DIRECTOR, AUSTRALIAN MUSEUM RESEARCH INSTITUTE
Dr Rebecca N. Johnson

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NSW Office of Environment and Heritage
Conservation Programs Branch
Level 12
PO Box A290
Sydney South NSW 2000
Email: lmbc.support@environment.nsw.gov.au

Draft Biodiversity Conservation Investment Strategy 2017-2037

The objectives of the Australian Museum are to propagate knowledge about the natural environment of Australia and to increase that knowledge, particularly in the natural sciences of biology, anthropology and geology. Accordingly, much of our research involves describing, classifying, documenting and explaining the faunal diversity of Australia. Furthermore, we study wildlife in a variety of habitats, and have expert knowledge of the processes affecting faunal populations and diversity. Environmental issues are emphasised in many of our public programs and we seek to contribute to the resolution of questions concerning land management. Consequently, we are in a good position to provide advice on the State's investment in biodiversity conservation. We therefore welcome the opportunity to make a submission on the *Draft Biodiversity Conservation Investment Strategy 2017-2037*.

Overview

The Australian Museum strongly supports the need for a national reserve system and adheres to the current scientific framework based on comprehensiveness, adequacy and representativeness. While we consider it fundamental to continue working towards such a reserve system on public land tenures, we recognise that there are limited opportunities for achieving this in the short term, and that effective protection measures on private land are critical for the conservation of biodiversity. Consequently, we agree that there should be significant public investment to compensate private landholders for undertaking activities on their land that enhance biodiversity benefits for the whole Australian community. We consider that the *Draft Biodiversity Conservation Investment Strategy 2017-2037* is for the most part strategic, logical and based on sound principles, such that it provides a clear direction for future investment. However, there are a number of places where the intent is ambiguous and we elaborate on these issues below.

Adequacy of protected area system

While the *Strategy* gives clear directions toward achieving comprehensiveness and representativeness, it is weak in terms of setting targets for adequacy. The goals around protecting "examples" of landscapes fall far short of achieving adequate representation, and accordingly the 20 year targets are not sufficiently ambitious to achieve the goal of prevention of further biodiversity loss. Toward the end of the *Strategy*, the Aichi target of protection of 17% of terrestrial areas is used as a "tool" for prioritising landscapes, and we consider it appropriate for the *Strategy* to adopt this as a genuine target.

Classification of priorities for investment

While the priorities themselves are logical, the terminology and classification of priorities varies in different parts of the *Strategy*, which adds unnecessary complexity. It would be better if the same five priorities were used consistently. For example, "Areas of outstanding biodiversity value" is clearly a priority and so should be included under "Priority Investment Areas" in the "Key Concepts".

Similarly, by introducing a second, modified classification (Figure 1) there is confusion between biodiversity outcomes and socio-economic consequences of funding these outcomes. "Generating regional socio-economic benefits" and "maximising benefits across other government programs" are not biodiversity outcomes. Moreover, the protection of "large core areas" is of equal, if not greater importance than the protection of the "least-protected ecosystems" and the "improvement of connectivity". Accordingly, the protection of large core areas should appear in the objectives boxes in Figure 1. These boxes should reflect the five priorities defined in the "Key Concepts" rather than introducing down-stream consequences.

A similar, but not equivalent classification of "Environmental benefits" is introduced in Box 2. This classification also fails to include the "protection of large core areas", while it splits "stepping stones" and "wildlife corridors" into separate benefits. These are potential strategies for achieving the same benefit of improved landscape connectivity, and both should be subsumed under the same dot point. Moreover, the wording around the term "establishing new wildlife corridors" should be clarified (also on p 16) to ensure there is no perception that funding will be provided for revegetation of cleared land with the aim of establishing "new wildlife corridors". Australian governments have previously made large investments in attempts to re-establish connectivity through programs such as Landcare, although the benefits remain uncertain (Hodgson *et al* 2010)[1]. The importance of retaining large areas of natural and semi-natural habitat has been conclusively established, and the *Strategy* should therefore stay focussed on its goal of protecting a comprehensive, adequate and representative (CAR) protected area system.

[1] *Hodgson, J.A., Thomas, C.D., Wintle, B.A. & Moilanen, A. (2009) Climate change, connectivity and conservation decision making: back to basics. Journal of Applied Ecology, 46, 964–969*

Similarly, we would also recommend that the *Strategy* remains faithful to the CAR approach and invest only in the priority investment areas. We consider that the *Strategy* is vulnerable to compromise from lobbying and other influences if there are exemptions from the objective criteria, which make funding available to landholders in subregions that have already met the national representativeness target (as is proposed in sections 2.2, 2.3.4, 3.1 and 3.2). If above-target investment remains in the *Strategy*, detailed explanation of the eligible circumstances is required, and a definitive target for adequacy is essential to ensure that it can be implemented objectively. We also consider that sites that might have high environmental value as identified through Saving our Species programs or the NSW Koala Strategy (pp 24,25) should be funded through those specific programs, rather than run the risk of compromising the CAR approach by extending the scope of priorities beyond the scientific framework.

Applying prioritisation principles

While we mostly support the framework and principles for prioritising investment, we question why the datasets used for applying the four principles are given equal weighting (p 17). In particular, we believe that care must be taken when using data on ecological connectivity and soil capability, to ensure that disproportionate investment is not committed to heavily-degraded landscapes. We can think of many situations where it is preferable to give a higher weighting to areas of high conservation value. Cost-effectiveness should be an important part of the equation, and triage is an important consideration in distributing investment. Similarly, assigning equal-weighting to connectivity, and ranking landscapes that have been heavily cleared as the highest priority, will make it difficult for rangelands to attract investment. However, such landscapes are good candidates for investment because strong biodiversity benefits can be derived from management practices that can be readily implemented by private landholders if provided with financial incentives. Rather than amalgamate quantification of the four prioritisation principals into a single map on the basis of equal weightings (Figure 4.), we consider it would be useful for the final *Strategy* to include separate maps showing the results derived from the application of each principal.

Equivalence with IUCN definitions of protected areas.

The extent to which the proposed types of conservation agreement fulfil IUCN criteria for protected areas is fundamental to the *Strategy*, but despite discussing the agreements in detail in numerous places (p*xi*, p4, p5, p7) their equivalence to IUCN criteria is explained only in the middle of the *Strategy* (p12). We recommend that the section on Key Concepts, explicitly mention that only Biodiversity Stewardship Agreements and Conservation Agreements meet IUCN criteria and that Wildlife Refuge Agreements do not fulfil requirements as protected areas. It should also mention that the latter agreements are ineligible for payments. In addition, it would be helpful if Figure 3. were moved to the beginning of the *Strategy.*

Offsets

The Strategy is ambiguous in its discussion of the Biodiversity Offsets Scheme. We understand that the framework proposed in the *Strategy* for investing in conservation of private land will also have derivative benefits in that the same framework can be used for identifying land suitable for the NSW Biodiversity Offsets Scheme. However, given the strong and polarised views on offsets that are present both within the scientific and broader community, we would advise against complicating the present discussion with reference to offsets, and accordingly, we recommend removing the discussion of offsets in Sections 1.3.2 and 3.3.

Targets

Both the 5-year and 20-year targets require refinement to make them more quantifiable and to better reflect biodiversity outcomes (Figure 1). Unless there is a target for adequacy, perhaps reflected as a specified land area or a percentage of a nominated final target, "protecting examples" of landscapes does not represent a meaningful target that can be used to measure success. Whether the target is "examples of 30 landscapes in 5 years" or "examples of 90 landscapes in 20 years", it is only the percentage of the target, rather than the absolute number of the examples, that is the important indicator of success. As they stand, the targets could have the perverse outcome of preventing the adequate protection of one landscape in favour of piecemeal investment in two landscapes.

It also seems peculiar to include "diversified income streams" as one of only two targets for measuring success. The purpose of the *Strategy* is to invest in biodiversity conservation, and accordingly there will be a cost that needs to be justified in terms of an improvement in biodiversity relative to the trajectory if the investment did not occur. An unavoidable consequence of this is that it will diversify the income streams of subscribers to the program. This may be considered an incidental socio-economic benefit of the program but spending money in itself is an inappropriate measure of success, and should not be the target.

The most useful measures of success of the program are those that directly measure biodiversity. We recommend that for each landscape, a "shopping basket" of representative species is identified that can be monitored through time. These species should be characteristic of each landscape and be sufficiently abundant to allow for statistically measurable change to be identified (i.e. target species would generally not be threatened species). While such biodiversity monitoring is complex and requires resourcing, it would have many other benefits, and is the key currency for measuring performance of biodiversity programs.

Socio-economic benefits

As outlined above, we consider that care needs to be taken to prevent socio-economic targets from distracting the focus away from true biodiversity targets. It is possible that our conclusion has resulted from poor explanation of intentions of the program regarding socio-economic benefits. At present the *Strategy* includes

negligible information on what is meant by “diversified income sources”. Some detail is required on whether this is meant to include new industries, such as eco-tourism, or simply to diversify farm income with government payments for conservation activities. In particular Box 2 needs to explain 1) how employment opportunities will be created, 2) how economic shocks will be buffered and 3) how integrated landscape management will be promoted. These may be very laudable intentions, but we consider that it would be preferable to limit the discussion to those benefits that might reasonably be expected to be achieved as direct consequences of the *Strategy*. Attempting to compare the overall income of private landholders who subscribe to the scheme with those who do not, would involve privacy issues and a statistical complexity that would make achievement of this target very difficult to measure. Resources would be better invested in biodiversity monitoring.

Timelines and funding

We acknowledge that the exhibited *Strategy* is only a draft and that further work is required before the final *Strategy* is published. We also acknowledge that it is the intention to publish the profiles of IBRA subregions even though they are not currently available. However, if these profiles take longer to prepare than expected, we recommend postponement of publication of the final *Strategy* until they are available. The profiles are an essential element for assessing proposals, and strategic selection of sites for investment under CAR principles will be impossible unless they are all available at the time of implementation.

We also recommend that additional detail is provided on the budget and timeline. The *Strategy* commits $240 million over 5 years ($48 million per year), which is rather less than the $70 million per year that is proposed thereafter. We presume that this is because it will take time to roll out the project and that there will be relatively small uptake in the initial years, but superficially it appears that the more generous investment is proposed for the period beyond accountability. We recommend avoiding this interpretation by explaining the time-frame of the roll-out and the expected investment in each of the first five years.

Non-textual communication

Although we have focussed on reviewing the text, we believe that the choice of images in the *Strategy* has not been optimal for conveying the *Strategy*’s overall approach. We support the framework of the *Strategy*, which is directed toward biodiversity conservation through increasing the protected area network. A fundamental strength of this approach is that it provides protection for lesser-known components of biodiversity rather than the iconic, usually vertebrate, species which already benefit from threatened species funding such as the Saving our Species Program. The *Strategy* clearly indicates that it intends to complement those programs but it is inappropriate for the *Strategy* to emphasise them. Accordingly, the choice in images of a Koala, Treecreeper, Robin, Regent Honeyeater and Plains Wanderer conveys the wrong message. It would be far better to include, spiders, beetles, land snails etc. for which species-specific funding is usually scarce. Even if

images of vertebrates are required to fulfil public expectations, the strong bird focus is inappropriate, and a more diverse taxonomic palate is required. In addition, the images provide a venue for public education which, by omission of captions, is currently not exploited. Without so much as names, the images are nothing more than decoration. Each image could be used to highlight a particular conservation issue e.g. “The Regent Honeyeater is a critically endangered species that formerly ranged over a large area of eastern Australian woodlands. It is a nomadic species that is threatened by habitat fragmentation, and so protection of eucalypt woodlands on private land is essential for the species’ survival.”

Thank you again for the opportunity to contribute to the review of the *Draft Biodiversity Conservation Investment Strategy 2017-2037*. Please do not hesitate to contact me if you would like clarification or elaboration on any of the points we raise.

Yours faithfully

Dr Rebecca Johnson
Director, Australian Museum Research Institute