Peer Review Submission — CBD Notification 2026-047

First Draft Global Report on Collective Progress in the Implementation of the Kunming-Montreal Global Biodiversity Framework

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A note on terms used in this submission

This submission concerns domesticated mammals and birds — the living genetic diversity of the animals that people have raised, bred and adapted over millennia. These animals are biodiversity in their own right, with ecological, biocultural and economic value, and their genetic diversity is the foundation of that value. They are not solely an agricultural or food-supply concern; their food-system value is one consequence of their genetic diversity, which is precisely what is being lost and precisely what current frameworks do not measure or finance. Where this submission uses the word "livestock," it does so only in quoting or referring to a source that uses that term. The submission's own term is "domesticated mammals and birds," or, in the technical monitoring context, "animal genetic resources."

Preliminary statement: the central finding

These comments address a single structural finding that runs through the draft report: the report assesses progress on "biodiversity" while, at the operational level, measuring only its wild-species and ecosystem components. The genetic diversity of domesticated mammals and birds — which the Convention's own definition of biological diversity encompasses (Article 2), and which the Framework names explicitly in Goal A and in Target 4 — is absent from the report's indicators, case studies, agreement linkages, financing discussion, and reference apparatus.

This is not an isolated gap. It is systematic, and it is documented by the report's own text. The report's Table 9 scores the domesticated species element of Target 4 among the lowest of any element and states that "significant gaps with regard to domesticated species" exist. The vocabulary the report uses to describe animals and their genetic diversity is almost exclusively the vocabulary of wild species, and the contrast holds at every level: the word "wild" appears 108 times against "domesticated" 5 times, and the phrase "wild species" appears 59 times against "domesticated species" 4 times. The terms "breeds," "animal genetic resources," and "DAD-IS" do not appear in the report at all. The data and instruments required to address this element exist, are internationally agreed, are maintained by FAO — an organization the report relies upon throughout — and fall within the sources the report itself committed to drawing upon.

An assessment that omits a defined component of the biodiversity it measures produces a partial account. The consequence is not a matter of emphasis: a report that does not measure one component of biodiversity cannot fully assess progress toward conserving biodiversity, and the Framework's commitments to that component go unmeasured and unaccounted for. The comments that follow document this omission across the report's structure and identify, in each case, the existing resources by which it can be addressed.

General comment on the report as a whole

Section: General · Type: General comment

The Kunming-Montreal Global Biodiversity Framework explicitly includes domesticated mammals and birds within its scope. Goal A states that "the genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential." Target 4 mandates maintaining and restoring genetic diversity "within and between populations of native, wild and domesticated species." This is not incidental. The Convention on Biological Diversity defines biological diversity to include the variability within species and among domesticated species (Article 2). Domesticated genetic diversity is, by the Convention's own definition, biodiversity — and the Framework places it within its conservation architecture, in Goal A and in Target 4, alongside wild species, separately from its production architecture in Target 10. These are core commitments of the Framework this report assesses, not peripheral references.

The report assesses progress on "biodiversity" while measuring, at the operational level, only wild-species and ecosystem diversity. The vocabulary the report uses to describe animals and their genetic diversity is almost exclusively the vocabulary of wild species. Wild species are addressed through dedicated targets, indicators, case studies, linkages with multilateral agreements, and financing discussions. Domesticated mammals and birds receive no dedicated indicator, no case study, no agreement linkage, and no financing discussion. The contrast is measurable, and it holds at every level of comparison. The word "wild" appears 108 times and the word "domesticated" 5 times. At the level of the exact phrase, "wild species" appears 59 times and "domesticated species" 4 times. The five instances of "domesticated" occur only on pages 82, 83 and 247 — and in no other location, including the table of contents and the bibliography; three of the five fall within direct quotations of the Framework's own text (the Target 4 text, the Table 9 element label, and the Goal A text). The terms "breeds," "animal genetic resources," and "DAD-IS" do not appear in the report at all; "breeding" appears twice, both referring to wild species. An assessment that uses the term "biodiversity" for what is operationally an assessment of wild-species diversity is, by the Convention's own definition, a partial account presented as a complete one.

The report acknowledges this gap directly. In Table 9 (p.82) it scores the domesticated species element of Target 4 at 55 per cent — the lowest of all elements — and the accompanying narrative states explicitly that "significant gaps with regard to domesticated species" exist. Having identified the gap, the report provides no indicators to measure it, no data sources to track it, and no recommended actions to address it.

This submission does not attribute the gap to the Parties, and does not criticize Parties for low reporting rates on domesticated species. Reporting systems for this component of biodiversity have not been integrated into the national reporting architecture at the same level as wild-species systems. That is itself a structural matter this report can address. The submission asks that the report treat the gap it has already identified with the same analytical depth it applies to other gaps — by referencing the data sources that already exist, recommending indicator development, and ensuring that, where the financing of biodiversity conservation is discussed, domesticated mammals and birds are not excluded by default.

The data and the instruments to address this gap already exist and are maintained by the Food and Agriculture Organization (FAO). DAD-IS records, as of 2025, more than 9,200 breeds across 185 countries, documents 737 breeds as extinct, and classifies 29 per cent of breeds with known status as at risk of extinction. SDG indicator 2.5.2 provides an internationally agreed metric for the genetic

diversity of farmed and domesticated animals. The Global Plan of Action for Animal Genetic Resources, adopted by 109 countries at Interlaken in 2007 and updated in 2014, provides a multilateral framework for conservation response. These are established, internationally agreed, and directly relevant to the Framework's own stated scope.

The reference apparatus omits the animal genetic resources vocabulary

Section: List of abbreviations · Page 12 · Type: Specific

The report's List of abbreviations (page 12) is its only list of defined terms; the document contains no glossary or definitions section. The abbreviations defined include the institutional vocabulary of wild-species and plant conservation: the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the International Plant Protection Convention (IPPC), FAO, GBIF and IUCN. No term specific to domesticated animal genetic resources appears — neither DAD-IS, nor animal genetic resources (AnGR), nor the Global Plan of Action for Animal Genetic Resources.

This follows from the narrative omission rather than standing apart from it: an abbreviations list contains only terms the document uses, and because the report never invokes the animal genetic resources vocabulary, none of it enters the list. The point is the completeness of the pattern. The wild-species and plant conservation instruments are part of the document's working vocabulary and are defined for the reader; the animal genetic resources instruments are absent from that vocabulary entirely. A reader encountering the domesticated species element of Target 4 is given no pointer to the international system that monitors it.

Recommendation: Introduce the animal genetic resources instruments — DAD-IS and the Global Plan of Action for Animal Genetic Resources — into the report's working vocabulary where the domesticated species element of Goal A and Target 4 is addressed, and define the corresponding abbreviations in the List of abbreviations, so that the reference apparatus reflects the full scope of the genetic diversity the Framework names.

Monitoring framework and data gaps (Target 21 / Key Message A.6)

Section: II.B Target 21 / Key Message A.6 · Page 20 · Type: General comment on section

Key Message A.6 and the Target 21 section identify, in general terms, significant gaps in national monitoring capacity — data fragmentation and the need to develop monitoring systems for targets that currently lack operational indicators. That general diagnosis has a specific, identifiable instance the discussion does not name: the absence of a domesticated species genetic diversity indicator. Target 4 and Goal A both require monitoring of domesticated species, and no such indicator currently exists in the monitoring framework. Naming this specific gap is consistent with, not additional to, the section's own general point about indicator gaps — it is one concrete case of the need the section already identifies.

This gap is closable, and an operational data source already exists to close it. The animal genetic resources monitoring system maintained by FAO already tracks breed populations and risk status using harmonized, internationally agreed methodologies, and SDG indicator 2.5.2 — which measures the proportion of local breeds classified as at risk of extinction — draws on that system. It is an

internationally agreed indicator already in use, with FAO as custodian agency and an established methodology. It has not been connected to the Framework's monitoring framework, and no new methodology would be required to do so.

Recommendation: Name the absence of a domesticated species genetic diversity indicator explicitly in the monitoring gaps discussion as a specific instance of the indicator gaps the section already identifies, and evaluate SDG indicator 2.5.2, sourced from DAD-IS, for adoption as a component or complementary indicator for Target 4 and Goal A — for application now where feasible, and in the next monitoring cycle otherwise.

Sources of information (Box 3, Section I.A)

Section: I.A Introduction · Page 35, line 25 to page 37, line 4 · Type: Specific

Box 3 enumerates the sources the report commits to drawing upon, as specified by the Conference of the Parties. Item (e) includes the assessments and deliverables of IPBES. Item (k) includes "relevant information from the secretariats of biodiversity-related conventions and other relevant multilateral environmental agreements, international organizations and processes, including reports submitted under related conventions and on the Sustainable Development Goals," and identifies responses to notification 2025-099 as a source.

The report draws on FAO data substantially — for forests, for fish stocks, for ecosystem restoration, and for land, citing the FAOSTAT SDG indicators database directly. FAO is referenced throughout the report, in no instance in regard to domesticated animal genetic resources. FAO is also the custodian agency for SDG indicator 2.5.2, the internationally agreed measure of genetic diversity in farmed and domesticated animals. This indicator is reported through the FAOSTAT SDG indicators database the report already cites — the same Sustainable Development Goal reporting that Box 3, item (k), commits the report to drawing upon. The information required to assess the domesticated species element of Target 4 and Goal A was therefore within the report's own stated sources, was internationally agreed, and was held by an organization the report relies upon throughout. It is not referenced, and the report's treatment of the domesticated species element shows no evidence of drawing upon it.

Recommendation: Confirm whether FAO's submission in response to notification 2025-099, or the FAOSTAT SDG indicator data the report already draws upon, included SDG indicator 2.5.2. Where it was available and not applied, apply it and account for its prior non-use; where it was not included, obtain it for the second global report. The information falls within the sources the report committed to in Box 3 and is directly relevant to a named element of both Target 4 and Goal A.

Global status and trends (Section I.B)

Section: I.B Global status and trends · Page 43, line 4 to page 46, line 35 · Type: General comment on section

Section I.B frames the global biodiversity crisis, drawing on the assessments of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). The 2019 IPBES Global Assessment — the foundational scientific assessment on which the Framework itself was built — explicitly documented the loss of domesticated animal breeds alongside the collapse of wild species,

finding that by 2016, over 9 per cent of documented domesticated mammal breeds used for food and agriculture had become extinct, with more threatened. This finding is not reflected in the section's framing of the biodiversity crisis.

More recent data extend this picture. The FAO Third Report on the State of the World's Animal Genetic Resources for Food and Agriculture, whose preliminary findings were presented in June 2026, records 737 breeds as extinct in DAD-IS as of 2025 and classifies 29 per cent of breeds with known status as at risk of extinction, with the trend in extinction risk continuing to deteriorate. Together, the IPBES assessment and the FAO findings establish that domesticated animal genetic diversity is a documented and worsening component of global biodiversity loss — recognized in the very assessment that underpins the Framework, and confirmed by the most recent international data.

Recommendation: Include the status of domesticated animal genetic diversity in Section I.B's account of the biodiversity crisis, citing the IPBES 2019 finding on domesticated breed loss as the scientific foundation and the current FAO status data as confirmation of the trend, so that the baseline against which progress is measured reflects the full scope of the Framework's mandate. Cite the FAO figures as the draft chapter on the State of Livestock Diversity of the Third Report on the State of the World's Animal Genetic Resources for Food and Agriculture, presented at the FAO webinar of 17 June 2026, with the full report scheduled for November 2026.

IPBES assessments (Box 4, Section I.B)

Section: I.B Global status and trends · Page 45, line 13 to page 46, line 7 · Type: Specific

Box 4 summarizes IPBES assessment reports relevant to the Framework. The 2019 IPBES Global Assessment is the foundational scientific document underpinning the Framework. It explicitly documented the loss of local breeds of domesticated animals as a component of global biodiversity loss, finding that by 2016, over 9 per cent of domesticated mammal breeds used for food and agriculture had become extinct, with more threatened. The IPBES Summary for Policymakers (paragraph A6) names this loss as a serious risk to food security and links it to the undermining of the 2050 Vision for Biodiversity. This finding is not reflected in Box 4's characterization of the 2019 assessment, despite being a key finding directly relevant to the Framework's own mandate.

The most recent international data confirm the trend. The preliminary findings of the FAO Third Report on the State of the World's Animal Genetic Resources, presented in June 2026, record 737 breeds as extinct in DAD-IS and 29 per cent of breeds with known status as at risk of extinction.

Recommendation: Include the 2019 IPBES finding on domesticated breed loss in the Box 4 summary of the Global Assessment, with the current FAO status data cited as confirmation of the trend, so that the baseline biodiversity crisis narrative reflects the full scope of what IPBES documented and the domesticated species component of the Framework's mandate rests on the same scientific foundation as the wild species components. Cite the FAO figures as the draft chapter on the State of Livestock Diversity of the Third Report on the State of the World's Animal Genetic Resources for Food and Agriculture, presented at the FAO webinar of 17 June 2026, with the full report scheduled for November 2026.

Target 4 progress overview

Section: II.B Target 4 · Page 81, line 17 to page 82, line 26 · Type: Specific

The Target 4 progress overview states that "national targets are generally well aligned with target 4, particularly the elements relating to species conservation objectives." The target text explicitly includes both wild and domesticated species genetic diversity as conservation objectives. The progress overview does not distinguish between these two components when characterizing overall alignment.

As Table 9 on the following page shows, alignment with the domesticated species element (55 per cent) is substantially lower than alignment with the wild species genetic diversity element (72 per cent). A progress overview that describes alignment as generally good, without noting this divergence, does not accurately represent the distribution of effort within the target.

Recommendation: State in the progress overview that alignment with the domesticated species genetic diversity element is lower than alignment with wild species genetic diversity, and that domesticated species is one of the two lowest-scoring elements of Target 4 — tied at 55 per cent with human-wildlife conflict — which together are the gaps the report itself identifies in Table 9.

Table 9 and the domesticated species element of Target 4

Section: II.B Target 4 · Page 82, line 1 to page 83, line 19 · Type: Specific

Table 9 scores the domesticated species genetic diversity element of Target 4 at 55 per cent — the lowest score of any element in the target — and the accompanying narrative states that "significant gaps with regard to domesticated species" exist. This is an accurate and important finding. The report, however, does not follow this finding with any analytical content specific to domesticated species.

The indicators section (Table 10) provides two headline indicators: the Red List Index (A.3) and the proportion of populations with an effective population size greater than 500 (A.4). Both are designed for and applied to wild species. Neither is applicable to domesticated breed populations. No domesticated species indicator is listed, proposed, or identified as missing, and no data source for tracking domesticated species genetic diversity is referenced. The report identifies the gap, names it as significant, and then provides no pathway to address it. This is inconsistent with the analytical treatment the report applies to other gaps.

The data to close the gap exists and is internationally agreed. SDG indicator 2.5.2 — the proportion of local breeds classified as at risk of extinction — is the internationally agreed metric for the genetic diversity of farmed and domesticated animals. FAO is its custodian agency, its methodology is established, and its data are drawn from DAD-IS, to which 185 countries report. DAD-IS is the primary international system, but it is not the only relevant source: national and citizen/public breed registries, regional gene banks and research institutions also hold breed population and risk data that national reporting could draw upon. A point of particular relevance to this report: indicator 2.5.2 was originally proposed under SDG Target 15.5 — the target addressing the halting of biodiversity loss — before being placed under SDG Goal 2, and its UN metadata states that the indicator has "a direct link to biodiversity." The element is biological; the division between its monitoring systems is administrative.

Recommendation: Following the report's own acknowledgment of significant gaps with regard to domesticated species: (1) reference DAD-IS as the established global monitoring platform for domesticated animal breed diversity and risk status; (2) identify SDG indicator 2.5.2 — an

internationally agreed indicator under FAO custodianship, with an established methodology and data reported by countries — as available to serve as a component or complementary indicator for this element; and (3) integrate a domesticated species genetic diversity indicator alongside A.3 and A.4 in future reporting cycles, so that progress against the full scope of Target 4 can be assessed.

Target 4 summary of actions

Section: II.B Target 4 · Page 88, line 7 to page 90, line 15 · Type: Specific

The summary of actions in support of Target 4 describes recovery programmes, species reintroductions, habitat restoration including rewilding, anti-poaching patrols, Red List assessments, species-monitoring technologies, species protection legislation, gene banks, seed banks, botanical gardens, captive breeding programmes, and insurance schemes for human-wildlife conflict. All of the conservation actions described are oriented toward wild species. The only reference to domesticated animals is indirect — compensation for damage to crops and livestock — which concerns wildlife-conflict management, not the conservation of domesticated animal genetic diversity.

The text of Target 4 explicitly mandates conservation of genetic diversity in domesticated species through "in situ and ex situ conservation and sustainable management practices." For domesticated animals, conservation rests on two complementary strategies. The primary in situ mechanism is the continued maintenance of locally adapted breeds in their working production systems — on farms, on rangelands, and within the pastoral and smallholder systems that sustain them — carried out by Parties, by individual breeders and custodians, and by non-governmental organizations and breed associations. The complementary ex situ mechanism is cryoconservation of genetic material (semen, embryos and somatic cells), which the FAO data identify as critically underdeveloped: only 7 per cent of mammalian breeds hold sufficient cryoconserved material to reconstitute the breed, and the cryoconservation status of 42 per cent of mammalian breeds is unknown. Neither strategy substitutes for the other; the Global Plan of Action for Animal Genetic Resources treats them together. Both fall directly within the target's scope, and both are absent from this section's account of what Parties and other actors are doing and what more is needed.

A further gap concerns who and what the reporting captures. DAD-IS is the primary global registry, but it is not exhaustive: breeds maintained by individuals or organizations may not be recorded in it, and populations existing in countries with limited reporting capacity may not be reflected even where the animals exist. Reporting mechanisms that rely solely on DAD-IS registration risk rendering precisely the most vulnerable breeds and custodians invisible.

Recommendation: State in the Target 4 actions section that the target's mandate extends to domesticated species, and identify both in situ conservation of breeds within their production systems and ex situ cryoconservation of genetic material as reportable actions under this target — undertaken by Parties, individual custodians, and non-governmental organizations alike. Direct future national reporting guidance to invite Parties to report on such actions, using DAD-IS breed population and risk data as a reference baseline, while providing reporting avenues that accommodate breeds and populations not registered in DAD-IS, including those maintained by individuals and organizations and those in countries with limited reporting capacity, so that the conservation record is inclusive of the diversity that exists rather than only the diversity already registered.

Target 4 contributions of actors other than national governments

Section: II.B Target 4 · Page 89, line 17 to page 90, line 15 · Type: Specific

The section on contributions of actors other than national governments for Target 4 lists 12 commitments from non-governmental organizations, an academic institution, and an international agricultural research centre. These include bioacoustics monitoring, conservation of crop genetic diversity through gene banks, citizen science networks, anti-poaching patrols, and reintroduction of captive-bred wild animals. Conservation of crop genetic diversity through gene banks is included. Conservation of domesticated animal breed genetic diversity — the direct parallel activity for the animal side of the same Target 4 element — is not.

Individuals, citizens and organizations that maintain living populations of domesticated breeds, operate breed registries, or conduct population-genetics work on heritage breeds are engaged in activities that fall directly within the Target 4 mandate. The report already recognizes citizen contribution to biodiversity conservation: it credits citizen science networks for their role in wild-species monitoring and data collection. That same recognition is not extended to the citizens and communities who steward domesticated breeds. Their absence from this section corresponds to the absence of a reporting pathway through which such commitments could be recorded under this target.

Recommendation: Include domesticated breed conservation as a qualifying activity under Target 4 in the commitments portal and the guidance for actors other than national governments. Maintaining breed registries, operating in situ conservation programmes, conducting population monitoring, and cryoconserving genetic material for domesticated breeds are eligible commitments under this target, whether undertaken by organizations, communities, or individual citizens; identify them as such, consistent with the recognition the report already extends to citizen science for wild species, and invite relevant actors to submit them in future cycles.

Target 4 linkages with other agreements

Section: II.B Target 4 · Page 90, line 17 to page 91, line 26 · Type: Specific

The section on linkages with other agreements for Target 4 references the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) at length, and, in Box 14, the Convention on the Conservation of Migratory Species of Wild Animals (CMS). Both instruments apply exclusively to wild species. Target 4 explicitly includes domesticated species genetic diversity as a conservation commitment.

The most directly relevant multilateral instrument for that component of the target is the FAO Global Plan of Action for Animal Genetic Resources, adopted by 109 countries at the first International Technical Conference on Animal Genetic Resources at Interlaken in 2007 and updated in 2014. The Global Plan of Action is the internationally agreed framework for the conservation, sustainable use and development of animal genetic resources. It does not appear anywhere in the report. Its absence from this section means the report omits the primary governance mechanism through which the domesticated species element of Target 4 is operationalized internationally.

Recommendation: Add the FAO Global Plan of Action for Animal Genetic Resources as a relevant agreement linkage for Target 4. The Plan's associated reporting system provides existing infrastructure that can be integrated into national biodiversity reporting to support this element of the target, and SDG Target 2.5 provides an agreed international metric relevant to this linkage.

Indigenous peoples, local communities and pastoralist custodianship

Section: II.B Target 4 (contributions integrated in national reports) / Section C · Page 90, lines 4–15 · Type: Specific

The report describes the roles of indigenous peoples and local communities in implementing Target 4, including customary institutions regulating resource access, community rangers, and "community seed banks conserving agrobiodiversity." This accurately captures the plant and wild-species dimensions of community stewardship, but does not reflect the role of pastoralist and smallholder communities as the primary custodians of domesticated animal genetic diversity.

FAO data record that local breeds — those maintained predominantly by such communities — account for approximately 8,099 of the 15,715 national breed populations registered in DAD-IS. This diversity is the product of long-term, co-evolutionary stewardship of animals and the landscapes they help maintain. A substantial and disproportionate share of this stewardship is carried out by women and by indigenous communities, who manage and maintain a significant part of the world's locally adapted breeds.

This connects directly to the Framework's own commitments. The Framework's cross-cutting considerations (Section C) on the full and effective participation of indigenous peoples and local communities, on traditional knowledge, and on gender equality (Target 23), apply to the breeding knowledge and land-management practices through which these communities maintain domesticated animal genetic diversity. Where the report's equity and participation commitments are not extended to this component of biodiversity, the contributions of the women, pastoralists and indigenous communities who sustain it remain unrecognized — and recognition is a precondition for their visibility, their standing, and their access to the finance and support that recognized biodiversity stewardship can attract.

Recommendation: Include the custodianship of locally adapted breeds by pastoralist and smallholder communities in the references to indigenous peoples and local community contributions under Target 4, and recognize the disproportionate role of women and indigenous communities in this stewardship, consistent with the Framework's biocultural diversity, participation and gender-equality commitments. Recognizing this stewardship as biodiversity conservation is what gives these communities visibility within the Framework's implementation and review.

Target 8: managed grazing and locally adapted breeds as a resilience practice

Section: II.B Target 8 · Page 115 to page 121 · Type: General comment on section

Target 8 addresses minimizing the impacts of climate change on biodiversity and building resilience, including through ecosystem-based approaches. The report's treatment of Target 8 focuses on ecosystem restoration and habitat protection. It does not reference managed grazing as a resilience practice, nor the role of locally adapted domesticated animals in delivering it.

Managed grazing — rotational, planned or adaptive grazing — is a documented ecosystem-management practice with well-established benefits for soil structure, ground cover, reduced erosion, and water infiltration and regulation, and is a recognized contributor to soil organic carbon. It is not a marginal or contested practice: the United States Department of Agriculture promotes rotational grazing as a climate-resilience and adaptation measure, and FAO, in its first Global Assessment of Soil Carbon in Grasslands (2023), recommends that governments work to incentivize rotational, planned and adaptive grazing for carbon and ecosystem outcomes. Grasslands cover close to 70 per cent of global agricultural area, and the soils they have built over millennia under grazing — the deep grassland soils of regions such as the North American prairie — are direct physical evidence of grazing's long-term role in soil formation and carbon accumulation. The benefits to soil structure, ground cover and water function are well established; the magnitude of carbon sequestration is context-dependent and varies with management, which is precisely why management matters.

This is a distinction the report's treatment of the production sectors does not currently make. The harm associated with grazing arises from husbandry and stocking decisions — overgrazing, continuous grazing, poor distribution — not from the animals themselves. Well-managed grazing is a tool that builds the very ecosystem functions Target 8 seeks to strengthen. The ecosystem function of managed herbivory is performed by grazing animals generally — wild herbivores shaped these systems over millennia, and managed grazing by domesticated animals reproduces that role in working landscapes. Where the delivery agents are domesticated, the breeds best able to perform the task are those suited to the conditions and to the ecosystem function — whether locally adapted landraces matched to a specific environment, or hardy breeds capable of vegetation and brush control across a range of conditions. A treatment of climate resilience that omits managed grazing omits a documented, government-adopted ecosystem-management practice that is squarely within the scope of building resilience.

Recommendation: Recognize managed grazing in the Target 8 section as a documented practice for building ecosystem resilience — improving soil structure, water function and groundcover, and contributing to soil carbon — and identify the role of locally adapted domesticated breeds in delivering it. This aligns the report with the climate-adaptation and regenerative-grazing policies that many governments already encourage for these purposes, and reflects the resilience value of domesticated animal genetic diversity that the Framework's genetic diversity commitments establish.

Comment 8 — Target 10: biodiversity in agriculture

Section: II.B Target 10 · Page 131, line 18 to page 145, line 21 · Type: General comment on section

Target 10 addresses biodiversity in agriculture, aquaculture, fisheries and forestry, and includes the sustainable use of biodiversity within these production systems. The actions section mentions "genetic resource conservation and seed banking" once, within a list of agricultural actions. No equivalent reference to animal genetic resource conservation appears anywhere in the section — neither in situ breed diversity maintenance and national breed registries, nor the ex situ cryoconservation of animal genetic material that is the direct counterpart to the seed banking the section names for plants. The headline indicators (10.1 and 10.2) address agricultural land area and sustainable forest management; no animal genetic diversity metric is present.

A treatment of agricultural biodiversity that addresses crop genetic resources but not animal genetic resources is incomplete on its own terms. Domesticated mammals and birds are a substantial part of

the biodiversity of agricultural systems. FAO records that, since 2021, DAD-IS has allowed countries to link breed populations to ecosystem services; as of 2025, 9,675 national breed populations were associated with at least one ecosystem service, including vegetation management, habitat provision, soil fertility and others directly relevant to the biodiversity-friendly farming described in this target.

Recommendation: Include an explicit reference to animal genetic resource conservation as a component of biodiversity-friendly agricultural practice in the Target 10 section. Identify DAD-IS and the Global Plan of Action for Animal Genetic Resources as relevant data sources and governance instruments for this element of the target, and direct future national reporting guidance to invite Parties to report on breed diversity conservation, including both in situ breed conservation programmes and ex situ cryoconservation of genetic material, as Target 10 actions.

Financing for biodiversity (Target 19 and Goal D)

Section: II.B Target 19 / Goal D · Page 206, line 20 to page 209, line 6 · Type: Specific

Target 19 addresses the mobilization of financial resources for biodiversity, and its headline indicators (D.1, D.2 and D.3) measure international public, domestic public, and private funding "for conservation and sustainable use of biodiversity and ecosystems." The target's elements include encouraging the private sector to invest in biodiversity (element (c), addressed by 44 per cent of Parties) and stimulating innovative schemes such as payments for ecosystem services, green bonds, and biodiversity offsets and credits (element (d), 34 per cent). The report's treatment of these elements frames conservation finance in terms of ecosystems, protected areas and species — which, consistent with the rest of the report, means wild species and wild ecosystems. Domesticated mammals and birds are not referenced in the financing discussion, even though their genetic diversity conservation is an explicit commitment under Goal A and Target 4.

This omission is not only a downstream consequence of the gaps described above; it is part of how the gap is reproduced. The frameworks that channel private nature finance — the disclosure and assessment tools that operationalize Target 19's call to encourage private-sector investment — draw on source documents, including reports such as this one, to define what counts as biodiversity. When those source documents do not identify domesticated animal genetic diversity as a conservation category, and do not provide mechanisms to operationalize its conservation, the downstream disclosure and finance architecture encodes the same omission. The effect is visible in current practice. The Taskforce on Nature-related Financial Disclosures (TNFD), in its 2024 food and agriculture sector guidance, draws on the ENCORE knowledge base maintained by the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), the UN Environment Programme Finance Initiative (UNEP FI) and Global Canopy. In that guidance, the dependency of "raising of cattle and buffaloes" on "genetic material" is rated Medium, while the same genetic-material dependency for "growing of cereals and seeds" is rated Very high. Materiality-based assessment is designed to direct attention to the highest-rated dependencies first; an organization allocating finite resources under a duty to prioritize material risks will rationally address High and Very High dependencies before a Medium one. A Medium rating for animal genetic material is therefore not a neutral data point — it is a signal to deprioritize. Notably, the same TNFD guidance elsewhere lists "make investments in breeds and crops at risk of extinction" as a recommended response and ties it explicitly to GBF Goal A — so the connection to the Framework is recognized in the guidance, but is not carried through into the dependency ratings that drive corporate assessments.

If the biodiversity finance system does not recognize domesticated breed conservation as a legitimate conservation financing category, the private investment that Target 19 element (c) seeks to encourage, and the innovative schemes element (d) describes, will not reach it — even though Goal A and Target 4 of the Framework explicitly mandate its conservation. Conservation of domesticated breed diversity requires sustained investment in in situ conservation within working production systems, national breed inventories and monitoring, and integration of breed diversity into national biodiversity strategies and action plans. These are fundable, measurable conservation activities. They are not currently visible in biodiversity finance frameworks because the source documents on which those frameworks rely do not treat them as biodiversity conservation.

Recommendation: Recognize in the financing sections of the report (Target 19 and Goal D) that the Framework's mandate to conserve domesticated species genetic diversity constitutes a legitimate biodiversity financing category, eligible under Target 19's private-finance and innovative-scheme elements alongside wild species recovery and ecosystem restoration. Where biodiversity finance supports conservation in working and shared landscapes — rangelands, pastoral systems, and other grazing-dependent ecosystems whose biodiversity value is maintained through managed herbivory — recognize the locally adapted breeds that perform that management as a component of the same landscape's biodiversity, where they are ecologically integral. The FAO Global Plan of Action for Animal Genetic Resources provides the existing governance framework for such investment. Making this category visible in the report is a prerequisite for it becoming visible in the disclosure and finance frameworks the report informs.

The 2050 Vision and the long-term element of Goal A

Section: II.C Goal A / III.A (2050 Vision) · Page 246, lines 7–13 · Type: Specific

The 2050 element of Goal A states that "the genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential." The report's treatment of progress toward the 2050 Vision discusses ecosystem integrity and wild species, but does not address the domesticated species component of this long-term goal.

The 2019 IPBES Global Assessment — the foundational scientific assessment underpinning the Framework — explicitly identified the loss of domesticated breeds as undermining the 2050 Vision for Biodiversity, finding that by 2016, over 9 per cent of documented domesticated mammal breeds had become extinct, with more threatened. The report's 2050 Vision narrative does not reflect the domesticated species component of the Framework's long-term goal, despite that component being named in the goal text and documented in the assessment that underpins the Framework.

Recommendation: Address the domesticated species genetic diversity component in the report's treatment of the 2050 Vision and the long-term element of Goal A, drawing on the IPBES 2019 finding and current FAO status data, so that the long-term vision is assessed against its full adopted scope.

Goal A indicators and scorecard (Table 50)

Section: II.C Goal A · Page 249, line 6 to page 251, line 18 · Type: Specific

The Goal A text reproduced on page 246 states that "the genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential." Goal A therefore has three stated elements: ecosystem integrity, wild species abundance, and the genetic diversity of wild and domesticated species.

The indicators section and the scorecard (Table 50) present four headline indicators: A.1 (Red List of Ecosystems), A.2 (Extent of natural ecosystems), A.3 (Red List Index for species), and A.4 (proportion of populations with effective population size greater than 500). Indicators A.3 and A.4 are both designed for wild species. The Red List Index is based on IUCN Red List assessments of wild species; the effective population size indicator is applied to wild populations. Neither captures genetic diversity trends in domesticated breeds. The domesticated species component of Goal A therefore has no corresponding indicator, and the report presents no quantitative evidence of whether it is being achieved. A goal scorecard that omits one of the goal's three stated elements cannot represent complete progress toward that goal.

This is not a gap that must be left immeasurable. The proportion of breeds carrying population data has risen substantially over successive reporting cycles — to 71 per cent of mammalian and 65 per cent of avian populations by 2025 — and SDG indicator 2.5.2, an internationally agreed indicator under FAO custodianship, already provides an agreed proportion-at-risk methodology directly analogous to the Red List Index used for wild species in A.3.

Recommendation: State in the Goal A indicators section that headline indicators A.3 and A.4 do not capture the domesticated species component of Goal A. Add a row for that component to Table 50: where SDG indicator 2.5.2 — already an agreed indicator under FAO custodianship — can be applied immediately, populate the row from it; where a fuller measure is not yet in use, mark the row "cannot be assessed," with a footnote identifying DAD-IS and SDG indicator 2.5.2 as the existing resources. Making the gap visible in the scorecard itself is the first step toward closing it. Adopt SDG indicator 2.5.2 as the available metric for this component now, and develop a fuller complementary domesticated species genetic diversity indicator for subsequent monitoring cycles.

Part III synthesis of collective progress

Section: III.A Synthesis of collective progress · Page 306, line 1 to page 307, line 5 · Type: Specific

The Part III synthesis summarizes progress on Target 4 as "national targets are generally well aligned with target 4, particularly the elements relating to species conservation objectives," and identifies the Red List Index (A.3) as the widely reported headline indicator. This summary does not carry forward the finding the report itself made in Table 9 (p.82): that the domesticated species genetic diversity element has the lowest coverage of any element in Target 4 (55 per cent), and that "significant gaps with regard to domesticated species" exist.

A finding the report identifies as significant in its own analysis, but omits from its own concluding synthesis, is an internal inconsistency. The Red List Index cited here as the indicator of Target 4 progress is a wild-species instrument and does not measure the domesticated species element at all. As a result, the report's concluding assessment of Target 4 reflects only part of the target as adopted.

Recommendation: Carry forward the domesticated species coverage gap identified in Table 9 into the Part III synthesis of Target 4 and the corresponding entry in the summary table, consistent with the

report's own characterization of it as significant. State in the synthesis that the headline indicators cited for Target 4 do not capture the domesticated species element, so that the concluding assessment reflects the full scope of the target.

Policy coherence and CBD–FAO coordination (Key Message A.4)

Section: III.B Key Message A.4 · Page 319, line 172 to page 320, line 220 · Type: Specific

Key Message A.4 identifies the need to improve "environmental governance, the mainstreaming of biodiversity, and policy coherence across Governments, multilateral environmental agreements and sectors," and notes that the ministries most commonly involved in national biodiversity strategies and action plans are those of agriculture, fisheries and finance.

The domesticated species genetic diversity element of Goal A and Target 4 is a specific, documented instance of the coherence challenge this message describes. The internationally agreed monitoring system for this element — DAD-IS and SDG indicator 2.5.2 — sits within the food and agriculture domain (FAO; SDG Goal 2), while the report's genetic diversity monitoring is built entirely on wild-species and ecosystem instruments housed in the environment domain (the IUCN Red List; the CBD monitoring framework). As noted above, SDG indicator 2.5.2 was originally proposed under SDG Target 15.5 — the biodiversity-loss target — before being placed under SDG Goal 2, and its metadata states it has a direct link to biodiversity. The element is biological; the division between its monitoring systems is institutional.

The report already demonstrates that such coordination is feasible: it cites collaboration between FAO and the UN Convention to Combat Desertification on Target 10 and SDG indicator 15.3.1 (p.145). The same form of coordination, applied between the CBD monitoring framework and FAO's animal genetic resources monitoring system, would allow the domesticated species element of Goal A and Target 4 to be assessed using data that already exists.

Recommendation: Include, as a specific example of the policy coherence Key Message A.4 calls for, coordination between the CBD monitoring framework and FAO's animal genetic resources monitoring system, so that the domesticated species element of Goal A and Target 4 can be assessed. This is an identified opportunity to close a known coordination gap.

Closing note

The Framework treats the genetic diversity of wild and domesticated species as a single, indivisible element of Goal A and a single element of Target 4. It cannot be partially assessed and reported as if complete. A report that measures the wild component and presents it as an assessment of genetic diversity substitutes a part for the whole.

The information required to assess the full element was available to the report. The Convention's definition of biodiversity encompasses domesticated species. The report's own statement of sources (Box 3) commits it to drawing on relevant information from international organizations, including reporting on the Sustainable Development Goals and responses to notification 2025-099. SDG indicator 2.5.2 — the internationally agreed measure of domesticated animal genetic diversity — is

reported by FAO within the Sustainable Development Goal indicators that the report's own statement of sources commits it to drawing upon, and FAO is the organization the report relies upon for its forest, fisheries, restoration, and land data. The information was within the report's stated sources, available, and from a source already in use. It was not incorporated.

Two paths follow. The report's assessment of genetic diversity can be expanded to include the domesticated species the Framework names, drawing on the resources identified throughout these comments. Or the report can state its scope explicitly as limited to wild species — which would be an acknowledgment that it does not assess biodiversity as the Convention defines it. What cannot hold is the present position: an account framed as covering biodiversity that, in operation, measures only its wild component. These comments are offered to support the first path, and to assist the Secretariat in producing a second draft that reflects the full scope of the Framework as adopted.

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