IN THE INTERNATIONAL COURT OF JUSTICE

AT THE PEACE PALACE

THE HAGUE, THE NETHERLANDS

QUESTIONS RELATING TO

Prior Informed Consent and Benefit Sharing in the Context of De-Extinction

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ANECOYON

Applicant

v.

RIDUS

Respondent

MEMORIAL FOR THE APPLICANT

THE THIRTIETH ANNUAL

STETSON INTERNATIONAL ENVIRONMENTAL

MOOT COURT COMPETITION

2025 - 2026

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LIST OF ABBREVIATIONS

SN	Abbreviation	Full Form
1	**¶**	Paragraph
2	**ABS**	Access and Benefit Sharing
3	**ART**	Article
3	**CBD**	Convention on Biological Diversity
4	**COP**	Conference of the Parties
5	**CITES**	Convention on International Trade in Endangered Species of Wild Fauna and Flora
6	**CRISPR**	Clustered Regularly Interspaced Short Palindromic Repeats
7	**DSI**	Digital Sequence Information
8	**EIA**	Environmental Impact Assessment
9	**ICJ**	International Court of Justice
10	**LMO**	Living Modified Organism
11	**PIC**	Prior Informed Consent
12	**R**	Record
13	**SAP**	Sidney Animal Park
14	**VCLT**	Vienna Convention on the Law of Treaties
15	**USD**	United States Dollar

QUESTIONS PRESENTED

1. 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?
2. Whether Anecoyon's refusal to consent based on its objections to de-extinction is counter to the CBD's objectives?
3. Whether, as an initial matter, DSI used for de-extinction activities is "biotechnology" for purposes of the CBD and the Nagoya Protocol?
4. 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 of the ICJ Statute, Anecoyon and Ridus have presented their disputes regarding the matters outlined in Annex A, including the Clarifications, relating to the concerns over the benefit sharing under the Nagoya Protocol and CBD Decision 16/2, through a Special Agreement, and have sent a copy to the ICJ Registrar on July 14, 2025. On July 28, 2025, the Registrar notified the parties involved. Consequently, both Anecoyon and Ridus have acknowledged the ICJ's jurisdiction in accordance with Article 36 (1) of the Statute and are asking the Court to resolve the dispute based on international law principles and any relevant treaties.

Anecoyon and Ridus have agreed to accept this Honorable Court’s Judgment as final and binding and shall execute it in its entirety and in good faith.

STATEMENT OF FACTS

Anecoyon, a lower-middle income country, shares a border with the high-income state of Ridus. The extinct Royal Panther once roamed both territories. In 1901, the best-preserved fossil of the species was discovered in Anecoyon and later loaned to Ridus's National Museum in 2009 for "education and scientific research." The event that prompted the loan was that the museum had recently opened a wing devoted to the history of Panthera people. In 2022, Ridus extracted DNA from the fossil to initiate a de-extinction project without Anecoyon's consent.

Anecoyon asserted its sovereign rights under the Nagoya Protocol, demanding Prior Informed Consent (PIC), which Ridus denied, arguing the fossil loan predated the Protocol. Despite multiple objections and Anecoyon's 2023 legislation prohibiting genetic resource use for de-extinction, Ridus proceeded with genome sequencing and published Digital Sequence Information (DSI). It partnered with Salols Co., which used CRISPR to create two panthers, now housed at Sidney Animal Park, which profits from public display.

Anecoyon maintains that PIC was required, the fossil use exceeded agreed terms, and benefit-sharing obligations under the Convention on Biological Diversity (CBD) apply. Both Parties have submitted the dispute to the International Court of Justice.

The Parties, both signatories to the CBD and the Nagoya Protocol, agreed to submit the dispute over Prior Informed Consent and Benefit Sharing to the International Court of Justice.

SUMMARY OF ARGUMENTS

1. Ridus extracted and sequenced Royal Panther DNA without Anecoyon's consent, commencing utilization of a genetic resource. Fossil DNA qualifies as genetic material with research value, triggering PIC obligations. Anecoyon, as provider, has exclusive authority, and Ridus exceeded the 1901 loan's permitted purpose, violating international law.
2. Anecoyon's refusal to consent to de-extinction aligns with the CBD's objectives. De-extinction poses ecological, ethical, and scientific risks, invoking the precautionary principle. Proxy species divert resources from extant biodiversity and do not constitute "environmentally sound uses" under Article 15(2).
3. Under the VCLT, DSI used for de-extinction qualifies as "biotechnology" under the CBD and Nagoya Protocol. It is a biochemical derivative applied in genome reconstruction, and Parties' practice treats DSI as biotechnology. CRISPR-edited proxy panthers, as LMOs, clearly fall within this framework.
4. The SAP uses DSI through genome reconstruction and captive breeding, placing it in listed user sectors under CBD Decision 16/2. Its $130 million annual revenue, including $4 million from Royal Panther viewing, confirms commercial activity, overriding non-profit claims.

ARGUMENTS

1. RIDUS'S CONDUCT VIOLATED PRIOR INFORMED CONSENT OBLIGATIONS UNDER THE CBD AND THE NAGOYA PROTOCOL.

Agreements among treaty parties must guide interpretation.[1] Thus, the Nagoya Protocol—an implementing agreement to the (CBD),[2]—must be read together with it to clarify access obligations.

Ridus requires Prior Informed Consent (PIC) before accessing or using genetic resources.[3] Therefore, the PIC requirements are *prima facie* applicable here and should be interpreted in light of their ordinary meaning, preambles, and object and purpose.[4]

1.1. The PIC rules under the CBD and the Nagoya Protocol are triggered.

The PIC rules under the CBD and Nagoya Protocol apply because the Royal Panther fossil DNA is a genetic resource **[1.1]**, and were triggered when Ridus extracted and sequenced it, commencing utilization **[1.2].**[5] Acting in good faith[6], a new PIC duty emerged despite the 2009 loan **[1.3]**.

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[1] Vienna Convention on the Law of Treaties,[hereinafter VCLT] 23 May 1969, 1155 U.N.T.S. 331, art. 31(2)(a).
[2] Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits,[hereinafter Nagoya Protocol], 29 Oct. 2010, U.N.T.S. Reg. No. A-30619, preamble para. 5.
[3]Convention on Biological Diversity,[hereinafter CBD], 5 June 1992, 1760 U.N.T.S. 79, art. 15(1).
[4] VCLT, supra note 1, art. 31(1); see also Richard Gardiner, Treaty Interpretation 154–58 (2d ed. 2015).
[5] Nagoya Protocol, supra note 2, art. 2(c).
[6] VCLT, supra note 1, art. 31(1).

1.1.1. Fossil DNA Qualifies as a "Genetic Resource" under the CBD and the Nagoya Protocol.

A 6,000-year-old DNA-bearing fossil qualifies as "genetic material" under the CBD [7].The treaty covers fossils, and DNA from extinct organisms retains hereditary function and research value, qualifying as a "genetic resource."[8]
The 1901 fossil yielded DNA sufficient to reconstruct a genome[9], qualifying as "genetic material" under the CBD and a "genetic resource" under the Nagoya Protocol, with research value bringing it under the PIC regime.
Studies show fossils can have scientific and economic value,[10] and ancient DNA remains usable for genetic analysis.[11] The ICJ holds that treaty terms evolve with science,[12] supporting that ancient DNA falls within "genetic resources." Hence, fossil DNA use by Ridus triggered PIC obligations under the CBD and Nagoya Protocol.

1.1.2. The instant Ridus extracted and sequenced that DNA, it commenced "utilisation of a genetic resource."

Ridus extracted and sequenced the Royal Panther's DNA to build a reference genome, directly researching Anecoyon's genetic material and thus meeting the Nagoya Protocol's definition of "utilization"[13]. In September 2022, Ridus announced the DNA extraction and de-extinction plan, and by 2024 released the digital sequence information—activities clearly amounting to

[7] CBD, supra note 3, art. 2.
[8] Id.
[9] Clarification A12.
[10] George F. Winters, International Fossil Laws, AAPS J. (1997).
[11] Wan-Qian Zhao et al., DNA Fragments in Crude Oil Reveal Earth's Hidden History, arXiv (9 Dec. 2024).
[12] Dispute Regarding Navigational and Related Rights (Nicaragua v. Costa Rica), Judgment, 2009 I.C.J. 213, ¶ 66.
[13] Nagoya Protocol, supra note 2, art. 2(c).

utilization .[14] As these acts occurred after both States became Parties,[15] the PIC obligations fully applied.

The ICJ in Pulp Mills required good-faith notification and consultation for activities affecting another State[16], while Land Reclamation imposed a duty to exchange information even for scientific projects with potential impacts[17]—together affirming the need for prior consultation and consent.

Many States require consent and benefit-sharing for research or sequencing,[18]showing a broad expectation that utilization needs prior consent. Moreover, genomic and bioinformatic work is recognized as utilization under the Protocol.[19] Courts have also supported this view: both the ECJ[20] and the Uttarakhand High Court [21] have held that sequencing and bioprospecting activities trigger

[14] Questions Relating to Prior Informed Consent and Benefit Sharing in the Context of De-Extinction (Anecoyon v. Ridus), Special Agreement & Record (Stetson IEMCC 2025-26) [hereinafter R], ¶¶ 16,28.
[15] R,¶ 11.
[16] Pulp Mills on the River Uruguay (Argentina v. Uruguay), [hereinafter Pulp Mills (ICJ 2010)] Judgment, 2010 I.C.J. 14, ¶¶ 101–105.
[17] *Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v. Singapore)*, ITLOS Case No. 12, Provisional Measures Order, 2003 ITLOS Rep. 10, ¶¶ 90–93 [hereinafter Straits of Johor Case].
[18] Regulation (EU) No. 511/2014 of the European Parliament and of the Council, art. 3(5); Biological Diversity Act 2002 (India) §§ 3–4; Law No. 13,123/2015 (Brazil) arts. 2–3; NEMBA Bioprospecting Regulations (S. Afr.) reg. 3.
[19] Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising from their Utilization,[hereinafter Bonn guidelines] CBD COP-6, Decision VI/24 (2002), Annex ¶¶ 26–30;see also IUCN, Explanatory Guide to the Nagoya Protocol on Access and Benefit-Sharing 93–101 (2012).
[20] European Commission v. United Kingdom of Great Britain and Northern Ireland, Case C-176/20, ECLI:EU:C:2022:154 (E.C.J. 2022)
[21]Divya Pharmacy v. Union of India, W.P. No. 343 of 2016 (Uttarakhand High Ct Dec. 21, 2018).

ABS obligations. Interpreted in good faith[22] these sources confirm that once Ridus began sequencing, it commenced utilization requiring Anecoyon's prior informed consent.

1.1.3. As the Nagoya Protocol was already in force when the DNA was extracted, its temporal scope triggers a new PIC obligation despite the 2009 loan.

Although the 1901 fossil was loaned in 2009,[23] Ridus's 2022 extraction and sequencing of DNA[24], after both parties became bound[25], constituted new conduct within its temporal scope.[26]As treaties bind continuing acts under *pacta sunt servanda*[27], Ridus had a continuing duty to align its research with Articles 5–6 [28] despite the outdated colonial arrangement.
In Pulp Mills, the ICJ held that ongoing activities must comply with treaties in force, even if begun earlier.[29] Likewise, the Railway Land Arbitration[30],confirmed that prior consent does not justify actions that later violate treaty rules. Applying this logic, Ridus's reliance on the 1901 fossil loan cannot exempt it from Nagoya Protocol PIC obligations once the Protocol became binding. This reasoning refutes Ridus's claim that the Nagoya Protocol is non-retroactive.[31] Although the principle of non-retroactivity is well-established[32] and retroactive laws are exceptional, this case involves no retroactive application. The 2022 extraction and sequencing constitute new conduct

[22] VCLT, supra note 1, art. 31(1); Patricia Birnie, Alan Boyle & Catherine Redgwell, International Law and the Environment (3d ed. 2009) 19 – 21.
[23] R,¶ 15.
[24] R, ¶ 16.
[25] R, ¶ 11.
[26] Commentary of the Nagoya Protocol, at 73 (Article 3 discussion, paras. 49–65).
[27] VCLT, supra note 1, art.26.
[28] Nagoya Protocol, supra note 2, art.5-6.
[29] Pulp Mills (ICJ 2010), supra note 16.
[30] Straits of Johor Case, supra note 17.
[31] R, ¶ 19.
[32] VCLT, supra note 1, art. 28.

after the Protocol entered into force[33], making the PIC obligation prospective rather than retroactive.[34]

Scholars recognize that treaties govern continuing or subsequent acts,[35] and that environmental obligations must be interpreted evolutionarily and in good faith to remain effective,[36] with ongoing activities bound by treaty obligations.[37] Hence, Ridus's reliance on non-retroactivity mischaracterizes the issue, as ongoing utilization of genetic resources after the Protocol entered into force triggers a new duty to obtain Anecoyon's Prior Informed Consent.

1.2 Anecoyon is the country providing genetic resources whose Prior Informed Consent (PIC) was required.

Anecoyon is both the country of origin[38] and the provider[39] of the Royal Panther fossil**,[2.1]** which was excavated from its territory and yielded DNA of sufficient quality for research. The transboundary nature of the species does not diminish Anecoyon's exclusive authority,**[2.2]** as the decisive factor is the location where the material was collected.

[33] R, ¶¶ 20.
[34] Commentary of the Nagoya Protocol 73 (2012) ¶¶ 49–65.
[35] Ian Brownlie, Principles of Public International Law 616–618 (8th ed. 2008).
[36] Patricia Birnie, Alan Boyle & Catherine Redgwell, *International Law and the Environment* 19–21 (3d ed. 2009) [hereinafter Birnie, Boyle & Redgwell, International Law and the Environment].
[37] Philippe Sands, *Principles of International Environmental Law* 198–200 (3d ed. 2012) [hereinafter Sands, Principles of International Environmental Law].
[38] CBD, supra note 3, art. 2.

[39] Id.

1.2.1. Anecoyon Is the Country of Origin and the Party Providing the Genetic Resource.

The Royal Panther fossil was excavated in situ from a cave in Anecoyon and later loaned to Ridus.[40] As the material originated on its territory and yielded DNA sufficient to construct a genome[41]Anecoyon is the country of origin and provider of the genetic resource.[42]

Anecoyon has sovereign authority over access to its genetic resources.[43] International jurisprudence confirms that control attaches to the location where the resource is obtained, [44] and because the only viable Royal Panther specimen originated in Anecoyon, it is both the country of origin and the provider whose consent was required before Ridus's genome project.[45]

1.2.2. Transboundary Range of the Royal Panther Does Not Diminish Anecoyon's Sole Authority.

Ridus's claim that the Royal Panther's transboundary range limits Anecoyon's authority is misplaced; the decisive factor is the collection site of the viable fossil DNA[46],which came solely from Anecoyon,[47] not the species' historic distribution.

The provider country is determined by where the genetic material was actually obtained,[48] and although the Nagoya Protocol encourages cooperation for resources found in multiple countries,[49]

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[40] R, ¶15
[41] Clarification A12.
[42] CBD, supra note 3, art. 2.
[43] Stockholm Declaration (1972) Principle 21; Rio Declaration (1992) Principle 2.
[44] Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh/Myanmar), ITLOS Judgment (2012) ¶¶ 30, 223, 225, 619–620.
[45] Birnie, Boyle & Redgwell, International Law and the Environment, supra note 36; Sands, *Principles of International Environmental Law*, supra note 37.
[46] CBD, supra note 3, art 2.
[47] R, ¶16; Clarification Q12.
[48] IUCN, Guidelines on Access and Benefit Sharing (2020), p. 23.
[49]Nagoya Protocol, supra note 2, art. 11.

it does not create joint provider rights or shared consent obligations.[50] Scholars note that transboundary range alone does not limit PIC authority. Laws treating extinct-species fossils as resources of the extraction country reinforce this, leaving Anecoyon's sovereign rights unaffected by Ridus's claims.

Scholars note that transboundary range alone does not limit the PIC authority of the country supplying the material.[51] Laws treating extinct-species fossils as resources of the extraction country reinforce this,[52] leaving Anecoyon's sovereign rights unaffected by Ridus's claims.

1.3 Ridus's DNA sequencing breached the scientific purpose of the 1901 fossil loan.

The CBD and Nagoya Protocol require PIC for any utilization of genetic resources[53] and mandate provider participation in related research.[54] Anecoyon consented only to 'scientific and educational exhibition,'[55]**[3.1]** Yet Ridus's genome sequencing and de-extinction exceeded that scope. Ridus also ignored Anecoyon's objections and laws **[3.2]**. Because DNA extraction was unauthorized, the entire project is unlawful,[56] and any change in purpose legally requires fresh PIC.

[50] Jorge Cabrera et al., Explanatory Guide to the Nagoya Protocol (IUCN, 2014), pp. 133–135.
[51] Morten Walløe Tvedt & Tomme R. Young, Beyond Access: ABS Mechanisms and Implementation (IUCN, 2007), p. 108.
[52] German Research Foundation (DFG), ABS Case Study: Ancient DNA from Siberian Mammoth Fossil (2016).
[53] CBD, supra note 3, art. 15(5); Nagoya Protocol, supra note 2, art. Article 6(1).
[54]CBD, supra note 2, art.15(6).
[55] R, ¶ 15.
[56] Bonn Guidelines, supra note 19, paras. 16(b), 36;Nagoya Protocol, supra note 2, art. 5(2).

1.3.1. Ridus's sequencing and de-extinction went beyond the 1901 loan's limits to "scientific and educational research", exceeding the scope of valid consent.

The 1901 fossil loan was limited to scientific and educational display, not for bringing the species back.

International environmental law defines "scientific research" as knowledge-generation, not organism creation.UNESCO likewise defines it as study and experimentation for understanding, not species reconstruction.[57] Ridus's genome sequencing and de-extinction therefore exceed ordinary research. The Nagoya Protocol allows only non-commercial research and requires new PIC when purposes change[58], and guidelines similarly require renewed consent for any use beyond agreed terms.[59] ICJ confirms that historic consent cannot justify actions inconsistent with present-day treaty obligations.[60].

1.3.2 Anecoyon's sovereign authority was reinforced by its clear objections and domestic laws, which Ridus ignored by continuing utilization.

Anecoyon's sovereign rights over its genetic resources, protected under CBD[61] and Nagoya Protocol,[62] require its PIC. These rights were reinforced by Anecoyon's diplomatic protests[63] and its 2023 law banning de-extinction uses.[64] Ridus's claimed support from the Panthera community

[57] UNESCO Recommendation on Science and Scientific Researchers, Nov. 13, 2017, art. 3(1)(a).
[58] Nagoya Protocol, supra note 65, art. 6(3)(a).
[59] Bonn Guidelines, supra note 19, paras. 44–45.
[60] Straits of Johor Case, supra note 17, PCA 2014; Pulp Mills, ICJ 2010, supra note 16.
[61] CBD, supra note 3, Art. 15(1).
[62] Nagoya Protocol, supra note 2, art. 6(1).
[63] R ¶¶18–22.
[64] R ¶24

cannot replace State consent, as the Nagoya Protocol allows indigenous participation only in accordance with domestic law.[65]

Customary international law affirms permanent sovereignty over natural resources[66], and the CBD and NP enshrine this by making State-level PIC mandatory. As such, Ridus's continued use of Anecoyon's genetic material, despite its legal prohibitions, violates its sovereign rights and international law.

Therefore, Ridus's conduct violated the Prior Informed Consent provisions of the CBD and the Nagoya Protocol.

[65] Nagoya Protocol, supra note 2, art. 6(2), 7, and 12(1).
[66] GA Res. 1803 (XVII),Permanent Sovereignty over Natural Resources (14 Dec. 1962).

2. ANECOYON'S REFUSAL TO CONSENT BASED ON ITS OBJECTIONS TO DE-EXTINCTION IS NOT COUNTER TO CBD'S OBJECTIVES.

Anecoyon's objections to refusal to consent are based on ethical[67], policy and legal concerns[68] as the "royal panther" is a proxy species[69] which has numerous disadvantages.[70] De-extinction has also sparked concerns about the possibility of resurrected species being freed or escaping, which may potentially cause ecological issues.[71] All three objectives of CBD are to be pursued in a strongly interrelated and collective manner[72]. Accordingly, refusal to permit such speculative interventions may The preamble must be duly considered when interpreting the three objectives of CBD, namely; conservation of biological diversity**[2.1]**, sustainable use of its components**[2.2]** and fair and equitable sharing of the benefits arising out of the utilization of genetic resources**.**

2.1 The refusal to consent results in conservation of biological diversity.

Anecoyon's refusal to consent based on its objection to de-extinction is in harmony with CBD's objectives. One of the main objectives of CBD is conservation of biological diversity. Anecoyon's refusal is based on the precautionary principle**[2.1.1]** and the fact that CBD focuses on extant species and not de-extinct species**[2.1.2].**

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[67]IUCN SSC, Guiding Principles on Creating Proxies of Extinct Species for Conservation Benefit, Version 1.0, at 3 (May 18, 2016) [hereinafter IUCN Proxy Guidelines].
[68] R.¶18.
[69]IUCN Proxy Guidelines, supra note 67, at 1 ("Note on Terminology").
[70]IUCN Proxy Guidelines, supra note 67.
[71]Stuart L. Pimm et al., *Emerging Technologies to Conserve Biodiversity*, 28 Conservation Biology 431 (2014) [hereinafter Pimm et al., Emerging Technologies].
[72]Conference of the Parties to the Convention on Biological Diversity, Decision VI/5, *Strategic Plan for the Convention on Biological Diversity*, U.N. Doc. UNEP/CBD/COP/6/5 (Apr. 2002).

2.1.1 Anecoyon's refusal to consent aligns with the precautionary principle.

The precautionary principle[73] has attained the status of customary international law,[74] applicable when there is an uncertain threat of environmental damage of an irreversible nature,[75] which includes indirect and long-term threats.[76] CBD also contains precautionary principle in its preambular text[77].

The product of de-extinction can lead to invasiveness[78], inadvertent resurrection of ancient pathogens[79] and ecosystem impacts such as novel ecosystems[80], which are long term irreversible effects[81]. The irreversible effects coupled with uncertainty of potential damage requires the adoption of this principle.[82] De-extinction must be approached through the lens of the precautionary principle, given the inherent scientific uncertainty and potential ecological risks involved.[83]

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[73] Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Case No. 17, Advisory Opinion of Feb. 1, 2011, ITLOS Rep. 10 ¶135.
[74] ALEXANDER GILLESPIE, CONSERVATION, BIODIVERSITY AND INTERNATIONAL LAW 464 (2011) [hereinafter GILLESPIE]; Pulp Mills (ICJ 2010), supra note 16.
[75] UNGA Res.37/7, World Charter for Nature (Oct. 28, 1982); IUCN, *Guidelines for Applying the Precautionary Principle to Biodiversity Conservation and Natural Resource Management*, IUCN 1 (2007) [hereinafter IUCN Precautionary Guidelines].
[76] IUCN Precautionary Guidelines, *supra* note 75, Guideline 6.
[77]CBD, supra note 3, preamble.
[78] IUCN Proxy Guidelines, supra note 67, at 8.
[79]Id.
[80] Id.
[81]Richard J. Hobbs et al., *Managing the Whole Landscape: Historical, Hybrid, and Novel Ecosystems*, 12 Frontiers in Ecology & the Environment 557, 559 (2014) [hereinafter Hobbs et al., Managing the Whole Landscape].
[82] R. Cooney, *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: An Issues Paper for Policy-Makers, Researchers and Practitioners* (IUCN Policy & Global Change Series No. 002, 2004) [hereinafter Cooney, Precautionary Principle].
[83] S. J. Sherkow & H. T. Greely, *Frankenstein's Mammoth: Anticipating the Global Legal Framework for De-Extinction*, 96 Minn. L. Rev. 581, 581 (2016) [hereinafter Sherkow & Greely, Frankenstein's Mammoth].

Therefore, even in the absence of definitive scientific evidence that de-extinction using DSI poses environmental risks, the prevailing uncertainty justifies Anecoyon's refusal under the precautionary approach enshrined in the CBD Preamble. Hence, the refusal reinforces—rather than contravenes—the CBD's conservation objectives.

2.1.2 The CBD Prioritizes Conservation of Extant Species, Not De-Extinction

Ridus erroneously interprets article 8 of CBD stating that Anecoyon denying access based on objections to de-extinction is counter to the CBD's objectives.[84] CBD provision talks about conserving biological resources[85] for the conservation of biological diversity.[86] Biological diversity is the variability among living organisms.[87]The Convention was never designed to govern or facilitate de-extinct species; its provisions address the conservation of naturally occurring biodiversity, not artificially resurrected organisms.[88]

Additionally, using resources for de-extinction projects is just a misallocation of efforts[89]. Thus, Anecoyon's refusal to consent is justified because the CBD's conservation framework is designed for existing biodiversity, and de-extinction undermines that focus.

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[84] R.¶25.
[85] CBD, supra note 3, art. 8(c).
[86] Id.
[87] CBD, supra note 3, art. 2.
[88] Sherkow & Greely, Frankenstein's Mammoth, supra note 83.
[89]Paul R. Ehrlich & Anne H. Ehrlich, *The Case Against De-Extinction: It's a Fascinating but Dumb Idea*, Yale Envtl. 360 (Jan. 13, 2014) [hereinafter Ehrlich & Ehrlich, Case Against De-Extinction].

2.2 De-extinction is contrary to the concept of sustainable use of components of biological diversity

Sustainable use is the use of components of biological diversity in a way and rate that does not lead to the long-term decline of biological diversity.[90] Also, States are responsible for ensuring that biological resources are being used sustainably[91]. De-extinction is not an "environmentally sound use", so Article 15(2) of CBD does not apply to de-extinction.**[2.2.1]** An EIA conducted by Ridus cannot sufficiently address the unprecedented uncertainty surrounding a genetically reconstructed species with no ecological analogue, and international jurisprudence requires heightened due diligence where irreversible harm is possible.[92] Additionally, de-extinction diverts critical financial and scientific resources away from in-situ conservation priorities and creates moral hazards that undermine long-term sustainable management of extant biodiversity.[93]**[2.2.2]** Therefore, Anecoyon's refusal to consent is not at all counter to CBD's objective. Instead, it is strictly adherent to the principles of the convention.

2.2.1 De-extinction is Not an "Environmentally Sound Use" and Risks the Sustainability of Extant Species

Ridus incorrectly assumes that Article 15(2) grants an unconditional right of access to genetic resources, overlooking the requirement that access must be authorized only for "environmentally

[90] CBD, supra note 3, art. 2.
[91] Lyle Glowka et al., *A Guide to the Convention on Biological Diversity* ("IUCN–EPLP No. 30"), at 10 (IUCN Envtl. Law & Policy Paper, 1994).
[92] Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Advisory Opinion, ITLOS Case No. 17, ¶ 135 (Feb. 1, 2011).
[93] IUCN proxy guidelines, supra note 67, at 8–9.

sound uses."[94] This qualifier must be interpreted in light of Article 3, which affirms a provider State's sovereign right to regulate access pursuant to its own environmental policies,[95] and Article 8(g), which obliges Parties to adopt measures to avoid risks associated with living modified organisms.[96]

Although Ridus has carried out an Environmental Impact Assessment(EIA)[97]such an assessment cannot address the unprecedented risks posed by a genetically reconstructed species with no existing ecological analogue.[98] EIAs are inherently insufficient where scientific uncertainty persists, as recognized in Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, which requires heightened due diligence whenever potential irreversible harm exists.[99] De-extinction also creates perverse incentives by encouraging complacency toward habitat destruction—if species can simply be recreated, conservation urgency is undermined.[100]

Therefore, Anecoyon's refusal is a responsible exercise of its environmental sovereignty since de-extinction does not constitute an environmentally sound or sustainable use of biodiversity.[101]

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[94] CBD, supra note 3, art. 15(2).
[95] Id. art. 3; see also Catherine Redgwell, *From Permission to Prevention?* 29 *Netherlands Y.B. Int'l L.* 139, 160–61 (1998)
[96] CBD, supra note 3, art. 8(g).
[97]Clarification Q1.
[98] IUCN proxy guidelines, supra note 67, 8–9; see alsoSherkow & Greely, Frankenstein's Mammoth, supra note 83.
[99]*Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, Advisory Opinion, 2011 ITLOS Rep. 10, 50 I.L.M. 458 (Feb. 1).
[100] Sherkow & Greely, supra note 83, at 606–07 (describing "conservation moral hazard"); see also A. Trouwborst, *De-Extinction and International Law*, 25 Rev. Eur. Comp. & Int'l Envtl. L. 264, 270 (2016) [hereinafter Trouwborst, De-Extinction and International Law].
[101] CBD, supra note 3, art. 1(b); see IUCN Environmental Law Centre, *An Explanatory Guide to the CBD* 29–31 (IUCN Environmental Policy and Law Paper No. 46, 1994) (defining sustainability as requiring avoidance of practices that undermine long-term ecosystem viability).

2.2.2 De-extinction Diverts Critical Conservation Resources and Undermines Policies that Promote Sustainable Use

De-extinction undermines sustainable use by diverting resources from proven conservation[102], accelerating biodiversity loss. Sustainable use requires management practices that actively support the maintenance and recovery of existing biodiversity.[103] The CBD prioritizes protecting ecosystems, restoring habitats, and safeguarding endangered species through direct conservation.[104] De-extinction projects require costly labs, monitoring, and long-term maintenance, diverting resources from urgent conservation of at-risk species.[105] Conservation authorities warn that diverting resources to de-extinction distorts environmental priorities and threatens efforts to prevent current species loss.[106] Moreover, de-extinction creates a perverse incentive, leading people to neglect habitat protection and species conservation, assuming extinct species can be recreated.[107] This moral hazard undermines the CBD's goal of conserving biodiversity through proactive, ecosystem-based management.[108]

Therefore, Anecoyon's refusal to grant consent preserves the integrity of its conservation agenda and upholds its legal obligation to ensure that the use of its biological resources does not compromise long-term biodiversity, thereby aligning with the objectives of the CBD.

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[102]Ehrlich & Ehrlich, Case Against De-Extinction.
[103] CBD, supra note 3, pmbl., art. 1.
[104] Id. art. 8(a)–(e).
[105]Id., art. 20(1)–(2).
[106]IUCN Proxy Guidelines, supra note 67, 1.1, at 8–9., see also Stuart L. Pimm et al., *Emerging Technologies to Conserve Biodiversity*, 28 Conservation Biology 431, 434 (2014).
[107] IUCN Proxy Guidelines, supra note 67, 1.1, 8 (Version 1.0, May 18, 2016).
[108] United Nations Environment Programme, *Handbook of the Convention on Biological Diversity* 133–35 (3d ed. 2005).

3. DSI USED FOR DE-EXTINCTION ACTIVITIES IS "BIOTECHNOLOGY" FOR PURPOSES OF THE CBD AND THE NAGOYA PROTOCOL.

Applying the rules of treaty interpretation under VCLT, it is obvious that DSI that was used for de-extinction is "biotechnology" for the purposes of the CBD and Nagoya Protocol. DSI used for de-extinction is "biotechnology" under all the ways of interpretation listed in the VCLT: literal interpretation**[3.1]**[109], teleological interpretation**[3.2]**[110] , and subjective interpretation**[3.3]**[111].

3.1. Literal Interpretation Confirms DSI as a "Derivative" Utilized in a "Technological Application"

"Biotechnology" means any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.[112] "Derivative" means a naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity.[113]

Ridus erroneously claims that since extinct DNA is "non-functional," it is not covered by the treaty.[114] **Biochemical compounds isolated from specimens are specifically covered by the Nagoya Protocol's definition of "derivativ**e," which does not include any functioning requirements.[115] DNA is a naturally occurring biochemical compound because it is an organic

[109]VCLT, supra note 1, art. 31(1).
[110] Id. art. 31(2).
[111] Id. art. 32.
[112] CBD, supra note 1, art. 2.
[113] Nagoya Protocol, supra note 2, art. 2(e).
[114] R.¶19.
[115] Nagoya Protocol, supra note 2 , art. 2(c).

chemical of complex molecular structure.[116] Additionally, the definition of biotechnology in CBD is designed to include future technologies as well[117] which indicates that CBD definitions must be used in broad terms.

Therefore, according to the CBD and Nagoya Protocol, DSI is a genetic resource derivative, and its use for de-extinction is a "technological application" in the traditional sense of the word “biotechnology."

3.2 Teleological Interpretation Demands Regulation of DSI-Driven Technology

Interpreting DSI-driven genome manipulation as biotechnology is necessary to give effect to the object and purpose of the CBD and Nagoya Protocol. The CBD seeks to ensure the conservation and sustainable use of biological diversity and the fair and equitable sharing of benefits arising from genetic resources.[118] Excluding DSI-based de-extinction from the definition of biotechnology would create a regulatory loophole allowing users to circumvent ABS obligations simply by digitizing DNA—a result fundamentally incompatible with the equitable benefit-sharing objectives of the treaty. Moreover, where genetic manipulation produces organisms with ecological risks—as Anecoyon has consistently warned—the CBD’s precautionary purpose requires their regulation under biotechnology standards, particularly when activities generate commercial benefits, such as observation fees produced in the first six months of exhibition.[119]

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[116] *DNA, Organic chemical of complex molecular structure*, *Encyclopædia Britannica*;; Suzanne Wakim & Mandeep Grewal, *Biochemical Compounds*, in *Human Biology* 3.4 (LibreTexts ed. 2025).
[117] International Union for Conservation of Nature (IUCN), *A Guide to the Convention on Biological Diversity* (EPLP No. 030) at 17 (2003).
[118] CBD, supra note 3, art. 1.
[119] R ¶ 34.

Therefore, the only interpretation that gives full effect to CBD's and Nagoya protocol's objectives is that the de-extinction activities utilizing DSI constitute biotechnology.

3.3 Subjective Interpretation and Context Confirm DSI that was used for de-extinction as Biotechnology

The intent of the Parties, as reflected in subsequent agreement and practice, confirms that DSI utilization is embedded within the biotechnology framework of the CBD. CBD Decision 16/2—adopted unanimously at COP16—establishes a multilateral benefit-sharing mechanism specifically for "digital sequence information on genetic resources," expressly identifying sectors such as "biotechnology" as beneficiaries of DSI use.[120]

Moreover, the technology underlying de-extinction is Synthetic Biology, which the CBD Ad Hoc Technical Expert Group characterizes as "a further development and new dimension of modern biotechnology."[121] The CRISPR-edited proxy panthers also qualify as Living Modified Organisms ("LMOs"), bringing the activity under the governance structure of the Cartagena Protocol on Biosafety.[122]

This broader treaty context demonstrates that the CBD instruments understands genome editing, synthetic biology, and DSI manipulation as part of biotechnology, reflecting the negotiating history and evolving understanding of the Parties.

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[120] Conference of the Parties to the Convention on Biological Diversity, Decision 16/2, *Digital Sequence Information on Genetic Resources*, U.N. Doc. CBD/COP/DEC/16/2 (2024).
[121] Report of the Ad Hoc Technical Expert Group on Synthetic Biology, U.N. Doc. UNEP/CBD/SBSTTA/20/8 (Mar. 2016).
[122] *Cartagena Protocol on Biosafety to the Convention on Biological Diversity*, Jan. 29, 2000, 2226 U.N.T.S. 208, art. 3(g).

4. THE SIDNEY ANIMAL PARK CONSTITUTES A USER OF DIGITAL SEQUENCE INFORMATION AND ENGAGES IN COMMERCIAL ACTIVITIES UNDER CBD/COP/DEC/16/2

The SAP is considered a DSI "user" under the multilateral mechanism because its role as the commercial endpoint of the de-extinction project and its captive breeding activities fall within the covered user sectors like biotechnology and animal breeding. **[4.1]** The SAP engages in commercial activity arising from DSI utilization because its $130 million in annual revenue, including fees from Royal Panther viewing, overrides any claim to a public institution exemption and, when combined with its CITES-classified commercial captive breeding, confirms its status as a contributing commercial DSI user under the CBD. **[4.2]**

4.1. The Sidney Animal Park (SAP) is a User of DSI on Genetic Resources.

The SAP operates as the indispensable commercial endpoint of the de-extinction project, making it a "user" under the DSI multilateral mechanism. **[4.1.2]** DSI covers a broad range of digital biological information, not just DNA sequences. **[4.1.1]** Decision 16/2 includes biotechnology and animal breeding as user sectors, and SAP's captive breeding activities fall directly within these categories.[123] **[4.1.3]**

4.1.1. The definition and scope of DSI under the CBD and the Nagoya Protocol remain legally unresolved.

[123] CBD COP Dec. 16/2, Annex ¶ 3.

The Nagoya Protocol does not define DSI, but Article 2(c) defines "utilization of genetic resources" as research and development on their genetic or biochemical composition, including via biotechnology."[124] Given the generic and evolving nature of treaty terms, this definition must be interpreted evolutionarily to remain relevant to scientific and technological advances.[125] Decision 16/2 recognizes DSI users in sectors gaining direct or indirect commercial benefit,[126] should contribute to a global benefit-sharing mechanism.[127] Expert reports classify DSI to include nucleotide reads, sequence assemblies with annotations, and macromolecular and metabolic data.[128] Thus, DSI falls squarely within the "genetic and biochemical composition" of genetic resources.

4.1.2. The De-extinction Project constitutes a Functional Utilization of DSI via Synthetic Biology.

The Panthers are the direct, living product of DSI utilization and synthetic biology, created when Ridus contracted Salols Co. to use DSI to produce the Royal Panthers, Ixchel and Itzamna, now housed at the SAP.[129] While historical laws governing ABS focused exclusively on physical access

[124] Nagoya Protocol, supra note 2, art. 2(c).
[125] VCLT, supra note 1, arts. 31(1), 31(3)(c).
[126] CBD COP Dec. 16/2, Annex ¶ 3.
[127] Convention on Biological Diversity, Decision 15/9, Monitoring Framework for the Kunming-Montreal Global Biodiversity Framework, ¶ 8 (Dec. 19, 2022) [hereinafter "CBD COP Dec. 15/9"].
[128] Secretariat of the Convention on Biological Diversity, Study on Digital Sequence Information on Genetic Resources: Concept, Scope and Current Use, CBD/DSI/AHTEG/2020/1/3, at 7–10 (2020).

[129] R, ¶¶ 28–32.

to genetic resources,[130] The COP-15 multilateral DSI mechanism explicitly recognized that benefits arise from biological data utilization, independent of its physical form.[131] The framework thus requires legal and policy measures to ensure fair and equitable sharing of DSI benefits.[132] With the advent of synthetic biology, scientists are increasingly relying on digital sequence information, instead of physical genetic resources.[133] This reliance compels the conclusion that DSI itself serves as the functional component[134] of the resulting biotechnology, thereby rendering the SAP a user in the final, value-realizing stage of the utilization chain.[135] Ultimately, although Salols Co. initiated the creation of the Royal Panthers using DSI, it was SAP that completed the chain of DSI use, as SAP was the one to reap the ultimate benefits, making them the true end-user of the DSI.

4.1.3. The Park's Revenue Allocation to Captive Breeding places it squarely within a Decision 16/2 Listed Sector, which thus qualifies it as a User of DSI.

Decision 16/2 requires users to contribute if they are in sectors listed in Enclosure I.[136] Enclosure I of Decision 16/2 lists sectors benefiting directly or indirectly from DSI use on genetic resources, including "animal and plant breeding" and "biotechnology."[137] The CBD defines "biotechnology"

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[130] Michael Halewood et al., *New Benefit-Sharing Principles for Digital Sequence Information: Benefit Sharing Should Be Decoupled from Access*, 381 Science 1022 (2023).

[131] Convention on Biological Diversity, Decision 15/4, Kunming-Montreal Global Biodiversity Framework, Goal C, U.N. Doc. CBD/COP/DEC/15/4 (Dec. 19, 2022) [hereinafter "CBD COP Dec. 15/4"]

[132] CBD COP Dec. 15/4, Target 13.

[133] Frank Irikefe Akpoviri et al., Digital Sequence Information and the Access and Benefit-Sharing Obligation of the Convention on Biological Diversity, 17 Nanoethics 37 (2023).

[134] CBD COP Dec. 15/9, ¶ 8.

[135] CBD COP Dec. 16/2, Preamble ¶ 5.

[136] CBD COP Dec. 16/2, Annex ¶ 5.

[137] CBD COP Dec. 16/2, Enclosure I, ¶ 1(d)–(e).

as any technological application using biological systems to modify products or processes for specific purposes.[138] The de-extinction project exemplifies biotechnology from which SAP benefits, using synthetic biology and DSI to produce the Royal Panthers. Additionally, SAP conducts a captive breeding program,[139] which falls within the scope of Decision 16/2, Enclosure I, 1.d (Animal and plant breeding).[140] SAP benefits from DSI both directly, via its captive breeding program, and indirectly, through the Royal Panthers which themselves are products of DSI. Because the Park gains direct benefits from DSI via its captive breeding program, it qualifies as a DSI user, with its activities falling squarely within the listed sector.

4.2. The Sidney Animal Park Engages in Commercial Activity Arising from DSI Utilization.

The key issue is the practical difficulty of implementing fair and equitable benefit-sharing, especially due to challenges posed by DSI.[141] SAP does not qualify for the public institution exemption, as its commercial activities—including Royal Panther viewing and sales—undermine the CBD's fair benefit-sharing goal. **[4.2.1]** SAP's $130 million annual revenue, including $4 million from Panther viewing, demonstrates commercial activity outweighing any non-profit status under the CBD. **[4.2.2]** SAP's $130 million annual revenue, including $4 million from Panther viewing, demonstrates commercial activity outweighing any non-profit status under the CBD. **[4.2.3]**

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[138] CBD, supra note 3, art. 2.
[139] R, ¶35,
[140] CBD COP Dec. 16/2, Enclosure I, ¶ 1(d).

[141] Tim Coltman et al., *Benefit Sharing on Genetic Resources: Modelling Data Access, Control and Willingness-to-Pay for Digital Sequence Information*, *Ecological Solutions and Evidence* (2025).

4.2.1. The Sidney Animal Park Does Not Qualify for the Public Institution Exemption.

Ridus's claim that SAP is a public institution exempt under Decision 16/2(9) is incorrect.[142] SAP is an entertainment and tourism facility, not a research or academic institution, and it operates as a safari park focused on tourism revenue.[143] Although it may receive public funding, its main purpose is to market the Royal Panther as a paid attraction. Thus, the exemption for non-commercial public institutions does not apply, and the Park must contribute based on its commercial activities.[144] SAP is the final commercial link, designated by Ridus to charge visitors an extra $40 for viewing, generating $4 million annually from panther observation fees.[145] Exempting such a profitable entity from benefit-sharing would undermine the CBD's goal of ensuring fair and equitable sharing of benefits from genetic resource use.[146] Furthermore, the entity seeking import bears the burden of proving that its intended specimen use is clearly non-commercial.[147] An activity is deemed commercial if aimed at economic benefit,[148] and uses not clearly non-commercial are treated as primarily commercial.[149] It also sells merchandise, food, and drinks, generating USD 7 million, confirming its profit-oriented operations.[150]

4.2.2. The Park's $130 Million in Annual Sales Establishes an Economic Reality of Commercial Activity.

[142] CBD COP Dec. 16/2, ¶¶ 9–10.
[143] Clarifications Q2.
[144] CBD COP Dec. 16/2, Annex ¶ 3.
[145] R, ¶¶ 33, 34, 45.
[146] CBD, supra note 3, art. 1.
[147] CITES, 1(c).
[148] CITES, 1(b).
[149] CITES, 1(c).
[150] Clarifications, Q3.

About 1 million people visit yearly. Tickets cost USD 119, plus USD 40 to see the Royal Panthers. In six months, 50,000 paid the extra fee, and demand should remain steady.[151] Annually, this generates about USD 4 million from Panther viewing, contributing to roughly USD 130 million in total park revenue.[152] Also SAP has explicitly advertised the Royal Panthers to attract visitors.[153]Allowing this would create a loophole[154] that undermines the object and purpose.[155] This rejection is necessary, as a literal CBD reading could undermine its effectiveness and the ABS regime.[156] The test for commercial activity and financial scale is clearly met.

4.2.3. CITES-confirmed commercial purpose and breeding revenue satisfy CBD Decision 16/2, confirming SAP as a DSI user.

The panthers' captive-bred status places their use under a commercial legal designation. Species bred in captivity for commercial purposes are treated as lower-risk specimens.[157] ·This legally classifies the Panthers' breeding and use as commercial, undermining Ridus's claim that SAP's activity is purely conservationist. The ongoing captive breeding program shows that SAP operates within the "animal and plant breeding" category of CBD Decision 16/2 Enclosure I.[158] This shows SAP's operations are not purely educational or conservation-based but commercially benefit from DSI-derived organisms, triggering Decision 16/2.[159]

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[151] R, ¶¶ 34, 45.
[152] R, ¶45.
[153] Clarifications, Q5.
[154] Pulp Mills (ICJ 2010), supra note 16.
[155] CBD, supra note 3, art. 1.
[156] Frank Irikefe Akpoviri et al., Digital Sequence Information, 42 J. Env't L. & Pol'y 29 (2023).
[157] CITES art. VII, ¶ 4.
[158] CBD COP Dec. 16/2, Enclosure I.
[159] CBD COP Dec. 16/2, ¶ 3.

CONCLUSION

The applicant respectfully requests the honorable court to adjudge and declare that:

(a) Ridus's conduct violated the prior informed consent provisions of the CBD and the Nagoya Protocol;

(b) Anecoyon's refusal to consent based on its objections to de-extinction is in harmony to the CBD's objectives;

(c) DSI used for de-extinction activities is "biotechnology" for purposes of the CBD and the Nagoya Protocol; and

(d) Sidney Animal Park is a user of DSI on genetic resources for purposes of CBD Decision 16/2 and Sidney Animal Park is engaged in commercial activity covered by a sector currently listed in CBD Decision 16/2.

Respectfully submitted,

Agents for the Applicant