Australian
Citizen Science
Association

Introduction

The following outlines an edited version of the survey response made by the Australian Citizen Science Association (ACSA) to the discussion paper on ***Implementing Australia's Strategy for Nature 2024-2030*** (October 2025). The Australian Government is developing an implementation plan to support the Strategy for Nature – wanting to explore the connection between targets and enablers, identify key outcomes, highlight existing actions, and outline their monitoring, evaluation and reporting approach consistent with the Global Biodiversity Framework.

The consultation questions were organised around the collective action targets and enablers for change including the outcomes where action should be focussed to achieve the target or enabler (see below). ACSA provided a general response across all targets/enablers/outcomes rather than each individual target/enabler/outcome.

Targets:

- Protect and conserve 30% of Australia's landmass and 30% of Australia's marine areas by 2030
- Priority degraded areas are under effective restoration by 2030
- Eradicate or control invasive species in priority landscapes and further minimise their introduction by 2030
- No new extinctions
- Minimise the impact of climate change on biodiversity
- Increase Australia's circularity rate and reduce pollution and its impacts on biodiversity by 2030

Enablers:

- Ensure equitable representation and participation in decisions relating to nature, particularly for First Nations peoples
- Mainstream nature into government and business decision-making, including in financing, policies, regulations and planning processes
- Ensure environmental data and information are widely accessible and support decision-making

ACSA Response

Q: What additional outcomes will support us to achieve the targets and enablers of change?

Specificity and SMART - Greater specificity and targets within the outcomes is required, including a theory of change / program logic to illustrate the impact pathway to the outcome (an explanatory diagram would help).

Invest in enabling infrastructures - Financial support for enabling infrastructures that have an investment leveraging effect and provide significant amounts of data, including a connecting mechanism for communities to engage with nature ("support for community-based monitoring and information systems" GBF Monitoring Framework at COP16.2):

A. *technical infrastructure:* i.e. funding of key and foundational citizen science applications such as iNaturalist, eBird, NatureMappr, invasive species apps, Indigenous ranger data collection apps, ALA / TERN citizen science activities (noting citizen science not strictly within NCRIS facility mandate yet represent majority of data within ALA);
B. *organisational infrastructure*: support for coordinating, convening, educational, intermediary, and knowledge brokering organisations and groups as "backbone organisations" in helping to create collective impact.

An example of how citizen science infrastructures are contributing to threats such as invasive species is illustrated in the following recent article - Roger E, Turley A, Waite C, Balasubramaniam S, Slatyer C, Andrew Pearce J. (2024) Citizen science delivers high-value biosecurity surveillance and reporting capability. *Wildlife Research* 51, WR24046 https://doi.org/10.1071/WR24046

Q: Are there any barriers to achieving the targets or enablers of change? What solutions for overcoming these barriers can you put forward?

Two-way communication with citizen science - ongoing two-way communication between citizen science and government/decision making. While citizen science data is being increasingly used in decision making (one way), greater feedback loops are required - not only in how data is being used, but also guidance, direction and support on areas for effective citizen science activity and mobilisation (e.g. specific conservation areas, species, targets, threats etc).

Citizen science supports community engagement - properly resourced citizen science supports effective community / local community engagement and capacity building and makes real that "we all have a part to play" - supporting change through social cohesion, social licence, advocacy, volunteerism, social capital, social dialogue, community prioritisation, democratisation of science knowledge etc.

Embed citizen science in policy - explicit recognition of and commitment to citizen science and its inclusion and mainstreaming within policy, actions, indicators. A recent OECD report provides some key recommendations - https://www.oecd.org/en/blogs/2025/04/what-is-citizen-science-and-why-should-policymakers-care.html. An example at the local policy level - is the NSW Biodiversity Conservation Trust Citizen Science Strategy that ACSA co-developed.

Embed community ideation and co-design in every on-ground action. Require early-stage participatory design sessions (with local communities, First Nations organisations, schools, landholders, and practitioners), followed by shared decision-making and clear feedback loops. Co-created citizen-science programs show higher uptake, better data quality, and stronger stewardship that endures beyond strategy cycles. This approach aligns with Australia's Strategy for Nature "enablers of change" around partnering and empowering communities, operationalises the Kunming–Montreal Global Biodiversity Framework's call for full and effective participation (especially of Indigenous peoples and local communities), and reflects the UN Decade on Ecosystem Restoration principles for inclusive governance and co-creation, as well as OECD 2025 recommendations to embed citizen science through co-creation in research and policy.

Q: Are you or your organisation already taking action to contribute to achieving the targets or enablers of change? Please provide further information on the action you are taking.

Breadth and depth of citizen science actions - The ACSA project website (https://citizenscience.org.au/projects/) provides examples of some ACSA specific activities and our beta Scistarter Australia website also lists many citizen science projects https://www.scistarteraustralia.au/projects including in the environment space.

Our CitSciOz25 conference abstracts (to be published shortly - program provides overview: https://citizenscience.org.au/conference-program/) is a snapshot of recent actions from our community (including: options for citizen science in the nature repair market; citizen science in pesticide monitoring; biosecurity surveillance and citizen science; codesigning place-based and culturally appropriate citizen science with Indigenous communities; case studies on citizen science leading to real-world change; AI and citizen science etc).

Many of these examples and others could make good case studies in the implementation plan for Australia's Strategy for Nature 2024-2030 or national report to the Convention on Biological Diversity. ACSA welcomes the opportunity to work with the Department to develop these case studies.

Q: Feedback on Australia's approach to monitoring, evaluation and reporting under the Global Biodiversity Framework (GBF)? Specifically, please list the areas requiring particular attention to improve Australia's ability to monitor and report on progress (e.g. data availability, data consistency, collection methods, use of new emerging technologies etc.).

Citizen science provides an enriched picture for reporting - apart from actual resources ("domestic funding") to undertake the indicator activities, gathering the data to support reporting under the GBF indicator framework will require and benefit from information from the citizen science community (e.g. amount of domestic funding for citizen science, number of people from local communities contributing, actions for capacity-building (e.g. see ACSA/ SA Government project developing online-learning modules: https://citizenscience.org.au/capacity-building-program-for-south-australias-citizen-science-project-leaders/), capacity self-assessment, technology access, international partnerships, diversity of participants (e.g. See the ConnectUp platform incorporating citizen science for people with disability and their carers: https://citizenscience.org.au/connectup/)). ACSA is well suited to undertake this assessment and impact analysis activity with some resourcing, having developed a proposal for a general citizen science impact assessment.

The following article "Involving citizens in monitoring the Kunming–Montreal Global Biodiversity Framework". *Nat Sustain* 7, 1730–1739 (2024). https://doi.org/10.1038/s41893-024-01447-y - provides some insights into not only how citizen science can contribute to reporting on indicators but also some of the barriers and opportunities which we hope the Australian government and the citizen science community can work together on.