



TOTAL ENVIRONMENT CENTRE

**Submission on proposed amendments to the
Biobanking Assessment Methodology
19th November 2010**

The Environmental Defender's Office of NSW (EDO) and the Total Environment Centre (TEC) welcome the opportunity to provide comment on the proposed amendments to the Biobanking Assessment Methodology.

We appreciate efforts by DECCW to meet with us and discuss the proposed changes, both meeting with us in person and with follow up phone conferences.

The EDO and TEC note that the current methodology is complex, and we support the development of a more user-friendly methodology. We note that in proposing the current changes, DECCW aims to improve the methodology to this end.¹ At the September meeting, the MRG was told the changes were 'not designed to change the outcomes of the assessment, just to make the process more efficient.' According to DECCW, the proposed changes are designed to "maintain the high environmental standards of the methodology while providing benefits by simplifying the assessment process, reducing the costs of participation and improving the operation of the credit market."

After careful analysis of the proposed changes with extensive input from our scientific officers and from experts, we conclude that the changes do not achieve all the desired outcomes. The changes would affect the substantive outcomes of the assessment in that, for example, credit requirements would be reduced. While the amendments may well simplify the assessment process (although time reductions may not be as significant as intended), reduce assessment costs for participants and yield reduced credit requirements; the changes do not maintain high environmental standards.

The assessment methodology establishes the process by which the legislative "maintain or improve biodiversity values" is applied. By removing and relaxing the credit profile attributes in an attempt to reduce time and cost, the changes to the methodology move further away from establishing a system that ensures that all impacted biodiversity values are in fact maintained or improved. A methodology that continues to depart from the "like for like" offsetting principle will render the legislative test meaningless.

We make comment on the specific changes below in terms of:

- what has changed?
- what impacts do the changes have on the methodology process?
- what impact do the changes have on biodiversity and threatened species?

¹Available at: www.environment.nsw.gov.au/biobanking/summarytable.htm Accessed 20/10/10.

1. Changes to Section 2.3 – removal of quantitative indicators of regional biodiversity values in favour of qualitative indicators

What has changed?

Specific numerical values for regional abundance and percentage of remaining vegetation (by type and native) have been removed and replaced with relative qualifiers. For example, for relative abundance, “relatively high (greater than 50% remaining in the region)” has been changed to “relatively high in the region (relatively high means relatively high in the region compared with the percent native vegetation cover for the CMA area where the red flag area is located).”

What impact do the changes have on Methodology processes?

The changes mean the Methodology is less specific and less clear. Assessors would have more flexibility to consider the biological value of an area as high or low based on its context in that particular CMA; this introduces scope for subjectivity.

What impact do the changes have on biodiversity?

For relative abundance, the new guidance alludes to differences between coastal and inland areas. As a result it now reads “from one or more thousands of hectares in coastal regions, up to tens of thousands of hectares or greater for some inland regions” rather than “e.g. tens of thousands of hectares in the region”. In effect this reduces the relative abundance criteria in coastal areas from tens of thousands of hectares to as little as one thousand hectares, which could result in more sites being subject to red flag variations.

For percent remaining for listed ecological communities or native vegetation by area, the removal of the >50% guidance leaves this decision as an entirely subjective one. The result could, in theory, see red flag variations for listed ecological communities and vegetation types where only 30% of the original cover remains in that CMA.

The EDO and TEC are concerned about the increased subjectivity and potential increase in red flag variations.

2. Changes to Section 4.2.1: Removing threatened species subzones

What has changed?

Rather than identifying both vegetation zones and threatened species subzones, the proposed methodology requires only vegetation zones to be identified. The vegetation zones will be used as a threatened species proxy. The changes remove the consideration of landscape scale context (i.e. surrounding vegetation cover and patch size) when attributing a vegetation zone for a credit profile.

How has the methodology changed?

The case studies that DECCW provided illustrate that vegetation zones and threatened species subzones can be highly correlated, which makes ecological sense. However, in identifying vegetation zones there is no requirement to consider the surrounding vegetation cover or the patch size (including low condition), which is currently required when identifying threatened species subzones. Surrounding vegetation cover and patch size provide important landscape context.

What impact do the changes have on biodiversity?

The removal of surrounding vegetation cover and patch size from the credit profile for vegetation zones means that a vegetation zone that is part of a large patch has the same attributes as a vegetation zone that is the same in all aspects (CMA region, vegetation type etc) but surrounded by cleared land. The increased viability that connectivity provides is no longer recognised with this change. The landscape value (3.6) does take landscape scale attributes into account in its calculation, however without the landscape scale reflected in the credit profile attributes, a site with a landscape value with a high contribution from connectivity could be offset using a site with a similar landscape score with a low contribution from connectivity and a high contribution from area. The credit profile attributes are an important means to achieving 'like for like'.

There is a current shift towards a conservation focus at a landscape level. The Independent Review of the EPBC Act stated, in relation to the concept of biobanking, that "the maintain and improve test should be interpreted in an ecological context, that is the aim should be to maintain or improve the likelihood of species, communities and habitat persisting in the landscape."² Similarly Bekessy *et al* propose that objectives for offsetting schemes are ecological and specific in nature, for example maintain or improve "the persistence of species in the landscape and the extent and condition of their habitat."³ Removing consideration of the landscape scale elements of patch size and surrounding vegetation cover means the methodology is moving in the opposite direction current science and policy.

Changes to Section 5.2 – Delete equation 9, Amend equation 10, Amend equation 11

What has changed?

The current Equation 9 is used to calculate the change (loss) in site attributes for a particular threatened species.⁴ The result is fed into the current Equation 10, which is used to calculate the number of ecosystem credits required.⁵ The current equation 9 Equation is a function of the future (predicted) attribute scores for the species minus the current attribute scores for that species. The proposed Equation 9 is a modified version of the old Equation 10. The major change is that the proposed equation does not take into account the attribute scores (present or predicted) for threatened species. The new equation substitutes the change in attribute score with the change in Site Value. This is a more simplified approach and less specific to threatened species.

What impact does the change have on Methodology processes?

- To calculate the proposed Equation 9 requires:
 - Calculation of Equation 2, and
 - Calculation of Equation 5, and

² 2009, The Australian Environment Act – Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999, Canberra, Department of the Environment, Water, Heritage and the Arts at 3.92.

³ Bekessy, S. A., B. A. Wintle, et al. (2010). "The biodiversity bank cannot be a lending bank." Conservation Letters 00: 1-8.

⁴ Specifically, equation 9 is used to calculate the change in site attribute condition for the threatened species which will require the greatest number of credits.

⁵ For a vegetation zone at the development site when a threatened species is likely to use land within the development site.

- The number assigned to each individual species in the Threatened Species Profile Database,⁶ and
- The area in hectares of the vegetation zone.
- Equation 2 requires calculation of Equation 1, which calculates the Site Value score.⁷ Equation 1 needs to be calculated twice per assessment. In order to calculate Equation 1, the assessor must consider Table 1,⁸ which gives the scoring and the weighting of the site attributes. The Site Value is assessed using transects and plots to collect the site attribute data.⁹
- The difference between the current Equation 9 and the new Equation 9 is that the site attributes for a particular threatened species no longer need to be calculated with the new Equation.
- However, as per 1.2(b), the site attributes for the sites have already been considered in order to calculate the Site Value score using Equation 1.
- To calculate the Site Value scores for a threatened species, assessors use:
 - The Threatened Species Profile Database, which includes the Threatened Species Characteristics by CMA, which “lists a range of information for each threatened species ... and its associations with the site attributes,”¹⁰ and
 - The appropriate attributes from Table 1.
- Once the initial Site Value transects and plots have been used to collect site attribute data, the additional work required by the assessor to include habitat attributes for the threatened species in the current Equation 9 is to gather information from databases provided by DECCW.

The changes to the Methodology process are minimal, given that extensive field work needs to be undertaken in order to complete Equation 1, which is a component of Equation 2, which is required to complete the new Equation 9. Assessors will save the time required to open the TSPD and assess the information stored there.

What impact does the change have on the outcomes for Threatened Species?

Ecosystem credits for threatened species are used for those threatened species that can be reliably predicted to use an area based on habitat.¹¹ Under the current methodology, the credits are calculated based on site attributes associated with the habitat of each species; the proposed change would mean the credits are calculated based only on the loss in site value for a vegetation zone, not on the specific site attributes which predict the presence of a species.

In DECCW’s example scenarios, the result is usually a reduction in the credit ratio for ecosystem credits; this will result in a reduction in the size or quality of site used to offset a development for ecosystem credit species.

Given that ecosystem credits for threatened species are used for threatened species that can be reliably predicted to use an area based on habitat, it is critical that the data

⁶ The number represents the ability of a species to respond to improvements in site value at the biobank site.

⁷ Site value current and predicted, for both the biobank site and the development site.

⁸ DECCW (2008). BioBanking Assessment Methodology. P.14.

⁹ DECCW (2009) BioBanking Assessment Methodology and Credit Calculator Operational Manual (2009) P.24.

¹⁰ DECCW (2008) Information Sheet *Guide to the BioBanking Threatened Species Profile Database*. P.2.

¹¹ DECCW (2009) Guide to Establishing a BioBank Site. P.12.

underpinning these predictions is sound. If particular species or species' groups are less reliably predicted based on habitat, the data needs to be improved or, alternatively, consideration given to those species being transferred to species credit species.

Changes to Section 6.1.1. and 6.1.2. – Delete attributes 4 and 5 from ecosystem credit profile and, Changes to Section 4.3.1 – Delete attributes 4 and 5 from threatened species sub-zone attribute table

What has changed?

The current credit profile uses 5 attributes as a primary filter to predict the presence of threatened species, including:

- Attribute 4: Surrounding vegetation cover, and
- Attribute 5: Patch size

The proposed Methodology does not consider these two attributes when characterizing a group of credits. The CMA subregion attribute now includes adjacent CMA subregions, regardless of whether or not they support the threatened species impacted by the development.

What impact do the changes have on Methodology processes?

Calculating surrounding vegetation cover and patch size are a function of Equation 4, Equation 5, and Equation 6, which are used to calculate Landscape Value.¹² Landscape Value figures are used in Equations 7, 8 and 10, and the new Equation 9. The changes mean that for the credit profile, less work needs to be done, but the work has almost all been done to calculate other equations. When assessing credit profiles for threatened species, assessors would need to access the Threatened Species Profile Database, or the Microsoft Excel spreadsheet of threatened species characteristics.¹³ The changes would save the assessor the time it would take to open the databases and spreadsheets and search for a particular threatened species.

What impact do the changes have on threatened species?

Offset rules for ecosystem credits specify that for ecosystem credits for threatened species, all five credit profile attributes should be included on the biobanking statement, to ensure that the class of credits obtained from the biobank site are compatible, and will meet the 'improve or maintain' test.¹⁴ The Operational Manual specifies that if no threatened species requiring ecosystem credits are predicted to be impacted, only the first 3 credit profile attributes need to be considered.¹⁵ This implies that the fourth and fifth attribute (that have been proposed to be removed) are critical for ensuring compatibility of credits for threatened species.

In DECCW's example, adjacent CMA subregions did not predict all of the threatened species that were predicted in the CMA subregion where the development occurred; in some instances they predicted new, additional species. This means that some threatened species that suffer habitat loss at a development site may not have any habitat included at the biobanking site used for the credits. This does not meet the goal of 'maintain or improve' for such species.

¹² DECCW (2008). BioBanking Assessment Methodology. pp 17-23.

¹³ Available online at: <http://www.environment.nsw.gov.au/biobanking/VegTypeDatabase.htm> Accessed 11/11/10.

¹⁴ DECCW (2009). BioBanking Assessment Methodology and Credit Calculator Operational Manual. pp 12-13.

¹⁵ DECCW (2009). BioBanking Assessment Methodology and Credit Calculator Operational Manual. p13.

As with the changes to 4.2.1, the removal of the attributes of surrounding vegetation cover and patch size removes important information about the landscape context in which the development is located. This change means the credit profile does not recognize the difference in ecological value between an area of vegetation with connectivity into the wider landscape and an area of vegetation surrounded by cleared land.

Changes to Section 6.3.1 – Reduce requirement to match ecosystem credits (and expand area to include CMA sub-regions)

What has changed?

Offset rules have been relaxed, so that compatibility of credits no longer needs to consider the surrounding vegetation class, the patch size, and now include adjacent CMA subregions even if they don't occur in the geographic range of the species.

What impact do changes have on Methodology?

The Methodology has been simplified when it comes to assessing compatibility of credits for trading, and compatibility assessment is less stringent. The surrounding vegetation class and the patch size still needs to be assessed in order to determine Equation 4, 5 and 6, so the amount of work required has not been reduced.

What impact do changes have on threatened species?

The changes in 6.1.1 and 6.1.2 allow credits to be obtained from any adjacent CMA subregion, even if that CMA subregion isn't in the geographic range of the species' for which the offset is being obtained. This could result in a biobanking site for a specific species being located in a CMA subregion which has the vegetation type and formation with which the species is associated, but in which the species has never been recorded.

Changes to Appendix 2 – reduce the requirements for site surveys

What has changed?

Appendix 2 has been modified to remove prescriptive survey requirements in favour of a summary of section of the Native Vegetation Interim Type Standard.

What impact do changes have on Methodology?

The changes imply that they allow for a more site-specific survey design. Site-specific survey design is appropriate to increase efficiency of field-based surveys and to allow for more or less effort according to the requirements. However, there is a possibility of a lower survey effort in comparison with the current prescription and, accordingly, surveys may miss important variation in vegetation type or condition.

As it reads, the new Appendix 2 offers very little instruction or guidance to the applicant. Where Section 3.5.1 specifies that the minimum number of plots and transects must be in accordance with Appendix 2, it may be more appropriate to make specific reference those sections of the Native Vegetation Interim Type Standard that refer to survey design.¹⁶

¹⁶ DECCW (2008). BioBanking Assessment Methodology. p13.

Although site-specific survey design is desirable, interpretation of the Native Vegetation Interim Type Standard may result in inconsistent survey standards between sites and between surveyors, and the proposed Appendix 2 is less easily enforced than the current Appendix 2. For these reasons we suggest that the NVITS is used on a trial basis and reviewed by DECCW for each application to assess whether it captures all relevant data.

In summary, the EDO and TEC support a user-friendly methodology however achieving this must not compromise the integrity of the “maintain or improve biodiversity values” test. The methodology must accurately ensure that impacts on biodiversity values are in fact maintained and/or improved through the purchase of relevant credits. The proposed changes to the methodology do not achieve this and are therefore not supported.

Yours sincerely,

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