or other agencies.	X5	A BMP may prescribe requirements for other agencies.
Strategy 16: Prescribe the review process and timeframe.			
L	Evaluating the extent to which strategies have been achieved toward the end of the Sandalwood BMP's initial five-year term is too late to inform a future sandalwood order (that is due in four years).	X5	The Sandalwood BMP strategies are broader than informing the next sandalwood order. If recommendations for the next sandalwood order are completed by when due (2024), the relevant strategy will be deemed as achieved.
L	Key performance indicators are required for management actions.	X4	KPIs were determined to be a function set within each management action.
Other topics			
Plantations			
M	Transition from wild sandalwood harvesting to a mostly/completely plantation-based resource to decrease pressure on the wild resource.	X3	Refer to: 1.1.3 Scope of a BMP: Plantations.
L	Wild and plantation sandalwood needs to/can coexist.	X3	Refer to: 1.1.3 Scope of a BMP: Plantations.
L	Plantations (<i>S. spicatum</i> and <i>S. album</i>) are being harvested too early and the recovery from each tree is very poor. The quality of the plantation sandalwood is devaluing the reputation and price of wild sandalwood.	X3	Refer to: 1.1.3 Scope of a BMP: Plantations.

L	Access to more dead wood will support the sandalwood plantation industry through blending high quality dead wood with low quality plantation wood.	X3	Refer to: 1.1.3 Scope of a BMP: Plantations.
Government management structure			
L	There has been a 50-year rotation of harvest areas since 1929.	X7	Cutting the ingrowth harvest size cohort of trees doesn't qualify as the accepted forestry understanding of 'rotation' where there is not a replacement cohort of trees being established.
M	All future wild Sandalwood harvesting remain with the FPC as is best managed through contracts, rather than licences with individual groups. Shorter term individual licences don't encourage ongoing seeding programs and population monitoring.	X3	Refer to 1.1.4 Scope of a BMP: Allocation of annual harvest quantities.
L	The main impact on sandalwood has been the poor FPC management of sandalwood harvesting and regeneration.	X3	The comment is out of the scope of the Sandalwood BMP.
L	The FPC and state government have completed their objectives to develop a sandalwood industry, and now need to hand over to private enterprise.	X3	Refer to 1.1.4 Scope of a BMP: Allocation of annual harvest quantities.
Other			
L	The BMP include discussion and actions about contributing locally to the global transition to a modern and future-friendly regenerative economy.	X3	Not within the scope of a BMP that is to provide for conservation, protection and management of a native species.
L	Finalising the Sandalwood BMP be delayed until after determining sandalwood's threatened species status at Commonwealth and state government levels.	X3	Refer to: 1.1.2 Scope of a BMP: Threatened species nomination.
M	The draft programme has been released approximately five (5) years after it was promised.	X3	The Sandalwood BMP is the first BMP to be developed under the BC Act.