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Biodiversity Bill

The Royal Society of South Australia (RSSA) welcomes the preparation of legislation to conserve, enhance and restore this State's biodiversity. A stronger legislation to protect biodiversity and enhance effective conservation and management of land and waters will align with the global targets adopted in the Global Biodiversity Framework at COP 15 of the signatory countries of the UN Convention on Biological Diversity¹. Most of the plants and animals native to Australia are endemic and the diversity faces a continuing and rapid decline since European colonisation². The 2023 State of the Environment Report for SA estimated a decline of 41.6% of the native flora and 44.1% of native fauna with trends indicating that the decline is getting worse³. The RSSA encourages the Government to develop a Bill that is ambitious enough to affect a halt of this decline and to lay the path towards improved protection and a nature positive future.

We have reviewed the draft legislation and make several suggestions and comments as set out on the Attachment. For convenience, we have listed our suggestions and comments in the sequence of the relevant sections of the Draft Bill, with page and section references. As background to those specific suggestions, the RSSA offers the following general comments on the Draft Bill.

Since the Earth Summit in 1992, a guiding principle of environmental conservation has been the precautionary approach, described in the Rio Declaration (Principle 15) as an approach that should be widely applied by States to protect the environment. The principle implies that if there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason to postpone measures preventing environmental degradation⁴. The RSSA suggests this precautionary Principle 15 be added to the list of principles to be followed (Part 2 – 8).

Throughout the Bill, specifics of the operation and implementation appear vague as the regulatory environments are said to be evolving, policies to fulfill the objectives of the Act are still to be created,

and the State Biodiversity Plan is to be developed. We are concerned that this disjunct in timing of these determinants may create risks to the effective protection of biodiversity. It may also hamper the assessment of the potential efficacy of this Bill.

The large scale and spread of South Australia and its diverse array of landscapes and seascapes contributes to a large biotic diversity. The RSSA suggests the Bill include a clear statement defining the range of ecosystems to which the Bill applies. We suggest the Bill explicitly mention the inclusion of the Terrestrial, Marine and Freshwater realms, unless one of those realms is not covered by the Bill, in which case the exclusion should be clearly stated.

The RSSA also suggests references in the Bill to species be more prescriptive and in line with the scientific basis for defining units of biodiversity. A species is a taxonomically described entity and includes subspecies, varieties, and populations.

The Bill and Explanatory Guide include some ambiguities about native and non-native, as well as protected species. For example, the Explanatory Guide refers to simplified clearance of 'problematic' or 'impact causing' native plants without defining criteria for what a problematic native plant is or providing a list of plant species falling into this category. This should be added to the definitions. Native plants are often considered in the context of new plantings, but the remaining old growth vegetation in the state receive little to no mention, although of high value for biodiversity protection.

South Australia has a high biodiversity of marine macroalgae and seagrass, yet the provisions in the Draft do not appear to cover marine macrophyte biodiversity.

The Draft provides little consideration to invasive species which can be a great threat to biodiversity. As species non-native to South Australia but native to Australia are to be considered native under the Draft, there could be a risk that species not originally native to the lands and water of this State become invasive and outcompete local native species.

The Draft provides for the protection of all native animals but it appears that fish, amphibians and invertebrates are exempt and only protected if listed as threatened. If all native animals are to be protected under the Biodiversity Act (in recognition of the intrinsic value of biodiversity), the definitions should ensure that protection also applies to fish, amphibian and invertebrate species that are not listed as threatened.

It should be noted that assessments of the threatened status of invertebrates are only available for very few species. Globally, only 2% of described invertebrate species were evaluated by 2024⁵. According to the latest taxonomic list for fauna for use with the Biological Data Base of SA, four out of 2,468 invertebrate species (0.16%) were listed under the Environment Protection and Biodiversity Conservation Act, and none was assessed for South Australia.

The Explanatory Guide mentions 'regulated' and 'unregulated' activities for native plant clearance, but 'unregulated' activities are not defined in the Draft.

The RSSA commends the Government for the inclusion of a Scientific Committee as an integral part of the Bill and suggests the composition and functioning of the group is critical to meet the objectives of the proposed Bill. Members of this Committee should be appointed on the merit of their scientific qualifications and experience in biodiversity, ecology and conservation. We also

anticipate that members of this Committee are specialists equally representative of the plant and animal biotic realms, as well as terrestrial and marine biodiversity. We advocate for a wider role of the Scientific Committee beyond the assessment and advice of threatened species. The Scientific Committee should provide input to the establishment and review of the State Biodiversity Plan. Duties of the Scientific Committee should also be to recommend and advise on the research and monitoring needed to increase the understanding and state of SA's flora and fauna to ensure the efficacy of the Bill's intent and its implementation.

We have previously noted in our April 2024 submission to the Government on the proposed changes to the SA Museum that biodiversity underpins a strong economy. We also noted at that time that the value and application of a Biodiversity Act will require knowledge of this State's biodiversity with the voucher specimens collected and scientifically curated at the SA Museum. Voucher specimens affirm the existence of a species, and the records of the location of occurrence - especially as climate change is now shifting biota distribution ranges. The knowledge of the biodiversity of South Australia is based on the voucher collections in the major taxonomic collections of the SA Museum, the Waite Institute, and the SA Herbarium managed by the Government and that the value of these collections is dependent on the expertise of taxonomists working in these and other institutions. We suggest the Bill make specific reference to the relevance of these institutions and the taxonomic resources that contribute to our knowledge of biodiversity.

The Royal Society is aware of the likely ramifications of a regulatory Act of the kind proposed for the success of industry sectors operating in South Australia as business owners and investors consider nature-related dependencies and nature-related risks. An Act will also be an important guide to the establishment of business activities aimed at the repair and restoration of biodiversity, and the transition to a 'low carbon economy'.

The Royal Society is particularly interested in the scientific basis for the various provisions of the Bill and is keen to ensure that all decisions made under the Bill are based on the best available scientific evidence, applied routinely and with rigour. The RSSA has previously noted the scope and intent of the Government's investment in *BioData SA* as a "data system to capture, manage and share South Australia's biodiversity data with scientists, governments, business and the community." Building a stronger state biodiversity data system will require an intensification in scientific efforts (research and monitoring) as well as taxonomic research and curation at South Australian organisations. We note that the ability to provide data openly and freely may rely on Intellectual Property clauses in research funding contracts.

The Bill seeks to create a Biodiversity Register, which should be a platform linked with existing databases (including Biological Data Base SA, Naturemaps SA) and the data records at the SA Museum and SA Herbarium.

While the Bill seeks to include scientific foundations to the management of Biodiversity, it remains silent on the collection of plants and animals for fundamental scientific purposes. Collection of parts of plants (*eg* seeds and flowers) is also necessary for confirmations of identifications and voucher specimens for the Herbarium. Similarly, animals will need to be collected for research and monitoring, with sample processing usually requiring laboratory work and deposition in the SA Museum. The RSSA suggests comment is included in the Bill on the requirement for scientific permits in addition to those under the National Parks and Wildlife Act and Marine Park Act, and

perhaps foreshadow an intent to move towards a streamlined approach for permits to foster scientific investigations and monitoring in the State.

The RSSA seeks clarification on the process of assessment and listing of threatened species, as we see the need for support of more research to provide data to support the assessment. We also seek clarification on the geographic scale proposed to be considered as this is relevant for the assessment of changes in distribution and range of occupancy. The occurrence of a species could be below the threshold for listing in South Australia, but if there is ambiguity that would allow consideration of areas beyond the state boundaries, the outcome could be different. This risk should be avoided.

The RSSA notes that the Draft Bill is silent on the planning towards improved land management to protect and conserve habitats and ecosystems of high biodiversity value and encourage additions that reflect an ambition to revert biodiversity loss and increase biodiversity. The clearance of native plants undertaken for subdivisions, new developments, services and infrastructure will continue the decline in biodiversity, as habitat loss is the known main cause of Biodiversity loss (see State of the Environment report). Retaining native plants in subdivisions could also prevent urban heat islands and improve well-being of residents, in addition to benefits to mitigate climate change impacts.

The RSSA is grateful for the opportunity to comment and to provide suggestions for improvement and looks forward to the completion and adoption of a Biodiversity Act that will achieve the intended purposes.

Signed on behalf of the elected Council the Royal Society of South Australia Inc who have prepared this submission,



President

February 17th 2025

References

- 1 <https://www.cbd.int/article/cop15-cbd-press-release-final-19dec2022>
- 2 Dielenberg et al. 2024 <https://doi.org/10.1111/emr.12594>
- 3 <https://soe.epa.sa.gov.au/environmental-themes/land/state-of-our-land/biodiversity>
- 4 https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CON.F.151_26_Vol.I_Declaration.pdf
- 5 IUCN summary statistics 2024 <https://www.iucnredlist.org/resources/summary-statistics#Summary%20Tables>

Royal Society of South Australia Inc

Suggestions for changes to the Draft Biodiversity Bill 2025

At **page 11**, the definition of 'animal product' should specifically exclude fossils to avoid doubt in interpretation. The RSSA proposes an additional subsection (d) "but excludes fossils, mineralised fossils or fossil parts of an animal."

At **page 13**, definition of 'ecological community', the RSSA questions the specific reference to 'native species' in this context as the associated definition of 'ecosystem' at page 13 does not differentiate native and non-native species. The RSSA proposes a change in text to "**ecological community** means an association of co-occurring species that meets the criteria prescribed by the regulations for the purposes of this definition".

At **page 15** – the definition (b) for 'land' as an 'interest' should be clarified

At **page 15**, the definition of native animal needs to include those that are living or extant species. The RSSA proposes the definition in (a) be altered to read "an animal of a living or extant species that is indigenous to South Australia or was present in Australia before 1400 AD; or" We also note the need to define that Australia includes not just the land mass but also the EEZ, which is relevant for marine animals.

At **page 15**, the definition of 'native plant' subsection (c) explicitly excludes dead plants and plant parts. The associated definition of 'native animal' does not exclude dead animals. For consistency, dead plants should not be excluded in the definition. Moreover, dead plants, and particularly trees, are an important resource for breeding and roosting for various animals, and maintenance of old trees can be crucial to some species survival. The RSSA proposes subsection (c) of the definition of 'native plant' be deleted in its entirety.

At **page 15**, the definition of native animal needs to include those that are living or extant or living species. The RSSA proposes the definition be altered to read "an animal of a living or extant species that is indigenous to Australia or was present in Australia before 1400 AD; or"

At **page 16**, the definition of plant subsection (c) is too restrictive. Cone-bearing plants should be included in the definition. The RSSA proposes a change in text of subsection (c) from "flowers, seeds or any other part of a plant" to "flowers, fruits, cones, seeds or any other part of a plant".

At **page 19**, the definition of 'species' be specified to "species includes a taxonomically described entity and includes subspecies, varieties, and populations of a species". This addition reflects that species are a fundamental unit of biodiversity and has a specific meaning in biology, and that the categories like subspecies must relate to a taxonomic species.

At **page 22**, the reference to climate change is welcomed and the RSSA recommends more than a cursory mention of climate change at this section and elsewhere. The RSSA notes only 3 other references to climate change in the draft Bill.

At **page 23**, Section 10 – First nations knowledge. the RSSA suggests the word ‘apply’ is too restrictive and should be replaced with ‘integrate’. While it is important to consider such knowledge it should be in the context of all other knowledge sources. The RSSA recommends the sentence read “A person or body engaged in the administration of this Act must, as far as is practicable, seek, consider and integrate First Nations’ knowledge (where it is available and endorsed by the knowledge holders), in the following:”

At **page 25**, the Biodiversity Council membership should include more than one member of the Scientific Committee [subsection (1) (c)]. There is capacity to increase the representation of the Scientific Committee while still remaining within the Council designated size of at least 7 and not more than 12 members. The RSSA proposes a change in text at subsection (1) (c) from “1 must be a member of the Scientific Committee” to “at least 2 must be members of the Scientific Committee”. This also ensures a range of scientific skills are available to the Council, including skills in both animal and plant systems as these two are differentiated in the draft Bill.

At **page 26**, we note that for the selection of persons with experience in terrestrial and aquatic biodiversity, conservation and restoration to the Biodiversity Council, the Draft Bill states that the Minister will consult with the Conservation Council of SA. We encourage to widen this consultation to peak bodies of scientific institutions and/or professional associations.

At **page 27** – the RSSA recommends the prescribed number of members for the NPCAC is stated as ‘no less than...’.

At **page 29**, the RSSA recommends Scientific Committee be expressly required to seek independent and informed advice from experts in a particular field. The RSSA proposes the addition at subsection (2) of “will seek independent and informed scientific opinion or evidence in providing advice to the Minister.” This new text is perhaps best inserted after current subsection (i) and current subsection (j).

The RSSA also recommends the Scientific Committee have a stated minimum and maximum number of members to ensure a critical scale is available. The RSSA proposes a change in text at section 24 subsection (1) from “The Scientific Committee will consist of the prescribed number of members” to “The Scientific Committee will consist of such numbers as necessary to ensure the required skills are available and be not less than 10 members.”

At **page 53**, under Section 66 Protected animals – part (9), the RSSA suggests the scientific names of several species listed be reviewed for currency. Specifically, (a) red kangaroo is *Osphranter rufus*; (c) euro is *Osphranter robustus*; and (e) tammar wallaby is *Notamacropus eugenii*. These taxa are incorrectly assigned in the draft Bill to the genus *Macropus*.

At **page 111 and 112**, the RSSA suggests the updating of the State Biodiversity Data be prescribed to be at intervals of 2 years and the State Biodiversity Plan be reviewed at intervals of 5 years to ensure the currency of the information held and the value of the Plan to achieve the objectives of the Act. To achieve this, the RSSA proposes additional text as a subsection “The State biodiversity data will be regularly reviewed to ensure its accuracy and currency and at intervals of no less than 2 years.” The most appropriate placement of this new text will be after current subsection (3) and before current subsection (4).

The RSSA also proposes a change in text at subsection (3) from “The Minister must ensure that the State Biodiversity Plan is reviewed and updated at least once every 5 years and that a report on the review is published” to “The Minister must ensure that the State Biodiversity Plan is reviewed at intervals of 2 years, taking into account the scientific evidence available at the time of the review, and be updated at intervals of no less than 5 years and that a report on the review is published.”

February 17th 2025