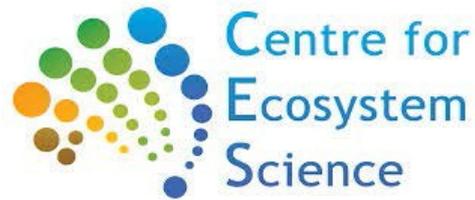# Submission to drafts of the Regulations for the Biodiversity Conservation Act, the amended Local Land Services Act and supporting tools in New South Wales

Centre for Ecosystem Science, UNSW, Australia

Contents

Executive Summary

The Centre for Ecosystem Science (CES), UNSW Australia, supports all legislative and other instruments of government that improve effectiveness of biodiversity conservation, founded on a strong evidence base. Current rates of loss of biodiversity around the world, in Australia and in New South Wales are unprecedented. The continued loss of biodiversity in NSW indicates a clear need to assess the effectiveness of the legislative framework that governs biodiversity conservation. CES welcomes the opportunity to provide a submission to the draft Regulations for the *Biodiversity Conservation Act 2016* and *Local Land Services Amendment Act 2016*.

The proposed regulations to support this legislation have strengths but there are number of weaknesses that need to be improved before the Regulations can adequately begin to address the unprecedented decline of biodiversity in NSW. Consequently, the Centre for Ecosystem Science, UNSW Australia recommends a series of changes are required in relation to the Regulations.

This submission provides comments on six key issues that require careful consideration by the NSW Government to improve the draft regulations in order to effectively have legislation that halts the decline in biodiversity in NSW:

1. Biodiversity Conservation Regulation (including aspects related to additional Biodiversity Values, Areas of Outstanding Biodiversity Value; Threatened Species and ecological communities, biodiversity offsets);
2. Serious and irreversible impact guidance;
3. Local Land Services Amendment Regulation;
4. Biodiversity Assessment Methodology;
5. The Land Management Codes. Specifically, there are improvements which could be made to the above key issues, as well as rectifying some errors in the drafted regulations and;
6. Consultation processes.

1. Draft Biodiversity Conservation Regulation 2017

This draft Regulation seeks to expand on the operations of the Biodiversity Conservation Act. Several areas need some modification including:

A. Part 1.3 Definitions
Issue 1 - The importance of several international, state and national agreements is not adequately covered here.

Recommendation - The definitions should include reference to Ramsar, as well as migratory organisms covered under the Bonn Convention; and also JAMBA and CAMBA international agreements. It is also unclear if Special Areas (Sydney Water catchment lands) should also be included here.

Issue 2 - National Parks estate and other conservation areas are included as (e) declared areas of outstanding biodiversity value. 'Grandfathered' Areas of Outstanding Biodiversity Value (AOVs) are on reserves and are based on single species. It is not clear if future Areas of Outstanding Biodiversity Value can be off National Parks estate and relate to a range of values. Further, definitions currently do not include the main conservation areas managed by conservation non-government organisations (e.g. Australian Wildlife Conservancy, Bush Heritage, Birds Australia) often acquired for conservation with some Commonwealth funding. These areas are included in protected area statistics reported by the Australian Government. However, there is no protection of the areas currently under state planning or conservation legislation.

Recommendations

1. Allow for the specification of Areas of Outstanding Value outside Government owned and managed areas.
2. Allow specification of conservation reserves managed by non-government organisations to be included in Biodiversity areas of outstanding value.

B. Part 1.4 Additional Biodiversity Values

The draft Regulation adds 6 components to the *Biodiversity Conservation Act 2016* definitions of biodiversity value as additional values. While these are supported, some need clarification and others components need to be added to the list.

Issue 1 - The definition of Biodiversity Values under the *Biodiversity Conservation Act 2016* (1.5.2) includes vegetation integrity and habitat suitability (along with the additional six matters in the draft regulation). It is well known that biodiversity also includes ecological processes and functions, including factors which maintain biodiversity (e.g. nutrient transfer, trophic structure). These are also essential to ecosystem services and hence the population of NSW. Hence it is a significant omission from values protected under the Act.

Recommendation – The draft regulation needs to add Ecological processes and functions (explicitly within the definition of ecological integrity) to the description of biodiversity values protected under the Act.

Issue 2 - 1.4a Currently, the regulation does not include species that may spend seasons, years or decades either away from the site or below ground as seeds, tubers or rhizomes and may not be detectable above ground at a site, even though their persistence may depend on the maintenance of suitable habitat at that site.

Recommendation - 'Occurrence' at a site needs to specifically include cryptic organisms that are hard to detect and seasonal or migratory organisms.

Issue 3 - 1.4b. Currently the concept of 'vegetation abundance' is unclear. Vegetation per se does not have 'abundance', rather species have abundance.

Recommendation – Wording needs to be clarified in relation to this reference so that it deals with area or occupation at a site.

Issue 4 - 1.4d. Currently the wording on this has too narrow a focus, primarily focused on mobile fauna and ignores ecological communities or stages of succession. There is a need for consistency within the legislation.

*Recommendation –*This should be altered to 'threatened species and threatened ecological community lifecycles—the contribution of a site to the life cycles of threatened species and the component species of threatened ecological communities, including dispersal, pollination, recruitment, breeding and survival.

Recommendation - A new 1.4g should be added "sustainability under fire regimes—being the degree to which the fire regimes and associated processes sustain threatened species and threatened ecological communities at a particular site." More broadly, there needs to be acknowledgement that a range of disturbance regimes for specific ecosystems.

C. Part 2. Protection of animals and plants

Issue 1 - cl2.16 and 2.17 appear to give ownership of plants, even if threatened, to landholders. This is different to the treatment of plants.

Recommendation – ensure consistency

Issue 2 - cl2.21b, c. It is not clear what evidence exists for destruction or options for other forms of damage mitigation by these species.

Recommendation – remove the ability to harm these species and develop alternate mechanisms for their management.

Issue 3 - cl2.22. It is acknowledged that these species are an important part of the pet trade. However there is also the propensity for capture of these species illegally.

Recommendation - It is important to specify that owners need to demonstrate that their individuals are from a captive source. New techniques of isotope analyses will allow for detection of whether species originate in the wild or captivity.

Issue 4- cl2.23. Many Aboriginal people also collect plant foods. This clause does not seem to cover this use.

Recommendation – Allow for the collection of bush plant foods by Aboriginal people.

D. Part 3. Areas of Outstanding Biodiversity Value

There is increasing recognition that loss of biodiversity is occurring across all of the world's ecosystems and a predominant focus on conservation of species is not sufficiently effective in protecting the world's most important areas of biodiversity (Butchart et al. 2010). This has meant more attention by legislators on larger habitats or ecosystems, including threatened ecological communities. There is also an understanding that protecting most valuable conservation assets is particularly important. Identifying and protecting Areas of Outstanding Biodiversity Value (AOVB) recognises the critical importance of this approach. Some of these may not be currently threatened but a proactive approach of protection means that such risks may be avoided if these areas are afforded such protection.

The criteria in the draft regulations are strongly supported. However, the initiative is opaque without more information, needed in the Regulation, on how this will occur There is currently insufficient information on the process for listing Areas of Outstanding Biodiversity Value, including the role of the 'to be established' New South Wales Biodiversity Conservation Advisory Panel. The Regulation should include details of the nomination and assessment process, how the public will be involved, means for reviewed, etc. Some detail on these aspects is important in establishing public support for the process and to ensure that public expectations are realistic.

Recommendations

1. This process should be consistent with internationally endorsed and rigorous criteria for listing Key Biodiversity Areas developed by the IUCN, under the Red-listing of Ecosystems.
2. To support this regulation, there is a need to develop appropriate guidelines, including some examples to assist stakeholders in engaging in this process.
3. There need to be clear processes in place for public nomination and listing Areas of Outstanding Biodiversity Value, which allow for world's best practice in relation to an evidence-based process that is completed within a time-frame that meets public expectations.
4. It is not clear what organisations could be involved in this process. The Act has an established process whereby the community may engage in the nomination and review of listings for threatened species, populations, ecological communities and key threatening processes, which are then assessed by an independent scientific committee. A similar process is needed for AOBVs allowing for evidence based decision-making.

5. Given the critical importance of Areas of Outstanding Biodiversity Value, there is a need for resourcing to identify areas in NSW that meet the criteria within the regulations as well as resources for implementation of listings. The latter would involve advice to land managers on appropriate management, including resources.

E. Part 4. Threatened Species and ecological communities

The criteria in the draft regulations are strongly supported and will allow alignment with global best practice (IUCN Red List criteria). A few modifications are needed as detailed below.

Issue 1. *4.1.5b Special additional criteria for listing populations.* There is an error in part b.

Recommendation – Cl 4.1.5b should be replaced with "the population is, in the opinion of the Scientific Committee, of significant conservation value based on its role in the conservation of the species or, of a number of other species."

Issue 2 – cl4.9. cl4.10. There did not appear to be any definitions of geographic area or what was meant by the different categories of restriction, possibly interpreted as different circumstances. There is a need for better definition of geographic distribution. For example, coastal saltmarsh (an Endangered Ecological Community) could be defined as widely distributed (from the Queensland border to the Victorian border) but within this it has restricted to very restricted habitat. Without adequate definition on this issue, there is likely to be difficulties in implementation.

Recommendation – Provide a rigorous definition for geographic distribution which adequately captures the potential issue of restrictions in habitat.

Issue 3 – cl4.1- cl4.13. Concepts of environmental degradation, disruption, collapse and probability of collapse are potentially open to differing interpretations. The precautionary principle may be ignored.

Recommendation – The precautionary principle should be taken into account throughout the legislation to ensure that biodiversity decline is arrested, a key goal of the legislation.

F. Part 4. Part 6 Biodiversity Offsets scheme

Issue 1 - 6.1.c. This clause only deals with the 'movement' component of a species' life cycle. It should be more inclusive to deal with any component that impacts on a species' life cycle (survival, growth, reproduction and movement).

Recommendation – Include 'dispersal, recruitment, pollination and breeding'

Issue 2 - 6.1d. This is currently limited to water regimes. There need to be two additional points that address i) fire regimes, which, like water, are key in promoting species

persistence; and ii) exacerbation of threatening processes, so that any adverse impacts on species or ecological communities from exacerbation of threatening processes such as weed, pests and pathogens is considered.

Recommendation – The following two additions need to be included

i)"the impacts of development on fire regimes and associated processes that sustain threatened species and threatened ecological communities (including from habitat fragmentation, changes to fuels, fire frequency, seasonality, severity and size),

ii) "the impacts of development in exacerbating known threatening processes that have adverse impacts on threatened species and threatened ecological communities"

Issue 3 - 6.4 Variation rules under biodiversity offsets scheme. The ability to not offset like for like (as detailed in section 6.4) goes against global best practice for offsetting and will result in increased species' extinctions in NSW. The variation rules as stated show a fundamental lack of understanding of extinction risk and recovery potential with respect to both species and ecological communities. Species or ecological community substitution can apparently be made without any consideration of extinction risk and without consideration of the consequences of loss of sites may have on extinction risk.

Recommendation – There should be implementation of world's best practice principles of offsets which include (Maron et al. 2012, Maron et al. 2015a, Maron et al. 2015b, Maron et al. 2015c, Maron et al. 2016):

a. the mitigation hierarchy, in which impacts are first avoided or minimised to the fullest extent possible, and offsets are implemented to compensate for residual impacts only after avoidance and minimisation has been demonstrated;
b. substitution of 'like for like', whereby offsets must be for the same type, composition and structure of vegetation lost;
c. offset actions and their outcomes must be additional to those that would have occurred if the development had not taken place;
d. offsets must be maintained in perpetuity, ensuring that offset gains are secure for the future; and
e. no net loss, ensuring the gains from offsets must at least balance the losses of biodiversity caused by the development

The Regulation should require offset parties to demonstrate show evidence of how a proposed offset will meet these principles.

Issue 4 - 6.5 Ancillary rules of Environment Agency Head for purposes of biodiversity offset and variation rules (section 6.4). 6.5.2c mentions the threatened species profile

database (which includes the identification of species' credit species and of ecosystem credit species). The existing OEH threatened species profile database contains many serious flaws, errors and unwarranted assumptions (e.g. NSW Scientific Committee http://www.environment.nsw.gov.au/resources/threatenedspecies/AdvBbank09Jul2012.pdf).

Recommendation - The Regulation should not commit to using the threatened species profile database unless there is a comprehensive and independent audit of the data therein which reflects the latest findings in the scientific literature, as opposed to the current situation where data in the database are at odds with the published peer-reviewed literature.

Issue 5 - 6.7 Principles applicable to determination of "serious and irreversible impacts on biodiversity values" (section 6.5 (1)). 6.7. 2b requires modification. Ecological communities do not have 'population sizes'. Two key IUCN Red List for Ecosystem criteria are not covered. These are environmental degradation and disruption of biotic processes or interactions (see comments on Draft guidance and criteria to assist a decision maker to determine a serious and irreversible impact below).

Recommendation - 6.7.2b should be replaced with the following: "it will further reduce the population size of the species that is currently observed, estimated, inferred or reasonably suspected to have a very small population size, or increase the environmental degradation or disruption of biotic processes or interactions of the ecological community, or".

G. Part 4. Part 7 Biodiversity assessment and approvals under Planning Act

Issue 1 - 7.1, 7.2 and 7.3 all involve consideration of triggering decision thresholds for clearing. The thresholds given in 7.2(4) vary with lot size. The thresholds, as stated, have no evidence base to support them. The *Biodiversity Conservation Act 2016* has as its objects to conserve biodiversity at bioregional and State scales. The proposed Regulation fails to address the impact that small scale losses have on bioregional, state, national or global scales'. Instead, the proposed Regulation only requires that each loss has to be assessed to see if it would trigger a loss of at least the bioregional scale. This is a major failing – the legislation propagates a "death by a thousand cuts" scenario that the public was assured that the Act was designed to avoid. The thresholds given in 7.2(4) assume that there can be no impact at the bioregional, state, national or global scales for a loss of 2 hectares of vegetation. This is simply incorrect, counter to the available published literature and many globally significant conservation assets in NSW occur at, and are viable at, scales well below 2 hectares. For example one listed Ecological Community has been reduced to only a few hectares including a number of semi-degraded patches. In other cases, the best remaining examples of more extensive species and ecological communities are small patches. These remaining patches are critically important to the conservation of these assets. As stated, the current thresholds will clearly lead to increased extinction risk of species and ecological

communities that are of bioregional, state, national and global scales within NSW. This is counter to the object of the *Biodiversity Conservation Act 2016.*

Recommendation - We suggest the current threshold values be deleted and an examination of the peer-reviewed literature be used to inform how to test for increased extinction risk in relation to habitat loss, with subsequent development of a more appropriate test of impact. We argue that there can be no threshold below which assessment of the risk of an increase in extinction is not needed as matters of bioregional, state, national and global conservation significance may exist at very small localised places in NSW.

Issue 2 - 7.3 Clearing within sensitive biodiversity values land map exceeds threshold. No map detailing all conservation assets in NSW is currently available for testing for scientific validity. Further 7.3.3 states" "The Map may include the following land:…" It further includes Ramsar wetlands.

Recommendations

1. A biodiversity values land map be provided for public comment before implementation.
2. This map should stipulate inclusion of all of these land types, not define as 'may'
3. In addition, World Heritage Areas, Sydney Catchment Management Areas, wetlands in the Directory of Important Wetlands and wetlands identified by the Murray-Darling Basin Authority and managed under the Basin Plan in compliance with the *Water Act 2007* should also be included.

2. Draft guidance and criteria to assist a decision maker to determine a serious and irreversible impact

This regulation includes four Principles for identifying serious and irreversible impact (SAII). All four Principles need to be retained.

The first three Principles flag those species and ecological communities where extinction risk is very high and where that risk would significantly increase if further locations of those species or ecological communities were lost (irrespective of any potential future gains). These three Principles are based on global best practice identification of extinction risk (IUCN 2016, Bland et al. 2016). Principle 4 attempts to deal with those species or ecological communities that cannot be recovered.

Recommendations

1. Some modification is needed to Principle 2 to make it applicable to ecological communities and to include the global best practice risk elements from Bland et al. (2016) that are currently not covered in the existing Principal descriptions. Threatened Ecological Communities do not have population abundance measures and hence Principal 2 needs revision to include elements of extinction risk from IUCN Red List for Ecosystems criteria. To do this we suggest applying IUCN criteria C and D

(Keith et al 2013, Bland et al 2016) under Principle 2 as follows:

To be evaluated under this principle, the ecological community should have been impacted by a very large degree of environmental degradation or disruption of biotic processes or interactions:

- ≥ 90% extent and severity where the disruption or impacts are measured since 1750 (historical decline); or

- ≥ 80% reduction where the disruption or impacts are over a 50 year time period, either in the past, future, or any part of past, present and future.

2. The Appendix lists need to be fully developed before the regulation is finalised. This should be accompanied by a rationale for how each species/ threatened ecological communities met the criteria.

3.3.2 Evaluate nature of impact on candidate entity

Issue 1. Does the impact exceed the impacts threshold for the entity?

Recommendation - All thresholds must be set at zero unless there is peer-reviewed published evidence to the contrary. We know of no published literature that justifies any other approach. Otherwise extinction risk will increase for impacted species.

3. Local Land Services Amendment (Land Management—Native Vegetation) Regulation 2017. Division 2 Native vegetation regulatory map

Issue 1- There appears to be no consideration of threatened species or ecological communities that meet serious or irreversible impact to be placed on the regulatory map.

Recommendation – There needs to be inclusion of threatened species and threatened ecological communities on the regulatory map, otherwise there is a high risk of loss of biodiversity at state, national and global scales.

Issue 2– The 'Grasslands and Other Groundcover Assessment Method' is referred to in the LLS Amendment (108(e) and 110(1,2)) as to be published. It underpins several key categorisations of low or high conservation value and subsequent categorisation under the Native Vegetation regulatory map.

Recommendation – The process by which this method is developed must be scientifically peer-reviewed and opened for public consultation before it takes effect. The timeframe for its development should also be set out clearly; at present it is vague and so might risk inappropriate clearing in the meantime.

Issue 3– 112 **Land mapped as containing critically endangered species of plants** & 113 **Additional land to be designated as category 2-regulated land**

All threatened species and ecological communities needs to be mapped as sensitive lands, otherwise there will be ongoing declines in species and ecological communities that are of bioregional, state, national or global significance.

Recommendation – Add All threatened species and ecological communities to the regulatory map as Category 2- sensitive lands.

Issue 4– 114(b) – use of wording 'consistent with' is ambiguous, as there may be natural patterns consistent with disturbance or modification.

Recommendation – 'consistent with' be changed to 'attributable to'

Issue 5– 116 – this clause suggests land can be re-categorised as exempt where there has been unlawful clearing in the past

Recommendation – If this is not desirable, the clause should be re-written. If the implication above is correct, we recommend that re-categorisation as category 1 – exempt land should not be allowable if it signifies a capricious side-effect of unlawful clearing.

4. Biodiversity Assessment Method (BAM)

The BAM builds on existing mechanisms under the *Native Vegetation Act 2003*. However, the conservation value of native vegetation assessment made in this tool fails global best practice methodologies. For example, the proposed method for determining current risk to 'plant community types' (referred to as threat status groups) has serious omissions of risk factors, with % cleared the only basis for assessment based on different thresholds to the international standard.

Recommendations - Global best practice (Keith et al. 2013, Bland et al. 2016) requires consideration of multiple indicators of risk, including decline, degree of restriction of geographic distribution, abiotic and biotic threats (extent and severity).
i. The BAM should be subject to independent external peer review that is publically reported and adjusted accordingly prior to adoption in Regulations.
ii. To achieve global best practice, the BAM needs to be revised to include all risk indicators from international standards adopted in IUCN Red Lists to determine threat status groups for plant community types and species. Implementation of these standards is essential for protection of bioregional, state, national and global conservation assets.
iii. Accountabilities and obligations for monitoring and reporting against management targets need to be substantially strengthened for agreed offsets and set asides. These changes are necessary to ensure return on investments and track outcomes against the baseline of no net loss.
iv. There should be removal of the exception for State significant development. This change provides a mechanism to promote consideration of alternative designs and locations for

State significant development to avoid impact, and ensures protection of the State's most precarious biodiversity assets from potentially terminal threats associated with large developments.

5. Land Management (Native Vegetation) Code

There is considerable opportunity to interpret codes that may allow for wide spread land clearing. Further, under the code local, Local Land Service officers will have considerable discretion in decision making. Currently, Local Land Services having considerable autonomy and it is not clear how uniformity of interpretation of the Code will be achieved. In addition, there is no evidence for the currently listed thresholds (see comment above).

Recommendations
1. Ensure there is a public participation process for all outstanding information relevant to the draft regulations, including the critical map developed for the state
2. Provide guidelines to Local Land Services to ensure that there is some uniformity in interpretation. In addition their performance should be regularly reviewed.
3. Develop appropriate ecological thresholds which adequately represent rarity and importance of different vegetation communities.
4. Ensure that there is a transparent review process for decision-making to identify opportunities to improve.

6. Consultation processes

In preparing this submission, we became aware of some potential issues of concern in relation to transparency and effectiveness of this consultation process. There were a number of documents on display simultaneously with a single path for submissions (followed by our submission) but it was not clear how responses to these documents will be coordinated given the ramifications and interactions among the different policy instruments provided. Further, not all documents were available for public input (e.g. proposed schedules 1,3,4 of the Land Management(Native Vegetation) Code and the mapping to underpin decision-making.

Recommendations
1. Ensure a whole of government coordinated response to submissions which allows for interaction among policy instruments to ensure that changes are consistent.
2. Provide an opportunity for public input into remaining documents which have not been released for public comment.

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