Submission on

Developing a Biodiversity Act for South Australia

By James R. Biggs

Director of Conservation & Population Management, Zoo & Aquarium Association Australasia (ZAA)

Director of the IUCN SSC Centre for Species Survival: Australasia (CSS: Australasia)

Head of Delegation & Representative Speaker for the Zoo & Aquarium Association Australasia to United Nations Convention on Biological Diversity and its Protocols (UN CBD); and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Submission on behalf of the following entities:

Zoo and Aquarium Association Australasia (ZAA)

IUCN SSC Centre for Species Survival: Australasia

ZAA Wildlife Conservation Committee (WCC)

ZAA Animal Management Committee (AMC)

Biodiversity Coordination Unit
Department of Environment and Water
81-95 Waymouth Street
ADELAIDE SA 5000
By email: biodiversity act@sa.gov.au

PO Box 538,
Mosman NSW 2088
admin@zooaquarium.org.au
ABN 71 836 556 156

27/02/2024

Dear Biodiversity Coordination Unit,

RE: Developing a Biodiversity Act for South Australia

The Zoo and Aquarium Association Australasia (ZAA), the IUCN SSC Centre for Species Survival: Australasia, and the listed ZAA Committees welcome efforts to establish a new Biodiversity Act for South Australia. The development of the Act is of great interest to our sector, and we welcome the opportunity to provide our expectations and priorities around biodiversity conservation, and offer our unique views, knowledge, and perspectives to this consultation.

We are alarmed by the rapid evolution of climate change, the continued loss of biodiversity, impacts from pollution, and the threats posed by these crises to nature, including to human well-being. As stakeholders invested in the preservation of our natural heritage, it is imperative that we urgently adopt ambitious, transformative, forward-thinking approaches to safeguard biodiversity and its evolutionary potential in the face of mounting environmental challenges.

We encourage the Government of South Australia to wholly support the implementation of Australia's international obligations under all biodiversity-related treaties including the UN Convention on Biological Diversity and its supplementary protocols – the Nagoya Protocol on Access and Benefit-sharing, and the Cartagena Protocol on Biosafety.

We support all objects and intents under Australia's relevant prevailing legislation and policies, including the Nature Positive Plan, the subsequent National Biodiversity Strategy and Action Plan 2024-2030, the suite of recommendations made in Professor Graeme Samuel AC's Final Report of the Independent review of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (2020), and the 2021 State of the Environment report. The development of sub-national legislation and policies aligned with these instruments will be critical to catalysing transformative action, and the subsequent successful delivery of the Kunming-Montreal Global Biodiversity Framework and its supporting frameworks.

Kind regards,

James R. Biggs on behalf of:

Zoo and Aquarium Association Australasia (ZAA)
IUCN SSC Centre for Species Survival: Australasia
ZAA Wildlife Conservation Committee (WCC)
ZAA Animal Management Committee (AMC)

Topic 1 – Biodiversity and South Australia's first nations people

Recommendations:

The South Australian Government should:

1. Foster enduring, mutually beneficial long-term relationships between Traditional Custodians and South Australian authorities to collaboratively address ecosystem and species recovery.
2. Recognise and embrace the customary laws, cultural practices, and protocols of all South Australia-based First Nations Groups, including provisions for those that many not yet be recognised by Native Title to co-develop area-specific protocols.
3. Meaningfully weave the values and knowledge of First Nations People in the co-design of processes to establish new legislation, and co-design and implementation of a new Biodiversity Act for South Australia, aligned with international Biodiversity-related multilateral environment agreements, and the principles of free, prior, and informed consent. These may include but would not be limited to the United Nations Declaration on the Rights of Indigenous Peoples; International Labour Organisation No, 169; United Nations Framework Convention on Climate Change; United Nations Convention on Biological Diversity, and the supplementary Nagoya Protocol on Access and Benefit-sharing; World Intellectual Property Organisation Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge, and Folklore.
4. Ensure that First Nations peoples' 65,000 years of science, knowledge and wisdom are not misused or misappropriated.
5. Establish a sustainable fund that supports the work of First Nations People on Country.

Topic 2 – Mitigation hierarchy and avoiding impacts

Most biodiversity legislation provides for threatened species but rarely adequately or explicitly considers measures to avoid scenarios where species or ecosystems unknowingly deteriorate as a result of "death-by-a-thousand-cuts".

There are too many real examples of species deteriorating to such low numbers that *ex situ* programs established to recover these species inevitably fail. For *ex situ* interventions to be of measurable value, time is needed to learn about species and their care before the species are imperilled to the point of functional extinction.

We also have an opportunity right now to buy time for species, through cryopreserving gametes, tissues, and other bio-specimens while key threatening processes are managed and mitigated.

We support the mitigation hierarchy and agree that offsets should be the last option in the hierarchy.

Recommendations:

The South Australian Government should:

6. Not weaken or otherwise undermine the strength of existing South Australian environmental legislation.
7. Prioritise measures to prevent negative impacts on biodiversity.
8. Buy time for species by instituting mechanisms to preserve species before they face imminent extinction, including through implementing research plans that seek to achieve the following with these species:

    a. Learn how to appropriately maintain, properly care for, predictably and consistently breed, maintain behavioural competency.
9. Implement proactive measures and triggers engage the *ex situ* sector and capitalize on its expertise before species become imperilled.
10. Implement plans to learn how to care for these species in an *ex situ* context before population numbers and genetic diversity are low.
11. Collaborate with the federal government and *ex situ* organisations to finance and systematically bank bio-specimens for all species before genetic diversity is lost.

Topic 3 – Transparent decision-making

Recommendations:

The South Australian Government should:

12. Maintain a readily accessible public register to disclose submissions affecting biodiversity and governmental decisions supporting such activities.

Topic 4 – Threats to biodiversity

Recommendations:

The South Australian Government should:

13. Support and finance initiatives aimed at mitigating threats to biodiversity identified nationally and in other states.
14. Take decisive action to prevent species from being monitored to extinction.
15. Enact statutory obligations to finance the mitigation of identified threats.
16. Permit, and where possible finance the implementation of *ex situ* actions such as biospecimen banking.
17. Permit, and where possible, finance the implementation of *ex situ* measures documenting successful care and breeding of both imperilled and non-imperilled species.

Topic 5 – Assessing the risk of extinction

Recommendations:

The South Australian Government should:

18. Embrace the precautionary principle in cases of deficient or uncertain data.
19. Embrace the Common Assessment Method and streamline pathways for nomination, assessment, consultation, conservation planning and review.
20. Work with/contract organisations skilled in the assessment of threatened species. For example, the Species Survival Commission of the International Union for the Conservation of Nature (IUCN SSC), the IUCN SSC Centre for Species Survival: Australasia (IUCN SSC CSS Australasia); the IUCN SSC Conservation

Planning Specialist Group, and others, to scale up species assessments and the development of conservation plans.

21. Commit to preventing human-induced extinctions.

Topic 6 – Biodiversity planning and reporting

Effective conservation requires that a diversity of management actions is considered and tested using a cross-disciplinary, multi-institutional approach (Biggs *et. al*. 2023). As habitats continue to be impacted by a complexity of unabated threats, there is an increasing need for a 'One Plan Approach (Byers et al. 2013) that integrates *in situ* and *ex situ* management processes (Schwartz *et. al.* 2017; IUCN 2020; UNEP 2021). This concept is further supported by the IUCN SSC (2023), who encourages all its partners including government agencies to collaborate with botanic gardens, aquariums, and zoos in the collective work of saving species through the One Plan Approach.

Increasing rates of extinction, exacerbated by climate change, will likely challenge the dependence on *in situ* strategies and may necessitate increased development of in *ex situ* approaches (Bowkett 2014). The role of ex situ organisations, however, is often under-valued, under-recognised and misunderstood (IUCN SSC 2023).

Ex situ facilities can deliver many strategies and tools that cannot be replicated solely in *in situ* settings (Biggs 2023) These include frozen zoos, seed banks and botanic gardens specializing in research geared towards maintaining germplasm and germline samples in perpetuity; hospitals and emergency response facilities for treatment and ongoing care, rehabilitation and release of animals; traditional zoos and botanic gardens providing education and advocacy for species and intensive genetic management; as well as larger fenced sites.

In scenarios where *in situ* mitigation measures are ineffective and threat abatement measures can't be eliminated or abated, *ex situ* actions are literally the only management action that can guarantee a suite of future options for recovery of species.

Recommendations:

The South Australian Government should:

22. Integrate *in situ* and *ex situ* conservation planning and management processes to formulate comprehensive conservation plans.
23. Work with/contract organisations skilled in the management of large stakeholder groups to scale up the development of recovery plans for threatened species. For example, the Species Survival Commission of the International Union for the Conservation of Nature (IUCN SSC), the IUCN SSC Centre for Species Survival: Australasia (IUCN SSC CSS Australasia); the IUCN SSC Conservation Planning Specialist Group, and others.
24. Fund the production and implementation of multi-stakeholder, statutory conservation plans.
25. Align biodiversity decline and recovery indicators with headline, component and complementary indicators identified by the UN Convention on Biological Diversity (CBD).
26. Support national reporting mechanisms to the CBD.
27. Enact legislation mandating a regularly reviewed statewide biodiversity strategy, synchronised with Australia's National Biodiversity Strategy and Action Plan.

Topic 7 – The benefits of information

Recommendations:

The South Australian Government should:

28. Allocate resources to systematically collect data and bio-specimens from threatened and non-threatened species.
29. Facilitate research and utilization of collected samples for organisations engaged in threatened species conservation.
30. Enact a legislative framework to facilitate the collection, storage and public accessibility of biodiversity information, samples, and data where there are no objections from First Nations People.

Topic 8 – Achieving 30 by 30

Recommendations:

The South Australian Government should:

31. Support recommendations put forward by the Australian Land Conservation Alliance and others relating to 30 x 30 goals.
32. Institute schemes to further support the establishment and management of conservation areas on private and other lands.
33. Expand the protected area estate where such action does not undermine or prevent Traditional Custodians from accessing and caring for country.

Topic 9 – Biodiversity – a shared responsibility

Recommendations:

The South Australian Government should:

34. Clarify the respective roles and responsibilities of the community and introduce a 'biodiversity duty of care', making biodiversity protection a continuous legal and social responsibility.

Topic 10 – Consequences of doing the wrong thing

Recommendations:

The South Australian Government should:

35. Impose substantial sanctions and maximum penalties for actions contributing to biodiversity destruction.

Additional Topic – ACTION

Recommendations:

The South Australian Government should:

36. Finance the development statutory conservation plans, and the implementation of actions identified therein.
37. Regularly review the effectiveness of the new Act to identify and address shortfalls.
38. Finance appropriate government staff participation in national and state recovery teams.

Once again, the listed entities welcome efforts to establish a new Biodiversity Act for South Australia. The development of the Act is of great interest to our sector, and we welcome the opportunity to provide our expectations and priorities around biodiversity conservation, and offer our unique views, knowledge, and perspectives to this consultation. Thank you.

End.

References

Biggs JR, Gray J, West J, Wrigley D, Offord CA, Zimmer HC, Mackenzie BDE, Duval D, Guerin J, Te T, Parrot ML, Miller KA, McFadden MS, Van Sluys M. *Ex situ* responses to the 2019-2020 wildfires. In Rumpff L, Legge S, van Leeuwen S, Wintle B, Woinarski J (2023) Australia's Megafires: Biodiversity Impacts and Lessons from 2019-2020. CSIRO Publishing.

Bowkett AE (2014) *Ex situ* conservation planning is more complicated than prioritizing the keeping of threatened species in zoos. *Animal Conservation* **17**, 101–103. doi:10.1111/ acv.12116

Byers O, Lees C, Wilken J, Schwitzer C (2013) The One Plan approach: the philosophy and implementation of CBSG's approach to integrated species conservation planning. *WAZA Magazine* **14**, 2–5.

IUCN (2020) *Motion 94 – Linking in situ and ex situ Efforts to save Threatened Species*. Gland, Switzerland.

IUCN SSC (2023) Position Statement on the role of botanic gardens, aquariums, and zoos in species conservation. IUCN Species Survival Commission (SSC), Gland, Switzerland. 8pp. <https://www.iucn.org/sites/default/files/2023-10/2023-position-statement-on-the-role-of-botanic-gardens-aquariums-and-zoos-in-species-conservation.pdf>.

Samuel, G 2020, Independent Review of the EPBC Act – Final Report, Department of Agriculture, Water and the Environment, Canberra, October. CC BY 4.0.

UNEP (2021) First draft of the post-2020 Global Biodiversity Framework. United Nations Environment Program, <https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03- 03-en.pdf>.

Who is ZAA?

The Zoo and Aquarium Association Australasia (ZAA) is the peak body representing the collective voices of the zoos, aquariums, sanctuaries, wildlife parks and other *ex situ* facilities across Australasia that operate to the highest standards.

We foster respectful connections between people and nature by harnessing the collective influence and professional standards of our members.

We act as a central hub, connecting regional zoos and aquariums with global and national networks for conservation, animal welfare, sustainability, research, and community engagement.

Our collective membership is our greatest strength, recognising the experience, expertise, government connections and the many community partnerships that our members bring to the Association and our Vision: Positive outcomes for wildlife and people. ZAA Members are experts in caring for X native and exotic species.

ZAA administers ~100 species programs, many of which are established to meet ex situ-specific conservation needs identified in statutory conservation planning instruments (Recovery Strategies, Recovery Plans, Conservation Advice), or as advised by authorities (National, State, Territory Governments, Recovery Teams, Academia). Additionally, we actively contribute to 629 threatened species recovery projects around the world, and each year, we connect 22 million visitors with nature, educate 1.1 million students about wildlife.

For more information about ZAA, click here.

What is the IUCN SSC Centre for Species Survival: Australasia?

The IUCN SSC Centre for Species Survival (CSS) Australasia is a partnership between the International Union for Conservation of Nature – Species Survival Commission (IUCN-SSC) and the Zoo and Aquarium Association, Australasia (ZAA). The Centre is made up of a high performing team of scientists, brought together to assess the extinction risk of Australian threatened species and build strategies to maximise positive impact for long-term recovery of threatened native species. This work is funded through ZAA's charitable arm, the Wildlife Conservation Fund.

Utilising our unique network and knowledge, the IUCN SSC CSS Australasia supports native species conservation, working with the Australian Federal and State Governments and the Federal Threatened Species Scientific Committee (TSSC) on species assessment and conservation planning. With a species assessment complete and recovery plan endorsed, action to conserve the species is mobilised through ZAA's network of conservation based, welfare accredited zoos, aquariums, and wildlife parks.