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### **Australian Academy of Science submission on *Australia's new Nature Positive laws***

This submission is based on the information published by the Department of Climate Change, Energy, the Environment and Water in its public consultation sessions, of which the most recent was in March 2024.

The Academy makes the following recommendations to ensure holistic and systemic data collection and transparency in decision-making under the proposed new laws:

- The National Environmental Standards must be clear, unambiguous, measurable and enforceable.
- The National Environmental Standard for Data and Information should serve as an important foundation for the Nature Positive legislative suite and clearly define its data standards and requirements.
- The precautionary principle should be maintained.
- The Nature Positive plan should be implemented in full.

Well-informed decisions are underpinned by high-quality data, robust analytical frameworks and clear statutory requirements to integrate evidence and information into decision-making. An improved data regime for environmental decision-making was a central pillar of the Independent Review of the EPBC Act. **Current environmental data systems do not provide decision-makers with the information they need.** The result is inadequate responses to environmental challenges, insufficient environmental regulation, lack of capacity to address cumulative effects and considerable uncertainty regarding the impact of human actions on the environment.

For this reason, this submission focuses on the data and information aspects of the proposed Nature Positive legislation—it is through well-managed, useable and relevant data that environmental science can inform environmental regulation.

**The National Environmental Standards must be clear, unambiguous, measurable and enforceable.**

The Nature Positive legislation will hinge on the National Environmental Standards. These standards *must* be strong. They must be the clearest possible statement of the government's responsibility to Australia's environment.

The Standards must provide clarity and certainty to all parties involved in environmental decision-making, including the citizens of Australia.

Measurable outcomes should be at the forefront of the Standards. Under the Nature Positive legislative suite, there should be a requirement to clearly demonstrate how outcomes would be achieved through decision-making and to measure outcomes over time.

The Standards must be mutually consistent and mutually reinforcing. All Standards should inform each other and, where relevant, explicitly reference other relevant National Environmental Standards to reduce ambiguity and uncertainty. If the Standards are to be introduced using a staged approach, a set of core standards that allow current and subsequent standards to inform and interact with each other should be introduced.

The Standards must embody the government's commitment to preventing further decline in Australia's biodiversity and restoring it where possible.

## The National Environmental Standard for Data and Information should clearly define its data standards and requirements.

The National Environmental Standard for Data and Information is an important foundation for the Nature Positive legislative suite.

The current draft National Environmental Standard for Data and Information purports to provide guidance on the attributes that define the best available evidence. However, it lacks clarity and conflates several considerations that should be treated separately. These ambiguities are not conducive to good data practices.

Data and information are critical to environmental decision-making. For this reason, the National Environmental Standard for Data and Information should serve as the foundational minimum standard that informs the data and information requirements for decision-making under the Nature Positive suite. All decisions made under the new legislation, including setting baselines under other National Environmental Standards, should be in accordance with the National Environmental Standard for Data and Information. To reduce ambiguity, other National Environmental Standards should explicitly refer to adherence to the National Environmental Standard for Data and Information.

If the Data and Information Standard is to define “high-quality data” for the purposes of decision-making under the Nature Positive legislation, it must include:

- **Data Quality Standards** defining the properties the data must have to be considered “high quality”.
- **Data Use Standards** defining the suitability requirements for application to specific decisions, including clear quality, certainty and relevance requirements for decisions.
- **Reporting Standards** defining how essential components of data-informed decisions should be reported, including (for example) how uncertainty in the data should be treated, and how risks arising from this uncertainty should be managed.
- **Data Storage, Accessibility and Transparency Standards** defining the requirements for proponents, the Commonwealth and other relevant parties for disclosure and the sharing of data and information.

There should be a clear, mandatory requirement for data and information used for decision-making to meet the defined attributes. If exemptions to meeting the defined attributes are to be made, the standard should clearly define how such exemptions and data deficiencies should be dealt with in decision-making, such as through the use of the precautionary principle and expert elicitation. Where defined attributes are not met, there should be full disclosure of the datasets and how the defined attributes have not been met. This should also trigger planning to address the shortfalls and ensure a process is in place to raise the quality of data so that it meets the Standard.

A formal system should be developed to address uncertainty in decision-making. Environmental decision-science techniques could provide quantitative or qualitative frameworks for the evaluation of the certainty associated with data points used for approval decisions. The assumptions and approaches used to address uncertainty should be clear, with guidance made available on reducing further critical uncertainties. Uncertainty need not be crippling, and specifying uncertainty can help target monitoring and research to prioritise addressing critical knowledge gaps for better management.

All environmental data — including the data on which environmental impact assessments are based — should be transparent, well-documented, and consistent in format. All data, including models, codes and assumptions used to inform decisions under the Act, should be publicly available and be centrally lodged to enhance transparency and allow for long-term use and easy reuse for future decision-making. This would significantly increase the data availability for areas such as marine environments, where human activity is forecast to increase substantially in coming years. It is also critical to understand and track whether actual environmental impacts differ from predicted impacts to address any gaps and deficiencies in the underlying data, models, and assumptions that inform predictions. These datasets will become valuable resources for research purposes. A requirement for sharing environmental data should also be a major element of the National Environmental Standard for Data and Information.

Data should be specifically linked to defined, quantifiable thresholds that trigger decisions for action under each National Environmental Standard. This would allow for environmental recovery and protection actions to be initiated without needing a direct link to a specific project or intervention.

### The precautionary principle should be maintained.

Given the potential consequences of poor environmental management, the precautionary principle that underpins the EPBC Act should be maintained. While a lack of information should not preclude all action, decisions should be made on the best available evidence for listing and implementation decisions, accounting for uncertainty, with mechanisms for new evidence to affect regulatory decisions. To ensure confidence that environmental objectives are fundamental and prioritised in planning decisions, the precautionary principle needs to be applied until data collected according to standards prove otherwise.

### The Nature Positive plan should be implemented in full.

Stage 3 of the Nature Positive plan should be progressed before the end of 2024, including developing a National Environmental Data Strategy.

The National Environmental Data Strategy should be aspirational and aim to achieve active stewardship from Environment Information Australia and the Commonwealth to build an environmental data ecosystem where data needs and deficiencies are swiftly and effectively identified and dealt with, and stakeholders are brought together to share data, systems and knowledge for mutual benefit and to create a reliable, accessible, and holistic data ecosystem.

Furthermore, Environment Information Australia should be tasked with the responsibility of independently implementing the National Environmental Standard for Data and Information and ensuring that national data sources meet agreed quality standards and are fully disclosed. National harmonisation of the environmental sector data will improve the quality and reliability of environmental policies and identify gaps in research and management efforts that need to be addressed.

To discuss or clarify any aspect of this submission, please contact Mr Chris Anderson, Director Science Policy at [Chris.Anderson@science.org.au](mailto:Chris.Anderson@science.org.au)