Tabled document - Professor Brendan Mackey
Tasmanian wilderness inquiry
6 May 2014 - Canberra.

Independent Verification Group
20 February 2012

Response by Professor Mackey to AFPA comments and suggested amendments to the Draft IVG Conservation Work Plan

Comment 1 on page 1, para 1:

'New Federal and State policy objectives need an explanation of how they have been operationalized and the nexus between current policy objectives and JANIS needs explicit discussion'.

Response:

Australia's National Reserve System (NRS) is a principal instrument to operationalize biodiversity policy(including Australia's commitments under the Convention on Biodversity (CBD)) and national and world heritage policy. The IVG Conservation work plan proceeds from this basis.

As part of a national conservation partnership, all governments are working together to develop the NRS within a strong scientific framework.

The Natural Resource Management Ministerial Council is the peak governing body for the National Reserve System. It is made up of the environment and agriculture ministers of the Australian, state and territory governments.

In 2009, the National Reserve System Task Group convened under the Natural Resource Policies and Program Committee prepared an updated policy framework National Reserve System Strategy 2009-2030. The Strategy is an important step towards long-term protection of Australia's biodiversity and will fully guide the operation of the NRS in the years ahead.

It is important to note that the NRS is obliged to implement relevant commitments by Australia under the Convention on Biodiversity and that the current NRS Strategy will need to be revised to reflect the decisions of the CBD in late 2010.

The NRS (and the strategic plan under which it is developed) responds to new science, new ecological threats, new challenges and opportunities and revised targets.

The JANIS-CAR criteria represent three foundational conservation values which continue to inform the National Biodiversity Strategy, the NRS and commitments under the CBD, namely:

1. Comprehensiveness – the extent to which the NRS samples ecosystem types;
2. Adequacy – how adequately the NRS protects biodiversity and other conservation values; and
3. Representativeness – how well the biodiversity found within ecosystem types is represented in the NRS.

The current national strategic plan has a particular focus on improving the 'Adequacy' component of the NRS; particularly in relation to resilience in the face of current threats and the emerging challenge of climate change and on improving connectivity across the landscape.

In this respect, page 33 of 'Australia's Strategy for the National Reserve System 2009-2030 notes that "…the question of adequacy is … challenging and in general, protecting larger areas and more populations of species is needed to ensure the same viability for species as could be expected without climate change."

JANIS, developed in 1997, while still elaborating important conservation principles, has in important respects been superseded by revisions to Australia's biodiversity policy necessitated by new scientific understanding of the likely impacts on biodiversity of climate change. While there is some discussion in JANIS of the need to ensure ecological integrity in reserve design and the relationship to off reserve management is recognized as critical to biodiversity outcomes, there is little focus on the need to ensure ecological connectivity across landscapes or the need to assess 'Adequacy' in the light of the new threat of Climate Change.

Adequacy was little addressed during the RFA process and even in 1995, the Commonwealth position paper on National Forest Conservation Reserves noted that "adequacy addresses the difficult question of extent: what is the level of reservation that will ensure species remain viable, that is, what is the level of reservation that will ensure that species have a very high chance of

survival over many centuries?"...."The general rule is that chances of long term survival increase with greater proportions of populations/areas reserved, from zero if no area is reserved, to the maximum possible if all remaining forest is managed for conservation."

It might be helpful to note that land acquired by private conservation bodies in pursuit of their own conservation goals and utilizing their own conservation criteria are consistently accepted into the NRS provided they meet minimum management standards, among other considerations.

The "Adequacy" of the NRS is therefore dependent on an array of conservation factors, including the adaptation needs of species in the face of climate change and consideration of connectivity and refugia; the area of core habitat and population size of priority species; the spatial configuration of the reserve system; the appropriateness of off-reserve land management; and the impact of other threatening processes. The IVG conservation work plan is undertaking analyses to examine all of these factors which contribute to the "Adequacy" criterion.

Regarding the "Comprehensiveness" criterion (the "C" in JANIS-CAR), it is not problematic for the NRS if some areas have greater representation than the minimum percentage benchmarks targets of the NRS, which after all, represent politically negotiated targets aimed at encouraging continuous improvement in the NRS. Again in 1995, the Commonwealth paper referred to above noted that "any recommendation for a benchmark reservation percentage is, to a degree, arbitrary." And "it is important to stress that the nature of forest management in forest areas outside reserves is critical to the extent of reservation needed....less conservative forest management outside reserves would mean that greater proportions (than 15%) of forest communities should be reserved."

It is therefore important to understand that percentage benchmarks are guides to minimum levels of reservation and not ends in themselves'. Recent decisions under the CBD have led to the establishment of a new benchmark for the minimum percentage of biodiversity to be protected within the NRS (Aichi Target 11 - 17%). Therefore, it is now a legal necessity to use this minimum percentage when evaluating the "Comprehensiveness" of the NRS.

Recent scientific studies suggest 25-75% of a region must be managed with conservation of nature as a primary objective to meet goals for conserving biodiversity (Noss et al 2011). Similarly, models of habitat loss and fragmentation have identified 40% as the critical threshold (Andren, 1994).

The criterion of "Representatives" (the "R" in "JANIS-CAR") was also a challenge in the RFAs primarily due to the lack of the necessary biodiversity data. However, the last 15 years has witnessed an encouraging and significant improvement in the availability of species distribution data and modelling. Therefore, it now possible to examine the biodiversity that occurs within a given ecosystem type and assess its level of representation within the NRS depending on the availability of data for different flora and fauna groups. In the case of Tasmania, the data are available to examine the representativeness of native forest ecosystems in terms of vascular plant biodiversity.

Comment 2, page 1, para. 1:

'The nexus between the work plan use of the term HCV and FSC/WWF definitions of HCV be addressed and rationalized'.

Response:

Whilst this matter is not one specifically in the IVG's Terms of Reference, it is nevertheless useful to respond to the issues raised.

The FSC/WWF definitions of HCV were designed for the purpose of helping re-shape forest management in production forests by defining areas to be set aside from logging inside production zones. The WWF/FSC HCV terminology and definitions are not designed to help assess areas for formal reservation, including evaluating the contribution of proposed areas to the NRS.

It appears that the term HCV used by the ENGOs was intended to describe a series of areas that they identified needed formal protection and that this was the accepted understanding by the signatories to the Statement of Principles.

The Intergovernmental Agreement defines "High Conservation Value (HCV) Forests" as "those forest areas identified as High Conservation Value

by the Signatories to the Statement of Principles." The Statement of Principles itself does not define HCV but it uses this phrase in several contexts that make clear that it refers to specific conservation reserve proposals rather than a particular methodology or set of criteria. This interpretation is further supported in the Signatories Agreement 22nd June 2011, which, like the Statement of Principles, refers to 'HCV forests… identified by ENGOs [*sic*]'.

Both the Statement of Principles and the Intergovernmental Agreement refer to verifying the boundaries of the HCV (i.e. 'verification of … HCV boundaries;' (SoP) and '…verify…areas and boundaries of reserves within the ENGO- nominated 572,000 hectares of High Conservation Value native forest' (IGA cl.20)). This further reinforces the interpretation that HCV in this context refers to a series of reserve proposals – not an FSC or other set of specific criteria – and that the task for the IVG is to verify the values within and boundaries of the ENGO claimed reserve proposals.

Comment 3, page 1, para. 2:

'Habitat is not a binary feature. In practice it is a continuous variable. Habitat may be actual, modeled and/or predicted with varying levels of uncertainty'.

Response:

All species have specific habitat requirements for food, shelter and nesting (and for birds, also roosting) and these habitat resources are not continuously distributed across the landscape but have a patchy geographic distribution. Therefore, it is always possible to map areas that do not contain the habitat resources required by a given species. From this perspective, habitat is a binary feature. However, it is also true that within the areas that do have the necessary habitat resources, and particularly for species for which these are common and abundant, there is a range in habitat quality, which is typically correlated with where the populations occur with the highest density and/or stability.

Knowledge about the habitat resource requirements of species is limited, as is field survey data about their distribution and monitoring of changes in population dynamics and ranges over time. Therefore, it is necessary to

make use of the available data and knowledge to model species habitat requirements and potential distributions including the location of places that potentially constitute core habitat. It is standard practice to distinguish between a species overall range, known location s (i.e. where it has been observed in the field), and core habitat (i.e. locations that contain the necessary habitat resources as defined above).

Modelling approaches to the above vary but a common approach is to model range in terms of presence/absence, and then to model the core habitat based on sites where the species is predicted to occur. In both cases, a probabilistic approach can be applied. In which case, standard statistical diagnostics are applied to determine significance thresholds.

The quality and quantity of habitat resources is a critical factor in a species ongoing survival and is particularly important for priority species in meeting recovery objectives so that they are no longer considered under threat.

The IVG conservation work plan will employ the species location data, range estimates, and core habitat models of DPIPWE and the FPA. Any thresholds will have already been determined by these organisations and it is not proposed to critique or substantially re-visit them; although, time permitting, some further field assessment of hollow-bearing trees will be undertaken to establish the reliability of the FPA maps of hollow-bearing trees.

Comment 4, page 1, para 4:

'No conservation values are binary in nature and the presence of any single 'so called' binary value should not be enough to label an entire area of forest of High Conservation Value. Thresholds should be established for how much of each conservation value an area should have before a forest area is deemed to be HCV.

Response:

The description in the draft work plan of some values being binary in nature relates to those values which may be globally or nationally significant, unique, rare, or under threat. The example cited in the work plan of habitat

for listed species, assumes a threshold test has already been passed in the methodology applied by DPIPWE and the FPA.

The key task for the IVG is to assess the ENGO claims, which are summarized on page 1 of the revised work plan and outlined in detail in the report 'Tasmania's Native forests: Places for Protection'. When assessing the areas proposed for reservation it will be important for the IVG to be able to assess what conservation values they possess and whether any values identified through the verification process are consistent with Government policy and associated values and principles, together with approaches commonly taken into account when considering the conservation value of areas for formal reservation in Australia today.

The work plan will enable the IVG to assess proposed ENGO reserves in terms of whether and the extent to which, they would add to the NRS, including CAR objectives, contribute to resilience in the face of climate change, contribute to the long term survival of healthy populations of species and/or contribute to the protection of potential World Heritage and National Heritage values, etc.

While the ENGO claims align a priori with the criteria developed by the Commonwealth Government for the NRS, World and National Heritage, we make no assumption as to whether or not the areas proposed for reservation contain those values. The work plan makes the point that the conservation values claimed by ENGOs are consistent with the values articulated in Government policy and considered to be important for conservation and reservation in Australia today, as outlined in relevant government policy documents (see the draft conservation work plan).

ENGOs have also made a number of claims in relation to the inadequacies of the RFA (see 'Places For Protection') which are not being directly addressed in the work plan other than through contextual assessment of the impacts on biodiversity and natural values of current off reserve forest management.

The conservation work plan will also enable a number of other questions to be explored such as:
Do the ENGO proposed reserves support conservation values best protected through formal reservation?
Which parts of the ENGO proposed reserves have conservation values where reservation would make little difference to the persistence of those values?

What are the specific conservation values in different areas of the proposed reserves?
Are there alternative locations on public forest outside the ENGO 572,000 hectares which have comparable conservation values?

The impacts and/or contribution of current forest management on natural values and biodiversity will be highly relevant to some of these questions.

Comment 5, page 2, para. 3:

'The 572,000 includes 187,000 hectares of informal reserves which are included in the NRS and must be counted in this assessment as already reserved'.

Response:

It should be noted that there have been different figures quoted on the area in informal reserves within the ENGO proposed 572,000ha area. FT for example, has indicated a figure of 174,343 ha as forming the informal network on State Forest within the 572,000ha area.

The tenure status (including reserve status of informal reserves) will be verified as part of the IVG process.

Comment 6, page 2, para 4:

'The ENGO definition of HCV is not internationally recognized and the WWF and FSC definitions do not preclude forest management activities that are compatible with the value.'

Response:

The comments above and below apply.

Comment 7, page 2, para 5:

'While the HCV term has currency, ENGOs and the draft conservation work plan use of the term extends its scope without justification'.

Response:

Again there is confusion all round by stakeholders, and including ENGOs, on the use of this term.

While the term appears to be used by stakeholders it is not a term that has a scientifically-based definition grounded in conservation science nor does it have any degree of currency in scientific literature. As noted above, it was created by some ENGOs for a specific purpose and it is unfortunate that is has been appropriated for current purposes without it having a specific definition.

On reflection, it would probably be more helpful if stakeholders would move away from this term to simply focus on whether the conservation values and principles commonly accepted in good conservation science and relevant government policy documents are present/met in the proposed ENGO reserves. The work being undertaken to inform the IVG on these questions will utilize new knowledge, improved analytical capacity, and be consistent with up-to-date government policy frameworks.

Comments 8 and 9, page 3, para.1:

'The IVG is required to validate that the nominated forest areas have High Conservation Values and therefore needs to define what this is. A validate definition needs to be used and greater specification is required on methodology'

Response:

In light of the response made above on the issue of 'HCV', this point is moot. Rather, the questions the IVG needs to focus on are: 'what are the conservation values in the 572,000 hectares, what would they add, if anything, to the reserve system and are any conservation values identified best protected in formal reserves'.

Greater clarity on methodology for the various assessment projects will be provided.

Comment 10, page 3, para.2:

Given that private land is excluded from the analysis, 'It is not clear how the limited context for 'where else the same conservation values can be found' will enable this question to be properly answered'.

Response:

It is correct that by having to exclude private land from the analysis some important context will be lost. The IVG may not necessarily be able to identify where the 'best' habitat for some species may be, or areas which are significantly under-represented in the current reserve system, if located on private land. However, the IVG has been given unequivocal guidance in this respect. Note however that the analysis will enable the IVG to assess the conservation values across the entire public forest estate.

Comment 11, Page 3, last para

'It is inappropriate to quote selectively from the NFPS without also acknowledging the specific socio-economic objectives of NFPS. This is particularly relevant if proposing to go beyond the CAR criteria.'

Response:

Social and economic issues are obviously very important considerations for both the IVG and IGA. However, it would not be scientifically appropriate for social and economic considerations to constrain the validation work of the conservation values being undertaken under this work plan.

Stakeholders and governments will need to give full consideration to the social and economic assessments also being undertaken for the IVG before making final decisions on additional forest reservation.

Comments 12 and 13, Page 5

'The RFA's delivered the conservation objectives of the NFPS. There are no shortfalls in CAR criteria on public land required to meet JANIS. No extension of criteria is justified.'

Response:

Fifteen years ago JANIS foreshadowed that "flexibility might be necessary to allow for changes to CAR reserves as a result of changes in knowledge and changes in biota (such as through climate change)."

In the intervening 15 years a great deal has changed. There is now a significant body of new data, new conservation science, and new analytical and spatial tools which enable 'Comprehensiveness' and 'Representativeness' to be re-assessed in a more scientifically rigorous way.

It is generally accepted that 'Adequacy', was not adequately addressed in the RFA and remains difficult today. For example, the NRS is still working to better define this fundamentally important concept. The proposed work plan attempts to at least partially address the 'Adequacy' issue in line with the guiding principles in the Biodiversity and NRS strategies.

Government policy has also developed, including new commitments under the Convention on Biological Diversity and national-level policy frameworks promulgated in response to, among other things, new knowledge and emerging 'threatening processes'.

A further example of how things have changed in the past 15 years relates to heritage assessments. The framework for heritage has changed with the national estate criteria used in the RFA process being replaced in 2004 by the National Heritage criteria in the EPBC Act, in line with the 1997 COAG agreement. In addition, there is now a great deal of new information relevant to World and National heritage assessments.

Comment 14, page 6

'The CBD provides no guidance for the identification of HCVF or objective criteria relevant to the current verification. The Nationally Agreed Reserve Criteria provide the necessary policy guidance for application in Australia.'

Response:

Australia is required to operationalize the CBD agreements most of which are quite specific about targets and goals and easily able to be translated into policy and action.

It is important to note that the NRS is obliged to implement relevant commitments by Australia under the Convention on Biodiversity and that the current NRS Strategy will need to be revised to reflect the decisions of the CBD in late 2010.

Comment 15, Page 6 re CBD Target 5

'The target is irrelevant because forests are managed sustainably and not converted or degraded.'

Response:

The Federal Government's 2011 State of the Environment Report identifies that the conversion of native forest to plantations has had an adverse impact on biodiversity and other land values and has significantly increased fragmentation of Tasmania's native forests. "...the pattern of forest cover change over 2002-06 (the most recent years for which full continental data are available) shows woody vegetation loss concentrated in the north of the Northern Territory, southern Western Australia, northern and eastern Tasmania and inland central and northern Queensland." Conversion of native forest to plantations is land clearing and clearing places additional pressures on biodiversity and other natural values.

It is also apparent that forestry harvesting regimes and associated management practices alter natural forest structure and in many cases dominant floristics – among other considerations, a higher proportion of the landscape is dominated by younger-aged, regenerating stands with consequences for species habitat resources, carbon stocks, and catchment water quality and flow. In this context, harvesting degrades these conservation values. Note that this means we are speaking of "ecological degradation" which is different to the manner in which the term is used in

agriculture and its application to the phenomenon of desertification in, for example, sub-Sahel Africa.

An Independent Review of the Biodiversity Provisions of the Forest Practices Code published in 2009 recommends a number of significant changes to improve biodiversity outcomes in production forests to address the long term need to maintain 'old growth' and 'multi-aged' values.

Comment 16, pages 6 and 7 re CBD Target 11

'The target is irrelevant to Tasmania because 50% of forest is in reserves and other measures are in place to adequately meet reserve design and management needs.'

Response:

The work plan will enable the IVG to whether this target has already been met at bioregional level, and whether there is an opportunity to improve 'Representativeness' and 'Comprehensiveness' of the forest reserve system.

Comment 17, Page 7 re CBD Target 12

'There is no case of species extinction attributable to forestry in Australia and prevention of extinction does not equate to the need to protect all habitat'.

Response:

Forestry operations in native forests can damage the habitat resources of wildlife and add to 'an extinction debt' that increases the likelihood of local and global extinctions. Regional extinctions (extirpations), which have occurred in some areas of production forest in Australia, are of concern in themselves because (i) an important conservation goal is to maintain viable populations of species across their range and (ii) they increase the probability of and are a pre-cursor to global extinction.

In Tasmania a scientific study in north-east Tasmania reports on the adverse impacts of harvesting on biodiversity and outlines the risk of local extinction for several species.

For some species, protection of all known and predicted habitat locations that contain required food, nesting or shelter resources will be critical to their survival and persistence. Improvements in habitat protection will increase the likelihood of long-term species survival and improvement in their conservation status.

The 2009 Independent Scientific Review of the Biodiversity Provisions of the Forest Practices Code referred to above made a series of recommendations aimed at improving habitat resources across the forest estate including for species not currently listed as rare, threatened or endangered in order to ensure that logging does not threaten their viability.

Building a picture of the extent of hollow-bearing trees across the forested landscape will be an important habitat consideration in its own right and provide useful information about the success or otherwise of current forest management for biodiversity conservation.

Comment Page 7, re CBD Target 14, relating to ecosystem services

Delete from work plan

Response:

Target 14 was included in the background policy material in the work plan because it illustrates the importance of ecosystem services (particularly water services) to the health and well being of communities and all life. The IVG will be verifying claims made by the ENGOs in relation to the importance of their proposed forest areas for ecosystem services.

Comment 19, page 7

ENGO claims should not be assumed in the definition of HCV.

Response:

See above.

Comment Page 7:

'Delete (ii) ENGO claims'

Response:

The IVG's Terms of Reference require that the ENGO claims need to be verified and this section will be re-drafted to reflect this and that the values being assessed are values considered important in relevant government policy documents.

Comment Page 7:

'Delete (6) Heritage (from the Conservation work plan)'

Response:

The Australian Government has a number of obligations relating to heritage arising from international conventions and domestic legislation.
Also, extensive claims have been made by ENGOs in relation to heritage values of the 572,000 ha, and these need to be verified.

The contribution of areas within the 572,000 hectares to World and/or National Heritage Values is one of the major claims by ENGOs which needs assessment.

While there is not the time or resources to fully assess the potential World Heritage and National Heritage Values of the proposed ENGO reserves, it is possible to assess whether there are areas likely to satisfy heritage criteria within the 572,000 hectares.

There is a long history of pre and post RFA correspondence on heritage issues, particularly natural heritage values (including from IUCN, the body which advises the World Heritage Committee). There is also new scientific analysis relevant to natural heritage issues and new information relating to

cultural heritage. All of this information needs to be assessed by the IVG in order to validate the claims of the ENGOs.

The criteria for assessing and listing National Heritage (outlined on p 39 of the revised work plan) have changed radically as a result of changes to Federal government policy and legislation since the RFA and it is appropriate to conduct an assessment of the ENGO proposed reserves against the new criteria.

It is not intended that the IVG Conservation work plan will substitute for formal World Heritage or National Heritage Assessment but will provide evidence of whether or not these formal assessments need to occur.

Comment Page 7

'Delete (8) Restoration (from the Conservation work plan)'

Response:

It is accepted practice to include areas with some level of degradation in formal reserves if necessary to restore critical habitat or improve overall ecological integrity. The new CBD target gives greater policy and practical import to the role restoration can play in improving biodiversity and ecological outcomes and adds weight to Australia's existing target under its Biodiversity Strategy for restoration (target 5).

The work plan will enable the IVG to assess the potential contribution of meeting this target to important conservation values including improvements in representativeness, habitat for threatened species and connectivity.

Recommendation 31 of the Review of the Biodiversity Provisions of the Forest Practices Code relates to the desirability of setting restoration goals for some ecological values.

Restoration has been contemplated in past forest processes. The South East Queensland RFA Report on Ecologically Sustainable Forest Management, for example, recommended that restoration targets be set for old growth and other ecological values.

Comment Page 7:

'Delete (9) Ecosystem Services' (from the Conservation work plan)'

Response:

The principal claim by ENGOs in relation to ecosystem services is that protecting forests currently available for logging would result in significant carbon and water benefits. In light of the CBD recognition of these values, it seems appropriate that the carbon and water benefits, if any, of protecting the ENGO areas, be verified.

It will be up to the IVG to consider whether any benefits, which might be identified, are significant enough to warrant protection for these values alone or whether they add to other conservation values. As noted on page 20 of the revised work plan, there is little guidance in current conservation policy on these two important ecological issues.

Comment Page 7:

'Delete 'one or more' and replace with "a sufficient concentration of these values to distinguish it as having "high" as distinct from ordinary conservation values'.

Response:

The suggested revised approach makes this point moot.

Page 7, Comment 20:

'There needs to be more discussion and linkage with the Janis Reserve Criteria and the NRS'.

Response:

See above. It is also important to recognize that the IVG process is not trying to replicate the RFA process conducted 15 years ago.

Comment 22, page 8:

'Need to verify corrections to vegetation mapping to ensure correct attribution of native forests and plantations'.

Response:

Agreed. The work plan will ensure that that this verification will be done utilizing data held by Forestry Tasmania and independent assessment outlined on page 11 of the revised work plan.

Comment 23, Page 8:

'How can compositional turnover be used when it is restricted to the public forest estate?'

Response:

Compositional turnover for forest vascular plant species has been analyzed for all forests. This analysis is used to consider the contribution of the proposed ENGO proposed 572,000 to the representativeness of the NRS in relation to vascular plant composition. Details of the methods employed will be provided in the technical report.

Comment 24, Pages 8 and 9:

'What is the use of 'Height Potential data' from Forestry Tasmania as an indicator of habitat quality? Reservation gaps are more likely to be in lower productivity sites with higher biodiversity. This criterion appears to have been included to ensure 'further favourite places' will be identified. The ecological validity of this proposition needs testing.'

Response:

The Height Potential Data are being used as an indicator of habitat quality in order to identify locations that may serve as "source" rather than "sink" habitats. This data set and indicator are not intended to indicated anything

about biodiversity in terms of species richness; a typical measure of "biodiversity".

The ecological validity of 'source' versus 'sink' habitats is well established in the scientific literature and is an important conservation concept. JANIS specified that - "the principle of least cost (to wood) should be used…". Areas of naturally low biological productivity were prioritized for reservation. In addressing 'Adequacy', today, therefore, areas of relatively high and stable productivity can be critically important.

Areas which naturally support higher and more stable levels of primary productivity, and which support higher biomass volumes, can generally support higher densities and more persistent populations of forest wildlife due to superior and more consistent supply of food and water resources.

It is correct that site productivity is not the only indicator of superior habitat resources, for instance for some species minimal disturbance may be critical. Nor should the quality of habitat for any particular species be confused with diversity at a particular site. As noted above, site productivity may or may not be an indicator of overall diversity depending on other ecological variables.

Comment 25, Page 9:

'The statement that Historically, conservation areas have tended to under-represent high quality habitat (Pressey et al 2007) is highly arguable in the Tasmanian context post RFA'.

Response:

The revised Conservation work plan will enable this to be assessed.

Comment 26, Page 9:

'Clarification is needed of the implications of the overall approach to 'Representativeness' as it is a departure from the CAR approach based on forest types. The degree of fineness of scale in particular needs to be clarified'.

Response:

This is an instance in which improvements in knowledge and technical capacity have improved our ability to capture diversity across the landscape. The approach is not a departure from CAR but enables us to deliver on CAR principles. The use of 'forest types' during the RFA process as a surrogate for within-forest ecosystem biodiversity, simply reflected a lack of capacity at the time. The methods used in the present study will be documented in the technical report which will form part of the IVG final report.

Comments 27, 28 and 29, Page 9:

'Question the thresholds and methodology for determining important areas of habitat for listed species'

Response:

The methodology for determining habitat requirements for listed species and in particular species adversely impacted by logging will be further elaborated in the work plan. The revised work plan relies largely on the methodology and thresholds adopted by DIPWE and/or the FPA.

Comment 30, page 9:

'It is not clear whether 'Refugia' is a valid additional criterion or should be sufficiently expressed in "forest biodiversity". Including this as a separate value together with 'height potential' (for productivity analysis) is likely to bias outcomes in favour of wetter forests.'

Response:

The NRS Strategy has identified as a priority action inclusion of "critical areas for climate change resilience, such as refugia, to act as core lands of broader whole of landscape scale approaches to biodiversity conservation by 2030."

'Refugia' have long been recognized as requiring a high level of protection. In 1995 the Commonwealth Position Paper on National Forest Conservation Reserves recommended that 90% of all forest types that represent 'refugia' be protected. JANIS also recognized the need to maximize the level of protection afforded 'natural refugia for flora and fauna'.

In the face of climate change identifying and protecting refugia will be critical.

Comment 31, page 10:

'Questions the validity of the approach being taken to assess fire refuges and points to additional considerations which should be taken into account'.

Response:

The IVG is confident that all relevant factors will have been taken into account in this assessment. The methodology will be transparent in the final report.

Comment 32, page 10:

'The relevance of potential drought refuges is questionable based on CSIRO climate modeling which suggests that some parts of Tasmania will become wetter.'

Response:

The IVG will be drawing upon the most up to date, regionally-scaled forecasts of future climate for Tasmania. Published information from these models suggests that drought conditions will continue to be part of Tasmania's climatic regime and in certain regions where they currently occur may even intensify and become more frequent. Therefore, potential drought refugia will, at the very least, be as ecologically significant in the future as they have been in the past. The MODIS time series analysis to be used to assess drought refuges will be based on the most recent decade, which samples the driest and wettest years on record.

Comments 33, 34 and 35, Page 10:

'Include a specific reference to the Janis criteria on old growth and wilderness and delete any reference to those criteria not being systematically applied. Old growth and wilderness simply need to be updated to the present. If new definitions are to be developed, this needs to be explicitly documented and agreed and delete the reference at the end of page 10 to information to be provided by the Forest Practices Board on multi-aged forests and hollow bearing trees'.

Response:

JANIS required that 90% of rare old growth (defined as 10% or less of the original extent of a forest ecosystem) and 60% of remaining old growth be protected. JANIS did not adopt recommendations in the Commonwealth position paper referred to above to apply the 60% criteria to 'common' old growth (which was defined as forest types where more than 25% exists as old growth). The same paper recommended protection for between 60- 90% of old growth for forests where old growth comprised between 10-25% of remaining forests. A sliding scale for protection was intended. Common old growth was not defined in JANIS and no sliding scale adopted. Instead, any forest where more than 10% old growth remained had the 60% threshold applied.

Old Growth has never been a static concept. Again, the Commonwealth position paper referred to above "recognized that old growth, as part of an ecological succession, is not static and cannot be maintained indefinitely merely through the reservation of existing samples of that age-class." In some cases, notably in SE Qld, the RFA Assessment on Ecologically Sustainable Forest Management recommended that restoration targets be set for old growth.

Whether or not this is desirable for Tasmania will be revealed by the assessments being undertaken as part of the work plan.

The independent review of the Biodiversity Provisions of the Forest Practices Code referred to above, recommended that the Tasmanian Forest Practices Code "aim to maintain at least 30% of native vegetation (e.g. 30% cover or basal area) with a focus on trees with mature and old growth elements currently available at all four spatial scales".

Building a picture of areas of multi-aged forest and hollow bearing trees will inform the overall assessment of whether there are important areas which would add to restoration of old growth and wilderness values, should that be desirable to improve overall ecological value and integrity.

Wilderness was referred to in the JANIS criteria as a cultural concept - whereas conservation science now places much greater ecological value on large, intact natural areas. The intention in JANIS was that 90% of forested wilderness be protected. This intention was not met in Tasmania. The current work plan will facilitate assessment of the extent of forested wilderness and whether restoration is appropriate or necessary.

Comment, Page 11:

'Delete Heritage Assessments from the work plan'.

Response:

See comments on pages 12 and 13 above.

There may be some confusion about the role of the heritage assessments in the work plan. It is correct that the assessments being undertaken by the IVG cannot replace formal World Heritage and National Heritage assessment processes, set out in the EPBC Act.

It can, however, identify values and areas which possess heritage value(s) which should proceed to formal assessment.

Comments 36, 37 and 38, pages 11 and 12 relating to 'Connectivity' and the 'precautionary principle':

'There is no basis for 'Connectivity' as an independent HCV in its own right…it should be a result, not an input to the identification of conservation value…it is important that the IVG does not selectively use previous "claims" as the basis for validation in a circular fashion. Many of these are old and based on out of date data…There is an implicit assumption that connectivity is…achieved through reservation, which is not valid. The extent

to which the "precautionary approach" will be applied needs further elaboration. As it stands it allows the application of very subjective judgements based on un-specified levels of risk.'

Response:

The science underpinning connectivity conservation and the need to protect and restore ecological processes that operate at a range of scales has been well articulated in peer-reviewed national and international publications.

The practical application of connectivity as a conservation value has been further developed and explored by practitioners involved in designing and implementing conservation networks and whole-of-landscape approaches to biodiversity protection and restoration. Connectivity has emerged as a key element in global and national policies and strategies for protecting biodiversity and natural values (or at least maximizing their chances of survival) in the face of current threats and especially climate change.

Maintaining or restoring relatively large intact areas is a strategic priority for connectivity conservation initiatives. It is also true that active restoration to reduce degradation and/or fragmentation across landscapes and across tenures is an important strategy to improve habitat structural connectivity, the connectivity of ecological processes, and biological permeability across the landscape. Any contribution that the proposed ENGO reserves would make to connectivity to improve overall ecological integrity, help meet the requirements of dispersive species and help species naturally adapt to the pressures of climate change will be assessed by the IVG.

Connectivity may be achieved through a range of methods: from formal reservation (most of the recent acquisitions for the NRS have been aimed at maintaining or restoring connectivity across landscapes); covenanting bush-land or other ecosystems on private land; and active restoration and re-habilitation on private or public land.

Minister Burke has told the IVG that he is 'looking forward to advice on connectivity needs in Tasmania's forests' from the IVG process.

The Independent Review to the FPA on the Biodiversity Provisions of the Forest Practices Code noted that the current code does not mention climate change and suggested that, "a landscape approach to biodiversity

management provides a precautionary and optimal approach allowing species and ecological processes to respond to changing conditions. This particularly applies to linkages that maintain large contiguous habitats or enable maintenance of ecological processes, especially across a range of environmental gradients."

Considerable work is now being done on the level of risk to biodiversity from climate change and in particular on the cumulative impact of this relatively new threat with longstanding threats of habitat loss and degradation, changed water and fire regimes, weeds and invasive species, etc. The IVG will have access to this analysis for Tasmanian species.

Comments 39, 40, 41 and 42 Page 12:

'Delete 'assessment of restoration needs' against the CBD target. The validity of including a restoration target is questionable when it has yet to be formally operationalized in government policy. The validity of focusing restoration effort on restoring old growth in forests is also questioned'.

Response:

As noted above, restoration is recognized in Australia's biodiversity strategy as critical to the survival of much of our flora and fauna. It is assuming even greater importance with the emergence of 'Connectivity Conservation' as a cornerstone of Australia's approach to biodiversity conservation.

All of the assessments being undertaken under the IVG work plan have the potential to shed light on important forest areas and values to restore. The CBD target simply gives greater emphasis and priority to the need to look at this issue when assessing the conservation values in the ENGO proposed reserves.

The extent to which the CBD restoration target could be helpful for some forest values (whether old growth, wilderness, connectivity, habitat, refugia, etc.) will be informed by the results of the various assessments being undertaken under the work plan.

Comments 43 and 44 relate to Ecosystem Services page 13

'The need to assess carbon and water values associated with the proposed reserves is questioned and if they are assessed, a high significance threshold should be set before they are considered to be relevant to reservation questions'.

Response:

Claims have been made in relation to carbon and water values of the ENGO reserve proposal, and theses should be verified.

There is a valid issue of how to determine significance thresholds for these critical ecosystem services. Useful information on any water and carbon benefits associated with protecting the ENGO proposed reserves will certainly be produced through the work plan and should be helpful when stakeholders or governments consider reserve options.

Any views expressed by the IVG (and the basis for those views) on the significance of any values identified will be made transparent.

Comment 45, page 13, relates to assessing 'Unique features of Conservation Significance':

'The vagueness of the criterion is criticised as 'an undefined and subjective "grab-all" for anything. Unique features are usually amenable to localized management and do not require broad scale reserves'.

Response:

This category of conservation value is taken directly from the National Forest Policy Statement. As the work plan notes there is no specific project aimed at identifying or assessing 'unique features'. It is assumed that some insights may emerge from other projects (including the social values work being undertaken for the IVG by Professor Michael Lockwood). It should be possible to assess whether any identified unique features would best be protected through reservation or some other mechanism.

Comment 46, page 13:

Asks to see the completed report on the 'Knowledge Gap Review (assumed to have been completed due to the past tense used in the work plan).

Response:

The report was mistakenly described as being completed, rather than being incomplete. The work has not been completed and will of course be made available to stakeholders together with all other conservation project reports.

Comments 47 and 48, page 13 and 14, relate to the Review of off reserve impacts being undertaken as part of the work plan:

'The assessment needs further specification. How is it to be done and against what criteria? It is unacceptable that judgements of this nature are progressed without appropriate scrutiny of criteria and methodologies. A 'recent Australian Forestry issue which documents WA experience in this area might be extremely helpful.'

Response:

The nature of the assessment will be transparent. Further elaboration on this issue will be provided in the work plan and the paper referred to will be included in the assessment.

Comments 49 through to 54 together with suggested deletions relate to the section on pages 15 and 16 on 'the application of HCV criteria.'

The key points relate to the need for thresholds to be set which relate to combinations of values; verification of heritage values can only occur outside this process; the logic of not integrating criteria and values into a single numerical index is not accepted; the failure to evaluate all public and private native forests will bias the results.

Response:

This section has been re-drafted to reflect the approach now suggested of identifying the contribution, if any, of the ENGOs proposed areas to the

NRS in terms of the identified set of conservation values, namely: CAR; habitat protection for priority species; world or national heritage values; protection of evolutionary and ecological refugia; contribution to connectivity in the face of climate change; carbon and water values; and unique features.

The final technical report will present a summary of the conservation values of the ENGO proposed forest conservation areas. Assessment of whether any or all of the values identified would be best protected in reserves together with potential reserve boundaries will also be transparently reported here.

The conservation technical report will be complemented by the technical reports on wood supply and mineral potential. The IVG is investigating with the help of ERIN how any potential spatial conflict between these three reports (i.e. conservation values, wood supply, mineral potential) can be best communicated to the stakeholders, and how stakeholders might be able to examine the consequences of any proposed trade-offs during their negotiations.

Comment 55, page 17, relates to reference material:

'Why is there no reference to RFA documents? The omission of reference to the nationally agreed CAR criteria is concerning'.

Response:

References to RFA and JANIS material will be included.

Comment 56, page 18, re 'refugia' in the Summary work plan:

'The description in the work plan needs better specification. *Phyllocaldus aspleniifolius* is an ancient species but it is widespread and resilient and would be a poor indicator for refugia.'

Response:

Noted.

Comment page 19, re Summary work plan

Delete 'Heritage' and 'Restoration' Assessments

Response:

This is inappropriate for the reasons outlined above on pages 12-13 and 24-26 above.