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IN THE INTERNATIONAL COURT OF JUSTICE

AT THE PEACE PALACE

THE HAGUE, THE NETHERLANDS

General List No. 303

THE CASE OF QUESTIONS RELATING TO PRIOR INFORMED CONSENT AND BENEFIT SHARING IN THE CONTEXT OF DE-EXTINCTION

ANECOYON
(Applicant)

V.

RIDUS
(Respondent)

-WRITTEN SUBMISSION ON BEHALF OF THE RESPONDENT-

TABLE OF CONTENTS

INDEX OF AUTHORITIES

TREATIES AND CONVENTIONS

U.N. DOCUMENTS AND OTHER INTERNATIONAL DOCUMENTS

JUDICIAL DECISIONS

BOOKS

ARTICLES, JOURNALS, AND REPORTS

MISCELLANEOUS

QUESTIONS PRESENTED

I. Questions regarding prior informed consent:

A. whether Ridus's conduct complied with or violated the prior informed consent provisions of the CBD and the Nagoya Protocol, to the extent they are applicable; and

B. whether Anecoyon's refusal to consent based on its objections to de-extinction is counter to the CBD's objectives.

II. Questions regarding benefit sharing:

A. whether, as an initial matter, DSI used for de-extinction activities is "biotechnology" for purposes of the CBD and the Nagoya Protocol; and

B. if so, whether the Sidney Animal Park is a user of DSI on genetic resources for purposes of CBD Decision 16/2 and whether the Sidney Animal Park is engaged in commercial activity covered by a sector currently listed in CBD Decision 16/2.

STATEMENT OF JURISDICTION

Pursuant to Article 40(1) of the Statute of the International Court of Justice ("ICJ"), Anecoyon and Ridus have submitted to the ICJ the differences between them concerning questions relating to prior informed consent and benefit sharing in the context of de-extinction by Special Agreement on 14 July 2025. The Parties have accepted the jurisdiction of the ICJ. The Parties request the Court to adjudge the merits of this matter on the basis of rules and principles of general international law, including any applicable treaties. The Registrar, pursuant to Article 26 of the Statute of the ICJ, addressed an acknowledgement of receipt to the Parties on 31 July 2025.

The Parties have agreed to respect the decision of this Court.

STATEMENT OF FACTS

Anecoyon and Ridus are neighboring sovereign States located on the Passager Peninsula, historically inhabited by the Indigenous Panthera communities. The Panthera maintain a cultural and spiritual connection to the Royal panther, which once occupied the Peninsula before its extinction approximately 6,000 years ago. Fossils have been found in both States. The Panthera communities live only in Ridus. In 2009, Anecoyon loaned a fossil to Ridus for twenty years "for the purposes of education and scientific research."

In September 2022, the National Museum of Ridus extracted DNA from the fossil and announced a plan to create a reference genome and use the resulting digital sequence information ("DSI") to attempt the de-extinction of the species as part of a biodiversity restoration and rewilding project. Prior to implementation. Ridus conducted an environmental impact assessment ("EIA"), which found overall positive ecological benefits.

Anecoyon objected, asserting that the project required its prior informed consent ("PIC") under the Nagoya Protocol. Negotiations concluded in 2023 without agreement, after which Anecoyon enacted domestic legislation prohibiting de-extinction uses of its resources. Ridus returned the fossil to Anecoyon, but continued with the genome sequencing and made the DSI publicly available.

In December 2024, a private company, Salols Co., contracted by Ridus, used the DSI to successfully produce two Royal panthers through using the DSI and North American cougar cells

in CRISPR genome editing. The panthers are housed in the Sidney Animal Park ("the Park"), a non-profit safari park that hosts over 300 species and participates in regional conservation and captive breeding programs. Members of the Panthera may visit for free. Visitors may pay an additional fee to view the panthers, and all revenues are used for animal care and other conservation programs, including for transboundary species.

Anecoyon sought benefit sharing from the Park. Ridus maintained it was a non-commercial environmental restoration outside the scope of CBD Decision 16/2 ("CBD 16/2"). Unable to resolve their differences, the Parties jointly submitted the dispute to the ICJ.

SUMMARY OF ARGUMENTS

First, Ridus fully complied with the PIC requirements under the CBD and the Nagoya Protocol. No PIC from Anecoyon was required, as access to the relevant genetic resources occurred in 2020 when Ridus extracted DNA and thereby became the provider State. Even if access had occurred earlier, valid PIC had already been obtained through the 2009 Loan Agreement, and the Nagoya Protocol contains no retroactive language and does not apply to access occurring in 2009. Conversely, Anecoyon refusal to consent based on its objections to de-extinction contravenes the CBD's objectives. It frustrates the conservation of biological diversity and the fair and equitable sharing of benefits among Contracting States as well as the Panthera. Anecoyon's blanket ban on access to genetic resources for de-extinction is not justified under the precautionary principle.

Second, Ridus bears no benefit sharing obligations under the CBD 16/2. The use of DSI for de-extinction does not constitute "biotechnology," as it does not use biological systems, living organisms, or derivatives, nor does it make or modify any product for specific use. Moreover, the Sydney Animal Park is neither a user of DSI nor engaged in commercial activity. It undertakes no direct engagement with DSI, operates as a non-profit conservation institution, and its zoological activities are treated as non-commercial under CITES. The Park also falls outside all commercial sectors listed in CBD 16/2. Ridus's approach fully aligns with the objectives of CBD 16/2 and its COP16/NP-MOP 5 commitments.

ARGUMENTS

I. RIDUS'S CONDUCT COMPLIED WITH THE PRIOR INFORMED CONSENT PROVISIONS OF THE CBD AND THE NAGOYA PROTOCOL; CONVERSELY, ANECOYON'S REFUSAL TO CONSENT BASED ON ITS OBJECTIONS TO DE-EXTINCTION IS COUNTER TO THE CBD'S OBJECTIVES

Ridus does not commit any international wrongful act, as **[A]** its conduct complied with the PIC provisions, and **[B]** Anecoyon's refusal to consent is inconsistent with the CBD's objectives.

A. Ridus's conduct complied with the prior informed consent provisions of the CBD and the Nagoya Protocol

Prior informed consent ("PIC") safeguards States' sovereign rights over genetic resources. No breach of PIC obligation occurred, since **[1]** if the relevant genetic resources are the DNA and digital sequence information ("DSI") extracted in 2020, Ridus was the provider State. **[2]** Even if access occurred in 2009, Anecoyon was not a provider State, and valid PIC had already been granted through the 2009 Loan Agreement.

1. *No PIC from Anecoyon was required, as the relevant access occurred in 2020, when Ridus was the provider State*

Article 15(5) of the Convention on Biological Diversity ("CBD") requires PIC of the Party providing genetic resources.[1] The Nagoya Protocol adds that consent must come from the Party that is the country of origin or that has acquired the resources.[2] The provider State is thus the one

[1] Convention on Biological Diversity, art. 15(5), June 5, 1992, 1760 U.N.T.S. 79. [CBD]
[2] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of

supplying usable genetic resources at the time of access, not merely where the material was first found.[3]

No PIC from Anecoyon was required, since **[a]** Ridus extracted the genetic resources; and **[b]** "access" occurred in 2020.

a. "Genetic resources" are DNA and DSI with actual or potential value

The CBD defines genetic material as "any material of plant, animal, microbial or other origin containing functional units of heredity," *i.e.*, genes or segments of DNA.[4] Genetic resources are the subset of genetic material with "actual or potential value."[5] Material qualifies as a genetic resource when it is valued or used for its genetic information.[6]

The DNA and DSI extracted by Ridus in 2020 meet the standard. DSI contains hereditary information encoded in DNA or RNA.[7] The CBD treats isolating, analyzing, and using genetic sequence data as the use of genetic material for its genetic value.[8] Ridus's extraction and sequencing of DNA in 2020 gave the material its first functional genetic value and turned it into a

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Benefits Arising from Their Utilization to the Convention on Biological Diversity, art. 6(1), Oct. 29, 2010, 3008 U.N.T.S. 3. [Nagoya Protocol].

[3] CBD, art. 2; Nagoya Protocol, art. 6(1); International Union for Conservation of Nature, *An Explanatory Guide to the Convention on Biological Diversity* 76 (1994). [IUCN, *Guide to CBD*].

[4] CBD, arts. 2(9)-(10); IUCN, *An Explanatory Guide to the Nagoya Protocol* 71 (2012). [IUCN, *Guide to Nagoya Protocol*]

[5] CBD, art. 2(10).

[6] IUCN, *Guide to CBD* 76.

[7] R fn. 1. (*citing* Cali Fund Guide).

[8] Secretariat of the Convention on Biological Diversity [CBD Secretariat], U.N. Doc. CBD/DSI/AHTEG/2020/1/5, annex, 14-18 (Jan. 29, 2020) (identifying Bhutan, Malaysia, Peru, Bolivia, China, Colombia, Kenya, Mozambique, Oman, Peru, Uganda as countries taking this approach, although not all are actively imposing requirements); Peter Schei & Morten Walløe Tvedt, *"Genetic Resources" in the CBD: The Wording, the Past, the Present and the Future 22* (Fridjtof Nansen Inst. 2010).

genetic resource under the CBD, making it a provider state.[9]

Mere physical presence of degraded hereditary material does not render fossil itself to be a genetic resource.[10] Unlike seeds, cuttings, and sperm that inherently contain "functional units of heredity", fossils cannot perform biological functions or be directly used without artificial recovery.[11] Before extraction, the fossil DNA was inert and lacked functional genetic value.

b. Ridus first accessed the DNA in 2020

PIC applies only when a Party accesses genetic resources.[12] Access occurs when someone collects or acquires genetic material to study or use its genetic or biochemical composition.[13]

In 2009, Anecoyon loaned a fossil that offered no usable genetic value.[14] Ridus first accessed the DNA in 2020, extracting and sequencing DNA to generate usable genetic information and digital sequence data.[15]

2. Alternatively, if the access occurred in 2009, Anecoyon was not the provider State, and Ridus had valid PIC

[9] R¶¶16, 21.
[10] CBD art. 2(9)-(10); IUCN, *Guide to Nagoya Protocol* 71.
[11] See U.N. Env't Programme [UNEP], *Global Biodiversity Assessment* (V.H. Heywood ed., 1995).
[12] CBD, art. 15(5); Nagoya Protocol, art. 6(1).
[13] IUCN, *Guide to Nagoya Protocol* 115; Regulation (EU) No. 511/2014, art. 3(3).
[14] R¶15.
[15] R¶16.

Even assuming Ridus accessed the fossil in 2009, it complied with all obligations. [**a**] The Nagoya Protocol does not apply retroactively. [**b**] Under the CBD, Anecoyon does not qualify as a provider State. [**c**] In any event, PIC had already been obtained through the 2009 Loan Agreement.

a. The Nagoya Protocol does not apply retroactively

The Nagoya Protocol, which entered into force in 2014, governs access to genetic resources only after that date. Treaties bind states prospectively unless they expressly stated otherwise.[16] Because the Protocol contains no retroactive language, it does not apply to access occurring in 2009.[17]

b. Anecoyon was not the provider State under the CBD

Under the CBD, the provider State is the country that supplies genetic resources at the time of access.[18] Provider status therefore attaches to the State that actually furnishes usable genetic material, not merely to the State of discovery.[19] Article 15's PIC requirement applies only to access to *in situ* genetic resources. These are living organisms in their natural habitats.[20]

The Royal panther fossil had been excavated more than a century earlier and no longer existed *in situ*. The Ridus National Museum transferred it in 2009 as a nonliving specimen.[21] Anecoyon

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[16] Vienna Convention on the Law of Treaties, art. 28, May 23, 1969, 1155 U.N.T.S. 331 [VCLT]; *Aegean Sea Continental Shelf (Greece v. Turkey)*, ICJ Rep 1978 ¶96.
[17] Nagoya Protocol, art. 33; Conference of the Parties to the Convention on Biological Diversity [COP], Decision XI/1 *Outcome of the Eleventh Meeting of the Conference of the Parties to the Convention on Biological Diversity*, U.N. Doc. CBD/COP/DEC/XI/1 (Dec. 5, 2012) (preamble).
[18] CBD, Arts. 2, 15.
[19] IUCN, *Guide to the CBD* 19.
[20] CBD Arts. 2, 15; UNEP, *Global Biodiversity Assessment* 87 (V.H. Heywood ed., 1995).
[21] R¶15.

gains no provider State status from the fossil.

Even *ex situ*, fossil does not fit within the definition because it is not compatible with any recognized forms of ex-situ conservation, such as gene banks, tissue collections, captive breeding, or living organism collections.[22]

Also, the Royal panther historically ranged across both Anecoyon and Ridus.[23] No single State therefore held an exclusive right to control the species. Consequently, Anecoyon was not the provider State whose consent the CBD required.

c. Conversely, Ridus had obtained PIC

The 2009 Loan Agreement granted valid PIC and expressly authorized the fossil's use "for the purposes of education and scientific research."[24] All subsequent research activities remained within that authorized scope.

i. PIC attaches to access, and the 2009 Loan Agreement constituted valid PIC covering subsequent scientific research

PIC attaches to the initial act of access to genetic resources, not to subsequent research activities.[25] Assessment occurs at the stage of access, considering the type and quantity of resources sought and the intended use (e.g., taxonomy, research, or commercialization).[26] Once access is lawfully granted, a state may continue studies within the agreed purpose without

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[22] IUCN, *A Guide to the CBD* 52 (1994).
[23] R¶6.
[24] R¶15.
[25] CBD, art. 15(5).
[26] CBD Secretariat, *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of Their Utilization*, U.N. Doc. UNEP/CBD/COP/6/24, Decision VI/24, ¶36 (Apr. 2002) [*Bonn Guidelines*].

obtaining renewed consent.[27]

The 2009 Loan Agreement authorized Ridus to receive the fossil. It identified the material provided and specified the purpose of access, fulfilling the core procedural elements.[28] DNA and DSI can be extracted under that authorization. By 2009, established paleogenomic techniques allowed DNA extraction and sequencing from ancient or degraded material, although methods continued to improve.[29] Both Parties could reasonably foresee that authorized scientific research might include molecular or genetic analysis in the ordinary sense under the CBD.

The Loan Agreement satisfies the PIC requirement even though the fossil was loaned before any utilization occurred. Article 6(1) triggers the duty to obtain PIC "for access to genetic resources for their utilization," but it does not require that utilization already exist when the consent is given. Consent must precede utilization and specify the intended purposes of access.[30] Later sequencing continues the research purposes already authorized, fully within the scope of the original PIC.

ii. No associated knowledge triggers additional PIC

Renewed consent is required only when access involves associated knowledge,[31] which is conceptually distinct from the genetic material itself.[32] Ridus's research concerns only the genetic

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[27] Nagoya Protocol, art. 6(3)(a).
[28] *Bonn Guidelines*, ¶¶36-37.
[29] See, e.g., Svante Pääbo, *Ancient DNA: Extraction, Characterization, Molecular Cloning, and Enzymatic Amplification*, 45 Proc. Nat'l Acad. Sci. USA 542 (1989).
[30] *Bonn Guidelines*, ¶36; COP, Decision XIII/16 *Digital Sequence Information on Genetic Resources*, U.N. Doc. CBD/COP/DEC/XIII/16 (Dec. 16, 2016); CBD Secretariat, *Fact-Finding and Scoping Study on Digital Sequence Information on Genetic Resources in the Context of the Convention on Biological Diversity and the Nagoya Protocol*, U.N. Doc. CBD/DSI/AHTEG/2020/1/5, annex, 14-18 (Feb. 20, 2020).
[31] *Bonn Guidelines*, ¶37
[32] IUCN, *Guide to CBD* 76; Peter Johan Schei & Morten Walløe Tvedt, *Genetic Resources in the CBD: The Wording, the Past, the Present and the Future* 22, FNI Report 4/2010 (Fridtjof Nansen Inst. 2010).

resources, not associated knowledge.[33] Requiring renewed consent whenever scientific techniques evolve would undermine legal certainty and discourage international research collaboration.[34]

iii. Anecoyon lacked a procedural framework

Article 6(3) of the Nagoya Protocol requires each Party to establish a clear, transparent, and fair domestic framework for granting PIC.[35] Here, Anecoyon had not enacted any domestic legislation or established a competent national authority to regulate access to genetic resources.[36]

B. Anecoyon's refusal to consent based on its objections to de-extinction runs counter to the CBD objectives

Even if consent were required, Anecoyon violated Article 15(2) of the CBD by imposing restrictions that counter the objectives of the Convention.[37] With its refusal to consent and the blanket ban on access to its genetic resources or their derivatives for de-extinction,[38] Anecoyon frustrates CBD's objectives including **[1]** the conservation of biological diversity and **[2]** fair and equitable sharing of benefits,[39] and **[3]** the ban shall not be justified by the precautionary principle.

1. Anecoyon frustrates conservation of biological diversity

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[33] R¶15; CBD, art. 8(j); Nagoya Protocol, Arts. 7, 12; Schei & Tvedt, *Genetic Resources in the CBD* 22.
[34] CBD, art. 15(2); Nagoya Protocol, art. 6(3)(a); *Bonn Guidelines*, ¶44; COP Decision XIII/16 (2016); COP, Decision 14/20 Digital Sequence Information on Genetic Resources, U.N. Doc. CBD/COP/DEC/14/20 (Nov. 30, 2018).
[35] Nagoya Protocol, art. 6(3)(a)-(e).
[36] R¶20.
[37] CBD, art. 15(2).
[38] R¶24.
[39] CBD, art.1.

The CBD requires parties to protect, recover and rehabilitate biological diversity.[40] Textually, this mandate extends to recovering and rehabilitation of extinct species.[41] First, the ordinary meaning of "species", *i.e.* "[a] group or class of animals…of essentially the same kind,"[42] encompasses both living and extinct species. Second, the CBD uses the broader term "species" in its recovery and rehabilitation provisions.[43]

The treaty's purpose and subsequent agreements between Parties reinforce this interpretation.[44] The Preamble emphasizes that "biological diversity is being significantly reduced" and emphasizes the need to halt extinction with modern technologies.[45] Accordingly, the Kunming-Montreal Global Biodiversity Framework, adopted by the parties in 2022, identifies reducing extinction rate as a Global Goal to be advanced through "science, technology and innovation."[46] De-extinction directly serves these objectives by enhancing species, genetic, and ecological diversity.[47] It reverses extinction while addressing genetic and ecological diversity loss. Applied to living species, de-extinction can mitigate genetic erosion in captive breeding populations to increase species viability.[48] Recovering keystone or ecosystem-engineering species

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[40] CBD, Arts. 8(f), 9(c).
[41] VCLT, art. 31(1).
[42] *Species*, Oxford English Dictionary (September 2025).
[43] *See e.g.*, CBD, Preamble ¶10, Arts. 2, 8(d)(h), 9(d), etc.
[44] VCLT, Arts. 31(1), 31(3)(a).
[45] CBD, Preamble ¶6
[46] COP, Decision 15/4, *Kunming-Montreal Global Biodiversity Framework*, CBD/COP/DEC/15/4 (Dec. 19, 2022) [CBD 15/4]
[47] CBD, Preamble ¶1, Arts. 2.
[48] IUCN, *Guiding Principles on Creating Proxies of Extinct Species for Conservation Benefit* 7 (2016); Klimova A. et al., *The genetic consequences of captive breeding, environmental change and human exploitation in the endangered peninsular pronghorn*. 12 Sci. Rep., 11253 (2022).

could also restore critical ecological functions and rehabilitate degraded ecosystems.[49]

Moreover, the CBD's evolutionary character supports this interpretation. As a long-term treaty, the CBD contemplates that its terms and obligations will be interpreted under the contemporary scientific standards.[50] When negotiated, the CBD already recognized early conservation technologies, including cell fusion and recombinant DNA, as helpful tools to reverse loss of species.[51] Subsequent COP Decisions have since integrated later technologies like genome sequencing and synthetic biology into the CBD framework.[52] De-extinction represents the next step in this continuum of modern technological advancement. Therefore, the CBD's scope for conservation should evolve to encompass the recovery of extinct species. Anecoyon's objection to de-extinction thus frustrates the conservation of biodiversity under the CBD.

2. Anecoyon frustrates the fair and equitable benefit-sharing

Anecoyon's refusal to consent counters CBD's objective of fair and equitable benefit-sharing, by **[a]** failing to cooperate in the development and transfer of technology, and **[b]** excluding the Panthera communities from sharing benefits of their own cultural heritage.

a. Anecoyon failed to cooperate in the development and transfer of technology

The CBD provides that both access to and transfer of technology are essential elements to fair

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[49] *Id.*
[50] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, 1997 I.C.J. 7, 78 (Sept. 25); *Whaling in the Antarctic (Austl. v. Japan: N.Z. intervening)*, Judgment, 2014 I.C.J. 226, 257 (Mar. 31).
[51] IUCN, *Guide to CBD* 19.
[52] COP, Decision 15/31, Synthetic biology, CBD/COP/DEC/15/31 (Dec. 19, 2022); COP, Decision 16/21, Synthetic biology, CBD/COP/DEC/16/21 (Oct. 28, 2024).

and equitable sharing.[53] It mandates the duty to promote scientific research on conservation technologies and to cooperate in transferring those technologies through information exchange and joint research.[54] Anecoyon's ban does the opposite.

Anecoyon possesses the best-preserved Royal panther fossil,[55] which is critical for the extraction of complete, usable ancient DNA.[56] Extraction of viable DNA from specimens has posed severe technological challenges.[57] Although Ridus succeeded in sequencing the Royal panther genome, scientists need repeated access to high-quality fossils to replicate results, verify findings, and refine techniques.[58] Without Anecoyon specimen, researchers cannot improve the genetic fidelity of their sequences or advance the technology for broader application.

This especially harms developing countries. Ridus shared the DSI globally in compliance with its obligation.[59] However, data alone are insufficient. Developing countries lack both comparable fossil specimens and the expertise to work with degraded DNA. Without access to Anecoyon's fossils for training and validation, they cannot meaningfully participate in joint

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[53] CBD, art. 16(1).
[54] CBD, Arts. 12(c), 16, 18.
[55] R¶15.
[56] Morten Allentoft et al., *The Half-Life of DNA in Bone: Measuring Decay Kinetics in 158 Dated Fossils*, Proc. R. Soc. B: Biol. Sci. 279, 4724–4733 (2012); Landon A. Anderson, *A Chemical Framework for the Preservation of Fossil Vertebrate Cells and Soft Tissues*, Earth-Sci. Rev. 240 104367 (2023).
[57] Florian Keiper & Ana Atanassova, *Regulation of Synthetic Biology: Developments Under the Convention on Biological Diversity and Its Protocols*, 8 Front. Bioeng. & Biotechnol. 310 (2020).
[58] Lin J. et al., *Probing the Genomic Limits of De-extinction in the Christmas Island Rat*. 37 Curr Biol. 1650, 1654 (2022).
[59] R¶28.

research, apply the technology to their own species, or build domestic capacity in de-extinction for conservation.[60] Anecoyon thus violates its obligation to facilitate technology transfer and capacity-building, which are essential for fair and equitable sharing among Contracting Parties.

b. Anecoyon excludes the Panthera communities from contributing and sharing benefits of their heritage

Indigenous people and local communities should participate in conservation and share fairly benefits arising from the use of genetic resources and their associated traditional knowledge.[61] The Panthera holds traditional knowledge about the long extinct Royal panther,[62] which could exceed the limited information in digital archives and historical records.[63] Recognizing this, Ridus invited the Panthera communities to engage in the Royal panther de-extinction project.[64] Their participation would have strengthened representation in conservation, revitalized their cultural heritage, and built capacity in modern conservation.[65] However, Anecoyon's blanket ban frustrated the project from proceeding, and thus undermined the Panthera's chance to share their knowledge and benefit from reviving a species central to their culture.

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[60] COP, Decision 15/8, *Capacity-building and development and technical and scientific cooperation*, CBD/COP/DEC/15/8 (Dec. 19, 2022).
[61] CBD, Arts. 8(j), 17(2), and 18(4); Nagoya Protocol, Arts. 5, 12; COP, Decision 16/4, *Programme of work on Article 8(j) and other provisions of the Convention on Biological Diversity related to indigenous peoples and local communities to 2030*, CBD/COP/DEC/16/4 (Oct. 30, 2024).
[62] R¶7; Clarification, ¶11.
[63] Amanda Lilleyman et al., *Indigenous Knowledge in Conservation Science and the Process of a Two-Way Research Collaboration*, 4 Conserv. Sci. & Prac. e12727 (2022).
[64] R¶28.
[65] CBD Secretariat, *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (CBD Guidelines)* (Montreal, 2004), at 19.

3. Anecoyon's ban on access to its genetic resources for de-extinction is not justified under the precautionary principle

The precautionary principle is not a rule of abstention,[66] but a duty of due diligence premised on environmental impact assessment (EIA),[67] the content and scope of which is subject to State's discretion.[68] It is invoked to lead an obligation of continuous assessment of potential risks,[69] instead of a blanket ban on the application of emerging technologies without scientific evidence of the possible adverse effects.[70]

Ridus conducted EIA before de-extinction.[71] Anecoyon's blanket ban is therefore not justified absent scientific evidence that risks would arise. The protectionist framing would only "preclude use of the available tools" to manage utilization for conservation and sustainability,[72] running counter to the CBD's objectives.

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[66] Gerhard Hafner & Isabelle Buffard, *Obligations of Prevention and the Precautionary Principle*, in *The Law of International Responsibility* 521, 529 (James Crawford et al. eds., Oxford Univ. Press 2010).
[67] CBD, art. 14(a).
[68] *Pulp Mills on the River Urugu*ay *(Arg. v. Uru.)*, Judgment, 2010 I.C.J. 14, ¶205.
[69] CBD, art. 14.
[70] *Cartagena Protocol on Biosafety to the Convention on Biological Diversity*, art. 15, Jan. 29, 2000, 2226 U.N.T.S. 208; Commission of the European Communities, *Communication from the Commission on the Precautionary Principle* (2000), at 13.
[71] Clarification ¶1.
[72] IUCN, *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: An Issues Paper for Policy-Makers, Researchers and Practitioners* (Gland & Cambridge 2004).

II. DSI USED FOR DE-EXTINCTION ACTIVITIES IS NOT "BIOTECHNOLOGY" FOR PURPOSES OF THE CBD AND THE NAGOYA PROTOCOL; CONVERSELY, THE SYDNEY ANIMAL PARK IS NEITHER A USER OF DSI NOR ENGAGED IN COMMERCIAL ACTIVITY IN THE CONTEXT OF CBD DECISION 16/2

CBD Decision 16/2 ("CBD 16/2"), adopted at COP16/NP-MOP5, establishes the Cali Fund—a multilateral mechanism for sharing benefits arising from the use of DSI on genetic resources. CBD 16/2 requires commercial entities in certain listed sectors that profit from DSI-derived products to make monetary contributions to the Fund when these entities meet the financial thresholds.[73] The Sydney Animal Park ("the Park") bears no such obligation because **[A]** DSI used for de-extinction activities does not constitute "biotechnology" for purposes of the CBD and the Nagoya Protocol, and **[B]** in any event, the Park is neither a user of DSI nor engaged in commercial activity under CBD 16/2.

A. DSI used for de-extinction activities does not constitute "biotechnology"

Under Article 2 of both the CBD and the Nagoya Protocol, "biotechnology" is defined as any technological application that **[1]** "uses biological systems, living organisms, or derivatives thereof" **[2]** to "make or modify products or processes for specific use."[74] DSI used for de-extinction activities falls outside this definition because it satisfies neither element.

1. DSI used for de-extinction does not use biological systems, living organisms or derivatives

First, no biological system is used. A biological system refers to a set of self-organized,

[73] COP, Decision 16/2, *Digital Sequence Information on Genetic Resources*, U.N. Doc. CBD/COP/DEC/16/2 (Nov. 1, 2024) [CBD 16/2]; R¶13.
[74] CBD, art. 2; Nagoya Protocol, art. 2(d).

differentiated components that functions together as a unified whole.[75] Here, the fossilized DNA used in the de-extinction process cannot constitute a biological "system" because it entirely lacks interactivity and functionality.

Second, no living organism is used. A living organism is generally capable of autonomous reproduction, growth, and metabolism.[76] In the CBD context, all living organisms are made up of cells containing DNA molecules.[77] Here, neither the fossil nor the DNA extracted from it qualifies as a living organism because both derive from dead creatures incapable of life processes and cannot grow or reproduce.

Third, no derivatives are used. Article 2(e) of the Nagoya Protocol defines a "derivative" as a "naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources."[78] The fossilized DNA used in this project results from artificial intervention and extraction processes, rather than natural occurrence. It therefore does not constitute a "derivative" within the meaning of the Protocol.

2. DSI used for de-extinction does not make or modify products or processes for specific use

The de-extinction project falls outside the targeted scope of "biotechnology" because **[a]** the Royal panthers are not "products" in the CBD context, and **[b]** they are not made or modified "for specific use."

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[75] Carlos Alcocer-Cuarón, Ana L. Rivera & Víctor M. Castaño, *Hierarchical Structure of Biological Systems: A Bioengineering Approach*, 5 Bioengineered 73 (2014).
[76] David Moreira & Purificación López-García, *Ten Reasons to Exclude Viruses from the Tree of Life*, 7 Nature Reviews Microbiology 306 (2009).
[77] Guide to Nagoya Protocol, 72; CBD Secretariat, *Products Thereof*, U.N. Doc. UNEP/CBD/BSWG/5/Inf.3, at 2 (Aug. 12 1998).
[78] Nagoya Protocol, art. 2(e).

a. The Royal panthers are not "products" in the CBD context

Under the CBD framework, a "product" means a material or object that has been manufactured or processed for commerce such as a medical, food, or engineering product.[79] Factors that indicate a "product" include commercialization or sale to the public, seeking marketing or regulatory approval, applying for intellectual property protection, or identifying a specific commercial use for a derivative.[80]

Here, the Royal panthers are living animals produced for conservation purposes, not manufactured goods placed on the market. They are neither sold nor commercialized, and no intellectual property or marketing rights are sought over them. Charging visitor admission fees does not turn the panthers into products, because the fees are not for selling or exchanging the animals. The panthers remain state property of Ridus.[81]

b. The Royal panthers are not made or modified "for specific use"

The phrase "for specific use" signifies that biotechnology applies technology to achieve a utilitarian or instrumental objective. Biotechnology products are typically created to serve human needs, such as pharmaceuticals that treat diseases, agricultural products that improve yields, or industrial processes that produce chemicals.[82]

This interpretation accords with the conservation philosophy embedded in the CBD, which

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[79] CBD Secretariat, *Products Thereof*, U.N. Doc. UNEP/CBD/BSWG/5/Inf.3, at 1.
[80] Guide to Nagoya Protocol, at 66.
[81] R¶32.
[82] CBD Secretariat, *Products Thereof*, U.N. Doc. UNEP/CBD/BSWG/5/Inf.3, at 5-6.

distinguishes between ends and means.[83] Some elements of nature have instrumental value because they meet human needs, but species themselves also possess intrinsic value independent of human use.[84] The "for specific use" requirement precisely marks the line between exploiting nature for human benefit and restoring or protecting it for its own sake.

In this case, the de-extinction of the Royal panther was not undertaken for any instrumental or commercial purpose. The panthers were restored to life as an end in itself, not to serve human needs or to yield marketable products. Therefore, categorizing them as "products made or modified for specific use" would contradict the text of the CBD and the Nagoya Protocol and undermine the conservation principles those instruments seek to advance.

B. In any event, the Park is neither a user of DSI nor engaged in commercial activity in the context of CBD 16/2

Even if the de-extinction project qualifies as "biotechnology," the Park's activities still fall outside the CBD 16/2 framework because **[1]** it is not a user of DSI on genetic resources, and **[2]** it is not engaged in commercial activity within a sector covered by CBD 16/2. Accordingly, **[3]** Ridus's position is fully consistent with the objectives of CBD 16/2 and its COP16/NP-MOP 5 commitments.

1. The Park is not a user of DSI on genetic resources

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[83] Michael E. Soulé, *What Is Conservation Biology?*, 35 *BioScience* 727 (1985).
[84] *Id*.; *see also* Ian A. Smith, *The Role of Humility and Intrinsic Goods in Preserving Endangered Species*, 32 *Envtl. Ethics* 165 (2010).

Under the CBD framework, a "user" must directly manipulate DSI, instead of merely benefit from it. First, the ordinary meaning of user is "a person who employs or practices something," which requires active engagement with the thing itself.[85] Second, this interpretation fits the treaty's context. The Nagoya Protocol defines "utilization" as conducting research and development on genetic resources' composition, including through biotechnology.[86] The CBD defines "biotechnology" as technological application to genetic material.[87] These definitions confirm that "use" requires hands-on technological engagement with the DSI rather than passive interaction with its outcomes.

Furthermore, the 2018 Fact-finding Study on DSI commissioned by CBD Decision XI/16 identifies sequencing, synthesis, storage, assembly, and screening as core activities of DSI use.[88] These functions are conducted primarily by specialized actors in fields such as synthetic biology, biotechnology, agriculture, and medicine.[89] While the Study notes that users of DSI may include diverse participants, ranging from private companies to universities and governments, it does so only insofar as those actors are directly involved in research, innovation, or technological applications of DSI.[90]

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[85] *User*, Oxford English Dictionary (3rd ed. 2024); VCLT, art. 31(1).
[86] Nagoya Protocol, art. 2(d).
[87] CBD, art. 2.
[88] VCLT, art. 32; CBD Secretariat, *Fact-Finding and Scoping Study on Digital Sequence Information on Genetic Resources in The Context of The Convention on Biological Diversity and The Nagoya Protocol*, CBD/SBSTTA/22/INF/3, at 24 (Jan. 12 2018).
[89] CBD Secretariat, CBD/SBSTTA/22/INF/3, at 24, ¶89.
[90] *Id*. at 26-27, ¶¶104-105.

In contrast, the Park does not generate, access, analyze, or manipulate DSI in any way. Rather, its activities of providing habitat and caring for two living panthers are qualitatively different from the scientific or industrial practices identified by the Study as constituting "use" of DSI.[91] All direct engagement with DSI, including sequencing and genetic engineering, took place entirely before the Park's involvement.[92] To extend the notion of "user" to caretakers, zoos, or tourists merely because they interact with organisms created through DSI would cause the term to lose any meaningful boundary and distort the benefit sharing framework.

2. Alternatively, the Park is not engaged in commercial activity within a sector covered by CBD 16/2

CBD 16/2 applies only to profit-making entities in sectors where DSI is central to commercial product development.[93] Under this tailored approach, the Park is not covered by CBD 16/2 since **[a]** it is not engaged in commercial activity in the relevant sense, and **[b]** its activities fall outside of the currently listed sectors in CBD 16/2.

a. The Park is not engaged in commercial activity in the relevant sense

The Park's activities are non-commercial because **[i]** it is a non-profit entity exempted from monetary contributions under CBD 16/2, and **[ii]** its activities are treated as non-commercial under the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("CITES").

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[91] R¶33.
[92] R¶¶31-32.
[93] *Guide to the Cali Fund* 3 (CBD, UNEP & UNDP 2025).

i. The Park is a non-profit entity exempted from monetary contributions under CBD 16/2

CBD 16/2 expressly exempts public research and academic institutions from monetary contributions, reflecting the Parties' intent to avoid burdening non-commercial actors that contribute to biodiversity conservation and scientific understanding.[94] This exemption underscores that the monetary benefit sharing mechanism aims at "those that use DSI and generate profit from its use," while "not-for-profit users would not be required to contribute."[95] The UN Secretary-General confirmed that the mechanism was designed to "make those profiting from nature contribute to its protection and restoration."[96] The CBD Secretariat's Guide further illustrates that the mechanism serves as "a credible path for companies to share benefits responsibly."[97] These sources make clear that the monetary obligations of CBD 16/2 apply to for-profit corporate actors, not to non-profit or public institutions engaged in conservation.

Regarding the distinction between for-profit and non-profit entities, Anecoyon wrongly asserts that any entity generating revenue must be engaged in commercial use.[98] "Non-profit" designates

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[94] CBD 16/2, Annex ¶9; CBD Secretariat, *Compilation of Views and Information on Digital Sequence Information on Genetic Resources Submitted Pursuant to Paragraphs 9 And 10 of Decision 14/20*, CBD/DSI/AHTEG/2020/1/INF/1, at 97 (Feb. 4 2024); IUCN, *A Guide to Designing Legal Frameworks to Determine Access to Genetic Resource*s 46-47 (1998).
[95] CBD Secretariat, *Reflections of the Co-Chairs on the possible elements identified by the Working Group on Benefit-sharing from the Use of Digital Sequence Information on Genetic Resources at its first meeting*, U.N. Doc. CBD/WGDSI/2/2/Add.1, ¶13 (June 16 2024).
[96] UN Secretary-General António Guterres' remarks at the High-Level Segment of CBD COP16 in Cali, Colombia (Oct. 29 2024).
[97] *Guide to the Cali Fund* 2 (CBD, UNEP & UNDP 2025).
[98] R¶42.

an organization "which does not operate for the purpose of making a profit."[99] Non-profit organizations may lawfully generate revenue as long as any surplus is reinvested in its mission rather than distributed for private gain.[100] This principle mirrors the approach under CITES Resolution 5.10, which recognizes that zoological institutions may charge fees or generate incidental revenue so long as proceeds are used to support conservation or captive-breeding programmes.[101]

Here, the Park is a safari park operated by a non-profit corporation.[102] Visitor fees are earmarked for the care of Ixchel and Itzamna and for broader biodiversity initiatives, such as captive-breeding programmes for other endangered species.[103] All revenues are reinvested into its mission of animal care and conservation, with no private distribution to private benefit. Accordingly, the Park functions in the same non-commercial capacity as the exempted institutions identified in CBD 16/2 and falls outside the targeted scope.

ii. The Park's activities are treated as non-commercial under CITES

[99] *Non-profit*, Oxford English Dictionary (July 2023).
[100] National Council of Nonprofits, *Myths About Nonprofits*, https://www.councilofnonprofits.org/about-americas-nonprofits/myths-about-nonprofits (last visited Nov. 6, 2025).
[101] Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES], Resolution 5.10 (Rev. COP19), *Definition of "Primarily Commercial Purposes"*, at 2.
[102] R¶33.
[103] R¶35.

The CBD and CITES are among the most widely accepted and well-known international biodiversity-related agreements and their objectives are broadly compatible.[104] Because both Anecoyon and Ridus are Parties to both Conventions, CITES provides persuasive interpretive guidance within the relevant regime pursuant to Article 31(3)(c) of the VCLT.[105]

CITES Resolution 5.10 offers direct insight into the meaning of "commercial."[106] Its Annex identifies categories of activities where the non-commercial aspect predominates and that are therefore not considered "primarily commercial," including education, training, conservation, and zoological exhibition.[107] These activities share the characteristic that any incidental revenue is directed to sustaining conservation objectives rather than generating private profit. This interpretive principle is consistent with the CBD's own focus on biodiversity protection, sustainable use, and equitable participation of local communities.

Here, the Park engages in the zoological exhibition of over 300 animal species, education through such exhibitions and conservation.[108] It participates in a regional captive-breeding initiative and contributed to the successful reintroduction of captive-born white rhinoceroses to Africa.[109] Its operations align precisely with the categories of activity that CITES designates as predominately non-commercial.

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[104] International Academy for Nature Conservation, *Expert Workshop Promoting CITES–CBD Cooperation and Synergy: Workshop Report, Final Draft* (May. 14 2004).
[105] VCLT, art. 31(3)(c).
[106] CITES Resolution 5.10, at 1.
[107] *Id*. at 2.
[108] R¶33.
[109] Clarification ¶4.

Moreover, the overall and ultimate purpose of the de-extinction project is environmental restoration and rewilding.[110] Successive generations of Royal panthers will be introduced into a rewilding programme, with eco-tourism opportunities managed by Panthera communities.[111] This overarching conservation purpose predominates over any incidental economic benefits, consistent with CBD's objectives of biodiversity protection, sustainable use and inclusion of indigenous communities.[112]

b. The Park's activities fall outside of the currently listed sectors in CBD 16/2

While the drafters of CBD 16/2 recognized that DSI can potentially be used across a broad variety of sectors, they deliberately restricted the scope of sectors to those who currently use DSI in commercially significant ways.[113] These include pharmaceuticals, nutraceuticals, cosmetics, animal and plant breeding, biotechnology, laboratory equipment, and IT services.[114] Notably, the "animal and plant breeding" sector is narrowly defined to cover agricultural and aquacultural production aimed at generating crops or animals for food and feed.[115] By contrast, the Park engages in none of these activities, as it neither breeds animals for consumption nor develops products, equipment, or software based on DSI.

In identifying these sectors, CBD 16/2 directs Parties to reference the International Standard

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[110] R¶41.
[111] R¶36.
[112] CBD, Preamble.
[113] CBD Secretariat, *Studies Commissioned Further to Decision 15/9*, U.N. Doc. CBD/WGDSI/2/INF/1, at 17 (July 29 2024).
[114] CBD 16/2, Annex Enclosure I ¶1
[115] CBD Secretariat, U.N. Doc. CBD/WGDSI/2/INF/1, at 17.

Industrial Classification ("ISIC") system.[116] Under this classification, the Park's activities operations fall under ISIC Code 914: Botanical and Zoological Gardens and Nature Reserves Activities,[117] a category absent from the listed sectors. By contrast, the listed sectors in CBD 16/2 correspond to entirely distinct ISIC codes, such as Code 7210 ("Research and Experimental Development in Natural Sciences and Engineering") for biotechnology,[118] and Code 014 ("Animal Production") for animal breeding.[119] This distinction shows that zoological parks like the Park are conceptually separate from sectors that rely on DSI for commercial product development.

3. Ridus's position is fully consistent with the objectives of CBD 16/2 and its COP16/NP-MOP 5 commitments

At COP16/NP-MOP 5, Ridus expressed strong support for the Cali Fund, while affirming that only "commercial entities" operating within "specific sectors" are required to contribute.[120] However, the Park engages exclusively in conservation and zoological activities and thus falls outside those sectors. While the Park is therefore not subject to monetary contribution obligations, Ridus has nonetheless acted consistently with the purpose of CBD 16/2 and its commitments.

First, Ridus and the Park have fulfilled their non-monetary benefit sharing obligations

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[116] *Id*.
[117] United Nations Statistics Division, *Explanatory Notes of the Standard Industrial Classification of All Economic Activities, Revision 5 (ISIC Rev. 5)*, at 273 (Mar. 11 2024).
[118] *Id*. at 219.
[119] *Id*. at 9.
[120] R¶13.

consistent with CBD 16/2.[121] The Royal panther genome has been made publicly accessible.[122] The Panthera, who shares a verified ancestral connection with the extinct Royal panther through DNA-confirmed lineage, cave paintings, and oral tradition,[123] has been provided free access to observe the panthers, employment opportunities and a continuing role in co-managing rewilding initiatives.[124] These measures directly address the Panthera's "self-identified capacity and technical development needs,"[125] consistent with CBD 16/2, particularly given their socio-economic vulnerability.[126]

Second, Ridus channeled all revenues generated by the Park directly into the conservation of the Royal panthers, habitat restoration, and broader biodiversity initiatives involving the Panthera communities.[127] These reinvestments directly advance the very ends that CBD 16/2 and the Kunming-Montreal Global Biodiversity Framework seek to achieve.[128]

By applying monetary obligations only to profit-making actors and protecting non-commercial conservation institutions, Ridus implements the Cali Fund faithfully without extending its scope beyond the sectors agreed at COP16.

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[121] CBD 16/2, ¶¶6-7.
[122] R¶28.
[123] R¶7.
[124] R¶¶34, 36.
[125] CBD 16/2, ¶7.
[126] Clarification ¶6.
[127] R¶¶35-36.
[128] CBD 15/4, ¶12.

CONCLUSION

Respondent respectfully requires this Honorable Court adjudge and declare that:

A. Ridus's conduct complied with the PIC provisions of the CBD and the Nagoya Protocol; conversely, Anecoyon's refusal to consent based on its objections to de-extinction was counter to the CBD's objectives; and

B. DSI used for de-extinction activities is not "biotechnology" for purposes of the CBD and the Nagoya Protocol; conversely, the Sydney Animal Park is neither a user of DSI nor engaged in commercial activity in the context of CBD Decision 16/2.

Respectfully submitted,

AGENTS FOR THE RESPONDENT