



Green Fire Science Laboratory
University of Queensland,
BRISBANE QLD 4072

National Diversity Strategy Secretariat
Department of the Environment and Energy
GPO Box 787
CANBERRA ACT 2601
nbssecretariat@environment.gov.au

Dear Sir/Madam,

The Green Fire Science group consists of conservation scientists who care deeply about the future of Australia's biodiversity.

We thank you for the opportunity to comment on *Australia's strategy for nature 2018-2030: Australia's biodiversity conservation strategy and action inventory*. We would like the following comments to be considered for review.

Overall comments

- 1) We commend the 'vision' of the document. This is clear and concise; however, the vision should be separated into two parts:

“Australia's nature, now and into the future, is healthy and resilient to threats.”

And

“Australia's nature is valued both in its own right and for its essential contribution to our health, wellbeing, prosperity, and quality of life.”

The two visions are distinctly different and by conflating them, clear goals cannot be met. The goals outlined in the original document align well to the second part of this vision, but fail to address the first part. New goals that align well with the first part of the document's vision should be articulated.

- 2) We recommend that the definition of nature is used to complement and enhance the document further. We recommend the following definition:

“The phenomena of the physical world collectively, including plants, animals, the landscape and other features and products of the earth, as opposed to humans or human creations” (Oxford Dictionary 2018).



- 3) The definition of biodiversity is problematic because it is not consistent with the international convention to which Australia and 195 other nations are party to. Please consider using:

“The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems” (Secretariat of the Convention on Biological Diversity 2011).

Using the current simplified definition is both misleading and confusing.

- 4) The strategy’s goals and objectives do not follow SMART principles, which are fundamental to successful conservation planning, and involve setting clear conservation targets (Department of the Environment and Energy 2015a). Targets can be defined as specific desired outcomes that support achievement of the objectives (Department of Infrastructure, Regional Development and Cities 2016).

Specific – Target is well defined so its goal can be easily understood;

Measurable – Target has clear parameters that can be measured to track progress;

Attainable - Target is ambitious but realistically achievable with available resources;

Relevant – Target aids in achieving desired long-term outcomes and is consistent with other associated goals; and

Time-bound - Target includes a timeframe for achievement to keep progress on track.

A recent review of Australia’s previous biodiversity conservation strategy explicitly identified the need for SMART targets (Biodiversity Working Group 2016). Page 38 of the report states that, “For targets to be effective drivers of change, they need to be well defined, relevant to the desired outcomes and include clear parameters that enable progress toward their achievement to be measured.”

We fully support this comment and strongly recommend the use of SMART targets in the revised version of the nature strategy. SMART targets increase the focus, motivation, cohesion, and accountability of groups of people working toward a common vision. They are a widely-used and proven approach for improving the effectiveness of businesses, organisations and governments. For example, SMART targets were also used to guide the successful phase out of chlorofluorocarbons (CFCs) under the Montreal Protocol. Conserving nature is a complicated problem that needs the clarity and guidance SMART targets provide.

- 5) The document needs a clear scope. It is unclear at present who will use it and who is accountable for each objective.
- 6) Australian science is world-leading when it comes to systematic conservation planning and we have a proud history of generating the key tools and theories on global best-practice. It is very disappointing to see the absence of any core principles of



conservation planning in this document, namely collecting scientific data, setting clear budgets and reviewing current achievements.

- 7) Maintaining functional, intact ecosystems is a cornerstone of protecting the biodiversity and nature of Australia, especially in a time of climate change, as is clearly outlined in numerous international treaties. While this document demonstrates a focus to “Enrich cities and towns with nature”, there is no mention of the importance of maintaining intact ecosystems. Moreover, saving threatened species is the focus, and subsequently, saving wilderness areas is key for achieving this.
- 8) The description on traditional cultures is too generalised and should receive greater input from traditional owners.
- 9) Social engagement is important; however, it should be a part of a broader conservation plan and not the focus. The theory of change that supports the strategy may seem simplistic to some. Psycho-social scientific research suggests that increased knowledge alone does not translate into increased caring behaviour. Respect for nature and the limits to its use requires more profound societal and economic transformations. These may include delivering and implementing consistent policy among different sectors, which would also reduce social conflict around nature conservation and management.
- 10) State and Territory governments play a key role in conservation in multiple ways; for example, in the designation and management of national parks. Engaging with State and Territory governments shows a commitment to biodiversity beyond political boundaries and is an important component of federal oversight. Therefore, State and Territory governments should be involved and have their state agenda speak to this vision and the goals.
- 11) The strategic plan needs to be costed appropriately. There was no mention of proposed funding sources in the strategy.

The Goals

The three goals outlined in the document do not ensure the overall vision is achieved. In fact, the goals seem to be unrelated to the vision. Furthermore, the three goals are somewhat conflicting. For example, encouraging people to access fragile ecosystems can undermine important conservation actions. Where there is serious intent to reach stated goals, they must follow the SMART principles.

To achieve the first component of the Vision (namely “Australia’s nature, now and into the future, is healthy and resilient to threats”), we suggest there is a need for four specific, inter-related, goals:



- By 2030, ensure there are adequate representations of native species and ecosystems within the Australian protected area estate.
- By 2030, retain all remaining intact areas within Australia.
- No native Australian species will become extinct from human-caused threats between now and 2030.
- By 2030, species' population declines from human-caused threats are halted.

The Objectives

The objectives currently written in the strategy are unclear, unmeasurable and ambiguous. We suggest that the SMART technique is also used for the objectives. Example objectives for the above suggested goals include:

Objectives for Goal 1:

- By 2030, all threatened species are represented within the National Reserve System, and are provided with sufficient area to sustain viable populations.
- By 2030, the National Reserve System should link throughout major continuous habitat corridors, including the Great Dividing Range and other corridors crucial for species tracking shifting climate.
- By 2030, the National Reserve System represents current habitat and future habitat of all species, based on realistic climate projections (RCP 8.5).

Objectives for Goal 2:

- By 2020, identify all areas across Australian that are intact.
- By 2030, all intact areas are protected under a lawfully binding agreement.

Objectives for Goal 3:

- By 2020, the rate of loss of all natural habitats, including forests and woodlands, is at least halved or ideally brought to zero.
- By 2030, Australia will reduce carbon emissions by 28% based on 2005 levels (Department of the Environment and Energy 2015b).

Objectives for Goal 4:

- By 2030, key invasive species are eradicated or controlled; and measures are in place to manage pathways to prevent their introduction and establishment.
- By 2030, all scientifically identified climate change refugia are protected by either a protected area, indigenous protected area or private-protected area.

Final Comments

The previous plan entitled *Australia's Biodiversity Conservation Strategy 2010–2030* (Natural Resource Management Ministerial Council 2010) is well detailed and provides some strong and measurable targets. These included:



- Target 2: By 2015, achieve a 25% increase in employment and participation of Indigenous peoples in biodiversity conservation.
- Target 4: By 2015, achieve a national increase of 600,000 km² of native habitat managed primarily for biodiversity conservation across terrestrial, aquatic and marine environments.
- Target 5: By 2015, 1,000 km² of fragmented landscapes and aquatic systems be restored to improve ecological connectivity.
- Target 10: By 2015, establish a national long-term biodiversity monitoring and reporting system.

These types of targets should be included in the new strategy.

To ensure the vision is achieved, each federal government agency and department needs to understand the vision and ensure their agency-specific vision is not conflicting.

Australia's most recent *State of the Environment Report* (Commonwealth of Australia 2016) concluded that the outlook for Australia's environment depends on our ability to effectively address a complex mix of drivers and pressures through a range of strategies such as improved data, development of adaptive management tools and leadership. The current document shows demonstrably less leadership in a plan to protect Australia's biodiversity.

Please contact Michelle Ward via email m.ward@uq.edu.au or phone 0474 037 657 if you have any specific questions regarding this submission. We would welcome the opportunity to discuss these issues in more detail.

Kindest regards,

Green Fire Science Laboratory

About us

The Green Fire Science lab is headed by Professor James Watson (email james.watson@uq.edu.au) based at the University of Queensland in Brisbane. Collectively, we represent 27 conservation biologists including 15 postgraduate students working on conservation policy, management, prioritisation, spatial planning and threat management (see www.greenfirescience.com). Our science spans ecology, biogeography, social sciences, decision science, economics and philosophy.

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University of Queensland,
BRISBANE QLD 4072



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