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Submitted electronically

To whom it may concern,

Climateworks Centre Submission on the Consultation on National Environmental Laws, 13-14 December 2023

Climateworks Centre welcomes the opportunity to respond to the Consultation on National Environmental Laws, 13-14 December 2023, specifically regarding the proposed role of Environment Information Australia and the Draft National Environmental Standard for Data and Information.

Climateworks bridges the gap between research and climate action, operating as an independent not-for-profit within Monash University. Climateworks develops specialist knowledge to accelerate emissions reduction, in line with the global 1.5 degree Celsius temperature goal, across Australia, Southeast Asia and the Pacific.

As an organisation, we believe that protecting and restoring nature is critical to achieving net-zero greenhouse gas emissions targets because climate change and creating resilient ecosystems are deeply intertwined.

Nature is being increasingly recognised not only for its environmental, social and cultural value but also for its contribution to the sustainability of human society. Currently, over half of the world's economy is moderately or highly dependent on nature (World Economic Forum 2020). Despite this dependency, the state of nature is rapidly declining due to impacts of human activity (IPCC report, Australian State of the Environment report).

Over the last couple of years, we have focused on embedding the concept of natural capital in decision-making, specifically the measurement and valuation of environmental 'assets' as an important enabler of sustainable land use. This work is being conducted through our 'Natural Capital Investment Initiative', a key part of which is the development of the 'Natural Capital Measurement Catalogue'. The insights we gained during its development may be of interest to DCCEE, and we welcome the opportunity to discuss the Catalogue further (see Appendix 1).

Through the development of the Natural Capital Measurement Catalogue, Climateworks has engaged the services of Dr. Francisco Ascui, an Independent Consultant and Professor of Environmental Accounting at Federation University. Francisco is an internationally recognised expert in environmental accounting and finance, with over 20 years of experience across business, government, and academia.

In addition to ensuring that the Catalogue aligns with the evolving Nature Positive regulatory framework, Francisco supported Climateworks' review of and feedback on the Consultation on National Environmental Laws.

Additionally, this submission draws on:

- Insights from our [Natural Capital Investment Initiative](#) and Natural Capital Measurement Catalogue
- Climateworks' engagement with agriculture, conservation, finance, corporate and government sectors to drive consistency in natural capital measurement and embed the value of nature in decision-making.

Submission summary

With increasing attention on impacts from businesses and governments on nature, credible, reliable, and verifiable measurement is critical to determine whether the decline and loss of species and ecosystems is being halted and whether nature is being repaired and regenerating. We need to equip land managers, investors, governments and businesses with scientifically credible data that can inform decision-making at all levels. Climateworks recommends that DCCEEW account for the following when developing proposals for Environment Information Australia (EIA) and the National Environmental Standard for Data and Information. Further detail for each of these recommendations are included in the submission body.

Climateworks recommends:

- **EIA curates a set of nationally consistent environmental metrics and measurement methods.** EIA should collect and provide high quality and accessible natural capital datasets in readily available formats (at site and sub-national levels) to support robust decision-making.
- National Environmental Standard for Data and Information **reliability tiers should be presented in ascending numerical order**, such that Tier 1 is the lowest and Tier 3 is the highest reliability. This follows the example set by the Intergovernmental Panel on Climate Change (IPCC).

Climateworks seeks to work with the Australian Government and interested parties to help build sufficiently granular and extensive measurement systems and datasets in support of public and private sector action.

Context

At present, the Global Biodiversity Framework and the Paris Agreement are pursued and defined separately. However, climate and nature commitments are beginning to converge. At a global level, there is now an understanding that achieving the Paris Agreement will not be possible without the protection, restoration and sustainable management of nature. Businesses and governments must act to protect and restore nature while unlocking new investment opportunities.

The Australian Government seeks to improve its understanding of natural capital at the national, regional and local scales. The Government is compiling data using an accounting approach on natural capital and the flow of services, showing how the environment contributes to the economy and how the economy impacts the environment. In addition, the Government aims to increase private investment in Australia's natural capital by improving measurement and visibility of natural capital Australia-wide.

Internationally, the Task Force for Nature-related Financial Disclosures (TNFD) is emerging as a global, market-driven, science-led and government-backed initiative that aims to develop a practical and consistent risk management and disclosure framework to help corporates and financial institutions assess, manage and report on their dependencies and impacts on nature. The TNFD effort aligns with and shapes a broader movement towards including nature in emerging disclosure standards and regulations.

Measurement of environmental uplift and performance is fundamental if we are to develop new economic models, markets and policies that genuinely improve the state of nature. The chosen measurement approach should be fit-for-purpose, scientifically credible and protect against greenwashing.

Environmental information is a necessary precondition for quality TNFD reporting as well as ensuring private investment in natural capital delivers verified outcomes. Scientifically credible measures and fit-for-purpose data will need to be available to form environmental markets and assess the return on natural capital investments.

Environment Information Australia

Use nationally consistent environmental metrics and measurement methods to underpin decision-useful environmental data and information

Recommendation 1: Climateworks recommends that EIA **curates a set of nationally consistent environmental metrics and measurement methods.**

We strongly support the establishment of the 'Head of Environment Information Australia' as an independent statutory role responsible for State of the Environment reporting, economic-environmental accounting, and designating and curating National Environmental Information Assets. This will help drive much-needed consistency across the Federal government's environmental accounting and reporting, which we expect would drive greater consistency at state, regional and private sector levels.

For information to be comparable and increase transparency for decision-making, it must be based on a consistent interpretation of what is to be measured (metrics) and how measurement is to be carried out (methods). Otherwise, two datasets purportedly about the same thing may in fact provide inconsistent information that cannot readily be compared.

Climateworks recommends government be more explicit about who is responsible for curating a set of nationally consistent environmental metrics and measurement methods. While EIA implicitly has a role ensuring consistency of environmental metrics and methods, we think an explicit mandate would create clarity and improve integration. For example, this would help drive consistency between State of the Environment reporting and environmental-economic accounting, which is currently lacking. It would also help other stakeholders grappling with similar environmental data and information consistency challenges – such as organisations reporting their nature-related impacts, dependencies, risks and opportunities – comply with emerging recommendations from the Taskforce on Nature-related Financial Disclosures (TNFD).

Draft National Environmental Standard for Data and Information

Reliability tiers

Recommendation 2: Arrange the reliability tiers in ascending numerical order, such that Tier 1 is the lowest and Tier 3 is the highest reliability.

Regarding the three-tiered hierarchy proposed to rate the reliability of environment data and information, we acknowledge that the concept of tiers can be interpreted in different ways. However, the Oxford English Dictionary's primary definition refers to 'each in a series of rows or levels of a structure placed one above the other', from which the secondary definition is derived: 'a level or grade within the hierarchy of an organization or system'. There is a hierarchy associated with the term, such that higher tiers are conceptually 'above' or 'built upon' lower tiers. Higher reliability environmental data, for example, typically involves an incremental improvement upon lower reliability environmental data, as opposed to being entirely different. In numerical terms, a progression from 'lower' to 'higher' is more intuitively associated with ascending positive integers, i.e. 1, 2 and 3.

Furthermore, while examples can be found of both ascending and descending numerical denomination of tiers, we believe there is compelling reason to follow the example set by the Intergovernmental Panel on Climate Change (IPCC) in its guidelines for the compilation of greenhouse gas inventories – one of the most well-developed examples of environmental data. The IPCC guidelines are endorsed by the UN, widely applied by governments, and developed from and used widely in the scientific community. The IPCC defines its tiers as follows: 'A tier represents a level of methodological complexity. Usually, three tiers are provided. Tier 1 is the basic method, Tier 2 intermediate and Tier 3 most demanding in terms of complexity and data requirements. Tiers 2 and 3 are sometimes referred to as higher tier methods and are generally considered to be more accurate.' (2006 IPCC Guidelines for National Greenhouse Gas Inventories).

Climateworks has followed this approach in our own construction of tiers to organise information on environmental metrics and measurement methods in the [Natural Capital Measurement Catalogue](#). We explain our approach to tiers within the Catalogue below. We are also using this approach to tiers to categorise sources of data for natural capital metrics.

Natural capital can be measured in many different ways, by different users for different purposes. The NCMC allocates metrics and methods to three tiers, corresponding to different user needs and approaches to measurement, as summarised in the table below.

	Main purpose	Typical approach	Example
Tier 1	Improvements in operational decision-making/management	Estimate, model or measure using your own data and assumptions	Estimating harvested biomass by number of truckloads multiplied by assumed average weight per truckload.
Tier 2	Further improvements in operational decision-making/management, and/or reporting with a limited level of assurance	Estimate, model or measure using the easiest/cheapest/most accessible third-party data and assumptions	Deriving an estimate of biomass production from regional-scale remote sensing (e.g. NDVI) data.
Tier 3	Highly advanced operational decision-making/management, and/or supporting specific claims with a reasonable level of assurance	Estimate, model or measure using highly accurate and verifiable third-party data and assumptions	Measuring soil moisture using calibrated in-ground sensors.

- • **Verifiability, accuracy and costs** tend to increase as you move from Tier 1 to Tier 3.
- • **Confidence/error** tends to shift from unknown to quantified from Tier 1 to Tier 3.
- • **Ease of use and accessibility** generally moves from easy through to challenging from Tier 1 to Tier 3.

Thank you for taking the time to consider our submission. We would welcome an opportunity to brief your team if you would like to explore our responses in further detail.

Yours sincerely,

Eithne Cahill
 Program Impact Manager
 Climateworks Centre
 eithne.cahill@climateworkscentre.org

Liam Walsh
 System Lead - Food, Land and Oceans
 Climateworks Centre
 liam.walsh@climateworkscentre.org

Appendix 1

Natural Capital Measurement Catalogue

The **Natural Capital Measurement Catalogue** addresses the need for a common language and core set of natural capital metrics and measurement methodologies. The Catalogue is an open-source classification system that outlines consistent metrics and suggested methodologies for measuring natural capital assets and services at various scales. It was designed to integrate natural capital considerations into business, financial and government decision-making.

The Catalogue was developed under the guidance of a technical reference panel of experts from research institutions across Australia and an advisory group comprising more than 50 organisations – financial institutions, government, land management, research and supply chains, measurement providers, and consultancies – all with an interest and expertise in measuring and improving natural capital.

The Natural Capital Measurement Catalogue V1.0 was launched in July 2023 and has been positively received by a broad range of stakeholders. More than 2,500 people have interacted with the Catalogue since its launch. It has received local and international recognition through its inclusion in CSIRO's Natural Capital Handbook, the Capitals Coalition Natural Capital Toolkit and the TNFD Tools Catalogue. Climateworks will continue to improve and expand the Catalogue in 2024.

The Catalogue serves as the foundation for two pilot programs, involving NAB and Woolworths Group, that test incentives for measuring and improving natural capital on a large scale using a selection of metrics from the Catalogue. The findings will inform how pilot partners, and stakeholders in its supply chains, can consider natural capital risks and opportunities in their decision-making and prepare for nature-related reporting and disclosure. The pilot with NAB is an example of working with a financial institution to gather data on customer-specific natural capital impacts and dependencies, based on a combination of remote sensed and customer-reported inputs.

References

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IPCC (2006). 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). IGES, Japan.

World Economic Forum (2020). [Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy. New Nature Economy Series](#). Accessed from WEF website 27 March 2024.