UN environment programme

CBD/SBSTTA/26/INF/11

Distr.: General
24 April 2024

English only

Convention on Biological Diversity

Subsidiary Body on Scientific, Technical and Technological Advice
Twenty-sixth meeting
Nairobi, 13–18 May 2024
Item 3 of the provisional agenda*
Monitoring framework for the Kunming-Montreal Global Biodiversity Framework

Scientific and technical review of the traditional knowledge indicators and their suggested links with the headline, component and complementary indicators of the monitoring framework for the Kunming-Montreal Global Biodiversity Framework**

I. Introduction

1. The twelfth meeting of the Ad Hoc Open-ended Intersessional Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity was held in Geneva from 12 to 16 November 2023. The Working Group adopted five recommendations, including a recommendation on the Joint Programme of Work on the links between biological and cultural diversity, on task 2.a.1 to update the traditional knowledge indicators (WG8J/REC/12/4). In its recommendation on indicators, the Working Group requested that the Secretariat facilitate a scientific and technical review of the traditional knowledge indicators and their suggested links with the headline, component and complementary indicators of the monitoring framework for the Kunming-Montreal Global Biodiversity Framework. The Secretariat was requested to provide the results of the scientific and technical review to the Ad Hoc Technical Expert Group (AHTEG) on Indicators in time for its second in-person meeting, so that the AHTEG could take them into account in the formulation of its recommendations for consideration by the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-sixth meeting.

2. The scientific and technical review of the traditional knowledge indicators was prepared and subsequently reviewed, taking into account the inputs received during an Expert Workshop on Traditional Knowledge Indicators, which was held from 8 to 10 March 2024 in Cambridge immediately prior to the second in-person meeting of the AHTEG on Indicators held from 12 to 15 March 2024. The workshop was organized by the United Nations Environment Programme World Conservation Monitoring Centre, Forest Peoples Programme, and the Secretariat of the Convention on Biological Diversity. The AHTEG on Indicators considered the results of the Expert Workshop in formulating recommendations for the Subsidiary Body on Scientific, Technical and Technological Advice at its twenty-sixth meeting.

3. The scientific and technical review of the traditional knowledge indicators comprises four sections. Section II provides background information on the traditional knowledge indicators;

* CBD/SBSTTA/26/1.
** The present document is being issued without formal editing.

Section III outlines key considerations in relation to the review and operationalization of the traditional knowledge indicators; Section IV provides an overview of the status of the development of the traditional knowledge indicators; and Section V provides recommendations to be considered by the AHTEG on Indicators.

II. Background information on the traditional knowledge indicators

Description of the four traditional knowledge indicators

4. Traditional knowledge indicators have been the subject of several decisions by the Conference of Parties to the Convention on Biological Diversity. In Annex II to decision VII/30[1], the Conference of the Parties adopted a framework to enhance the evaluation of progress in the implementation of the Strategic Plan, covering seven focal areas, one of which is "protect traditional knowledge, innovations and practices". In annex I to the decision, the Conference of the Parties adopted a suite of indicators for assessing progress towards the 2010 Biodiversity Target comprising indicators for immediate testing and possible indicators for development. With regard to traditional knowledge, an indicator on the status of and trends in linguistic diversity and speakers of indigenous languages was included as an indicator for immediate testing.

5. Although languages may constitute a useful proxy measure of cultural diversity, it was recognized that these do not directly measure the state of traditional knowledge and that additional indicators could be proposed covering (a) land-based indicators, (b) people-based indicators, (c) program- and policy-based indicators, and (d) culture-based indicators.[2]

6. On the basis of the above, the Conference of the Parties adopted the following indicators for status of and trends in the knowledge, innovations and practices of indigenous peoples and local communities relevant to the conservation and sustainable use of biological diversity:

(a) Trends in linguistic diversity and numbers of speakers of indigenous languages;

(b) Trends in land-use change and land tenure in the traditional territories of indigenous and local communities;

(c) Trends in the practice of traditional occupations;

(d) Trends in the degree to which traditional knowledge and practices are respected through their full integration, safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan.

7. Decisions of the Conference of the Parties on traditional knowledge indicators have been understood as interrelated and designed jointly to provide a holistic assessment of the status of and trends in traditional knowledge under successive biodiversity strategies: the 2010 Biodiversity Target, followed by the Strategic Plan for Biodiversity 2011–2020 and the Kunming-Montreal Global Biodiversity Framework. The four traditional knowledge indicators are essential to the monitoring framework for the Framework, requiring consideration about how the suite of traditional knowledge indicators can holistically contribute to the monitoring framework.

Role of traditional knowledge indicators in the monitoring framework of the Framework

8. In paragraph 1 of decision 15/10, the Conference of the Parties decided to develop a new programme of work on Article 8(j) and other provisions of the Convention related to indigenous peoples and local communities aligned with the Kunming-Montreal Global Biodiversity Framework, with the full and effective participation of indigenous peoples and local communities. This decision aligns with the recognition of the potential contribution of traditional knowledge and customary sustainable use and, more broadly, the collective actions of indigenous peoples and local communities to the objectives of the Convention. Other considerations in the proposed programme on Article 8(j) and related provisions include a balanced and equal dialogue between knowledge systems, the use of community-based monitoring and information systems for assessing progress in the work of the Convention applying traditional knowledge. In this

[1] https://www.cbd.int/doc/decisions/cop-07/cop-07-dec-30-en.pdf
[2] UNEP/CBD/WG8J/4/10

regard, the traditional knowledge indicators are key to promoting the holistic implementation of the Framework.

The Joint Programme of Work on the Links between Biological Diversity and Cultural Diversity

9. Underpinning the Convention's work on traditional knowledge has been the recognition of the intrinsic and inextricable linkages between nature and culture as implemented through the Joint Programme of Work on the links between biological and cultural diversity.[3] In decision 15/22[4], the Conference of Parties renewed this commitment, noting its continuing relevance to the Framework. In the same decision, the Conference of the Parties requested the Executive Secretary, to implement, subject to the availability of resources, the elements and tasks contained in the annex to the decision under *Element 2 - Science dialogue, knowledge dialogue, equivalence of knowledge systems, indicators and monitoring efforts.* Task 2.a calls for the Ad Hoc Open-ended Intersessional Working Group on Article 8(j) and Related Provisions, together with the Subsidiary Body on Scientific, Technical and Technological Advice, to review and update the four traditional knowledge indicators in the light of the Framework, as well as the ongoing work on biological and cultural diversity and human well-being.

10. An advanced draft of the technical and scientific review was discussed at the Expert Workshop on Traditional Knowledge Indicators held on 8-10 March 2024 and the face-to-face meeting of the AHTEG on Indicators held from 12 to 15 March 2024.

11. Additional Tasks 2.b, Tasks 2.c and Task 2.d, under the same Element 2 envision ongoing monitoring work on traditional knowledge indicators and call on the Secretariat of the CBD to continue efforts: "To operationalize the existing indicators and relevant indicators developed in the Kunming-Montreal Global Biodiversity Framework; To explore the full potential of community-based monitoring and information systems (CBMIS) as methods and tools for monitoring the achievement of the Kunming-Montreal Global Biodiversity Framework […] and explore synergies in the monitoring of the Sustainable Development Goals and other global processes; Together with UNESCO and IUCN, […] to create events, spaces and platforms to promote the transmission and exchange, between scientific and traditional knowledge systems, of values, knowledge, experiences, methods and results relevant for the conservation and sustainable use of biological diversity, and facilitate sustained capacity-building and the development and promotion of open frameworks for knowledge dialogues and knowledge co-production at the international, national and regional levels."[5]

12. This approach underscores the profound relevance of the 2030 Agenda's principles of inclusivity, human rights, equality, participation, and accountability which align with the Framework, especially in the context of cross-cutting targets 22 and 23, and the traditional knowledge indicators. This alignment encompasses a broad spectrum of crucial issues, including the protection of lands rights, the elimination of poverty and hunger (SDGs 1 and 2), ensuring equitable access to vital services such as healthcare and education (SDGs 1, 3, and 4), advancing environmental sustainability (SDGs 12, 13, and 14), promoting inclusive and peaceful societies, reducing disparities (SDGs 10 and 16), and addressing discrimination and inequality through targeted strategies (SDGs 5 and 10).

IPBES Work with Indigenous and Local Knowledge in Large-Scale Social-Ecological Assessments

13. The work of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), which has purposefully included indigenous and local knowledge (ILK) throughout its functions and knowledge products can contribute many lessons with respect to bridging these relationships in the conduct of large-scale social-ecological assessments. The table below summarizes key aspects of IPBES approaches to working with indigenous and local knowledge.

[3] *Decision X/20.* Cooperation with other conventions and international organizations and initiatives
[4] https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-22-en.pdf
[5] https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-22-en.pdf

Summary of IPBES approach on indigenous and local knowledge	
Operational Principles[6]	Recognize and respect the contribution of indigenous and local knowledge to the conservation and sustainable use of biodiversity and ecosystems,
Elements of Approach to recognizing and working with indigenous and local knowledge in IPBES [7]	Concepts, practices, and steps to undertake IPBES assessments; Enabling conditions for the inclusion of ILK, including policy support tools and capacity building; and Institutional arrangements, including a participatory mechanism.
Specific challenges for working across knowledge systems	Scale – both horizontal and vertical Participation and representation Formats Methods and tools
• Cross-fertilization and co-construction of knowledge are relatively common at the local to subnational scales, but still rare at coarser scales (e.g. regional, global).	
• Difficult to reconcile the generalizable indicators most used in scientific monitoring (often expressed as percentages of population change or through spatial analysis) and those derived from ILK, where data are often non-quantitative, developed within oral traditions and based on interconnectedness.[8] • IPBES has stressed the need to use a gradient of complementary approaches, ranging from generalizing to context-specific through multiple evidence base crossing spatial and temporal scales.[9]	
Multiple Evidence Base[10]	• Acknowledges that there are aspects of each knowledge system that cannot be fully translated from one into another. • Emphasizes the need for co-production through the engagement of different stakeholders. • Highlights the complementarity, synergy and cross-fertilization of knowledge systems, rather than the integration of one system into another. • Stresses that relevant stakeholders should be involved at all stages in the processes of knowledge generation, assessment, design of policy support tools and capacity building. • Acknowledges that different value systems in decision-making have the potential for improving power asymmetries and equity issues in science practice and policy implementation. • Requires extra money and time and use of networks to ensure engagement and support from indigenous peoples and local communities.

III. Considerations regarding the traditional knowledge indicators

Cross-cutting relevance of the traditional knowledge indicators

14. Taking a holistic approach underscores the relevance of the principles of the 2030 Agenda for Sustainable Development, with which the Framework is aligned, including inclusivity, human rights, equality, participation and accountability, especially in the context of cross-cutting Targets 22 and 23 and the traditional knowledge indicators. This encompasses a broad spectrum of crucial issues, including the protection of land rights, the elimination of poverty and hunger (Sustainable Development Goals 1 and 2), ensuring equitable access to vital services such as healthcare and education (Goals 1, 3 and 4), advancing environmental sustainability (Goals 12, 13 and 14), promoting inclusive and peaceful societies, reducing disparities (Goals 10 and 16) and addressing discrimination and inequality through targeted strategies (Goals 5 and 10). This further points to

[6] https://www.ipbes.net/documents/policies-procedures
[7] IPBES- Decision 5/1 Annex II. Approach to recognizing and working with indigenous and local knowledge in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
[8] McElwee P.D. *et al*. 2020."Integrating indigenous and local knowledge (ILK) into large-scale ecological assessments: The experience of the IPBES global assessment." Journal of Applied Ecology 57: 1666-1676 https://besjournals.onlinelibrary.wiley.com/doi/epdf/10.1111/1365-2664.13705
[9] Diaz et al. 2015. The IPBES Conceptual framework – connecting nature and people. Current Opinion in Environmental Sustainability14:1–16.
[10] Tengö, M. et al, 2014. Connecting diverse knowledge systems for enhanced ecosystem governance: The Multiple Evidence Base approach. Ambio, 43, 579–591. doi: 10.1007/s13280-014-0501-3

the cross-cutting nature of the issue with respect to the objectives of the Convention, its work programmes, its linkages with other UN processes and instruments on culture, human rights, sustainable development, environment, and the whole of society approach. As such, the traditional knowledge indicators are also cross-cutting and complementary to the Goals and Targets of the Framework and its monitoring framework.

15. The proposed binary indicator related to Target 22 of the Framework[11] could provide a basis for monitoring the degree to which trends in traditional knowledge, innovation and practices of indigenous peoples and local communities are respected through their full integration, safeguards and the full and effective participation of indigenous peoples and local communities in the national implementation of the Framework. As the four traditional knowledge indicators are crosscutting and are relevant for the implementation of multiple goals and targets of the Framework, they should be considered in the monitoring framework as key elements for achieving the whole-of-government and whole-of-society approaches of the Framework.

Traditional knowledge and the rights of indigenous peoples

16. The Convention and IPBES have engaged with indigenous peoples and local communities in their work on traditional knowledge and indigenous and local knowledge and its ramifications for respecting their human rights. The substantive domains of the adopted traditional knowledge indicators on language, land tenure, traditional occupations and participation in decision-making are established rights of indigenous peoples as defined in international human rights law. The United Nations has well established human rights monitoring frameworks and indicators focused on assessing State compliance with obligations to respect, protect, promote and fulfil human rights. Given the substantive relevance and direct linkages between the traditional knowledge indicators and human rights, an important consideration is alignment and consistency with the wider United Nations human rights monitoring framework in monitoring traditional knowledge under the Framework using structural, process and outcome indicators. Section C of the Framework calls for applying a human rights-based approach in national reporting of progress under relevant goals and targets of the Framework. The UN Environmental Management Group has published guidance on Human Rights in National Biodiversity Strategies and Action Plans.[12]

17. The salient provisions of international law standards, policies, processes, and practices relating to traditional knowledge and the rights of Indigenous Peoples serve as the foundation for monitoring these rights. There are existing monitoring tools that are aligned with the human rights of Indigenous Peoples, as recognized in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). As discussed below, this includes the Indigenous Navigator, which has received endorsement from the UN Permanent Forum on Indigenous Issues.

A human rights-based approach to biodiversity

18. A report by the United Nations Office of the High Commissioner for Human Rights (OHCHR) on *'Integrating Human Rights in National Biodiversity Strategies and Action Plans'* recognizes the central role played by national biodiversity strategies and action plans (NBSAPs) and their potential for advancing a human rights-based approach (HRBA) to biodiversity planning.[13] They are also one of the most important mechanisms for the implementation of section C of the Framework.

19. Under a HRBA, biodiversity plans, policies and processes, including NBSAPs, are anchored in a system of human rights and corresponding obligations established by international law. All persons are empowered to claim their human rights as rights holders, and the capacity of duty bearers is reinforced to ensure they meet their obligations to respect, promote, protect, and fulfill human rights. A HRBA helps to promote the sustainability of biodiversity conservation work, empowering people, especially the most marginalized, to participate in policy formulation and hold accountable those who have a duty to act.

20. OHCHR has undertaken an in-depth study on the extent to which NBSAPs incorporate human rights through an analysis of NBSAPs by 186 State Parties. The first-generation NBSAPs

[11] See CBD/SBSTTA/25/2.
[12] See https://unemg.org/wp-content/uploads/2022/12/NBSAP-guidance-final.pdf
[13] See https://unemg.org/wp-content/uploads/2022/12/NBSAP-guidance-final.pdf

prepared between 1996 and 2003 largely failed to incorporate human rights in their preparation and design, contributing to poor implementation.[14] These NBSAPs were seldom prepared through a consultative process involving stakeholders and rights holders such as affected individuals and groups, local authorities, indigenous peoples and local communities, women and the private sector.[15]

21. Section C calls for greater policy coherence, communication and collaboration between Governments officials, indigenous peoples and local communities and stakeholders working on environmental issues and those seeking to advance human rights. OHCHR guidance on how these international obligations are applied in different national contexts with regard to the specific commitments made under the goals and targets of the Framework is highly relevant to the operationalization of traditional knowledge indicators.

Indigenous Data Sovereignty and Free, Prior and Informed Consent

22. The safeguards on Free Prior and Informed Consent (FPIC) and Indigenous Data Sovereignty highlight the right of indigenous peoples to provide, withhold or withdraw their consent and own, control, access, and steward data and knowledge over their communities, lands and culture, including in relation to projects involving or affecting them. These safeguards have been incorporated into research and data governance guidelines, such as the 2021 UNESCO Recommendation on Open Science. General guidance, such as the 2018 OHCHR *A Human Rights Based Approach to Data,* could be used to facilitate a human rights-based approach consistent with the Framework, while specific guidance for research with indigenous peoples, such as the Australian *AIATSIS Code of Ethics for Torres Strait Islander Research,* could promote confidence in data governance at different levels. The CARE principles for Indigenous Data Governance,[16] which are Collective Benefit, Authority to Control and Responsibility and Ethics, have been developed as a useful complement to the FAIR Principles[17] (Findable, Accessible, Interoperable and Reusable) in projects involving indigenous peoples. The approach that data should be as "as open as possible and as closed as necessary" can serve as a useful guide in establishing appropriate data-sharing agreements with indigenous peoples and local communities.[18]

Community-Based Monitoring and Information Systems

23. Indigenous peoples and local communities have been holistically tracking the health of biological diversity and ecosystems, and the wellbeing of their communities for generations. A new bundle of monitoring approaches, referred to as community-based monitoring and information systems (CBMIS), builds on traditional knowledge systems and integrates digital and other technologies. These community-led initiatives systematically generate data to inform local self-governance, strengthen communication with duty-bearers, and provide true measures of progress toward globally agreed targets. CBMIS brings together methodologies such as community surveys, participatory 3-D cultural mapping, resource inventories, and countryside management software, adapted for the priorities and needs of each community.[19]

24. Locally based monitoring of the environment has been shown to be capable of delivering credible data independent of external experts and there is evidence that CBMIS can improve research outcomes.[20] CBMIS can be cost-effective, responsive, flexible and timely, given that monitoring is performed by the communities with accumulated knowledge and connection to the local area or ecosystem being monitored. CBMIS can also make distinct contributions to global assessments and monitoring initiatives where other institutions do not have the capacity to collect

[14] Sonia Peña Moreno and Maximilian Mueller, *Societal participatory processes in the revision of National Biodiversity Strategies and Action Plans (NBSAPs)* (IUCN, 2015).
[15] Ibid.
[16] https://www.gida-global.org/care
[17] https://www.nature.com/articles/sdata201618
[18] This expression has its origins in the European Union Horizon funding programme and is now widely used in connection with guidance on data governance.
[19] Tebtebba Foundation, *Enhancing Indigenous Peoples' Development through Community-Based Monitoring and Information Systems (CBMIS)* (Baguio City, 2018).
[20] Danielsen et al (2022) Community Monitoring of Natural Resource Systems and the Environment. Finn Danielsen et al Annual Review

detailed, disaggregated data.[21] It is participatory, operationalizing the considerations for implementation contained in Section C of the Framework, particularly those referring to the contributions and rights of indigenous peoples and local communities and to the whole-of-society approach.

25. CBMIS is being increasingly recognized in international processes. In decision XII/12, the Conference of the Parties to the Convention: "Encourages Parties and indigenous and local communities to consider how indigenous and local communities might effectively participate in the development, collection and analysis of data […] and further explore how Community-Based Monitoring and Information Systems can contribute to monitoring of Aichi Biodiversity Target indicators […]. These efforts might contribute to future national reports and the review of the implementation of the Strategic Plan for Biodiversity 2011-2020". In decision 15/5 the Conference of the Parties: "Invites Parties and relevant organizations to support community-based monitoring and information systems and citizen science and their contributions to the implementation of the monitoring framework for the Kunming-Montreal Global Biodiversity Framework".

26. Another important aspect of CBMIS is that it can generate both qualitative and quantitative data and information, as exemplified by the Local Biodiversity Outlooks and the Indigenous Navigator.

Local Biodiversity Outlooks - highlighting the contributions of indigenous peoples and local communities to biodiversity.

27. The International Indigenous Forum on Biodiversity (IIFB) created the Local Biodiversity Outlooks (LBO) to better highlight the perspectives and contributions of Indigenous Peoples and local communities to the implementation of the Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets. In decision 13/29, the Conference of the Parties welcomed the LBO, and in Decision 15/3 it encouraged parties to take the LBO into account when developing, updating or revising their NBSAPs.

28. LBO-2 brings together information from published academic and non-academic sources and highlights more than 50 stories by indigenous and non-indigenous authors about their perspectives and experiences around the current social-ecological crisis, contributions to the UN Decade on Biodiversity, and, more broadly, local solutions across biodiversity, climate change, and sustainable development challenges. In a recent review, indigenous and local knowledge, values, and practices for nature were acknowledged in various case studies contained in LBO-2.[22]

The Indigenous Navigator

29. The Indigenous Navigator[23] is a prime example of a community-based monitoring and information system, targeted at upholding indigenous peoples' rights and monitoring the implementation of the SDGs at national and community levels. The Indigenous Navigator also includes operational monitoring of the four traditional knowledge indicators. It is a responsive and flexible framework, with new indicators on biodiversity, climate change, gender and business human rights due diligence being developed and added to the existing framework during 2024.

30. The monitoring of rights is a key foundation for establishing sustainable, self-determined and owned interventions to preserve, promote and protect biodiversity and the environment. Data collected by the Navigator highlighted challenges in regard to health, water quality and quantity, as well as environmental degradation. Projects implemented in Africa, Asia and Latin America have led to the development of community-led interventions which directly promote the conservation and sustainable use of biodiversity.[24]

[21] Ferrari, M. F., De Jong, C., & Belohrad, V. S. (2015). Community-based monitoring and information systems (CBMIS) in the context of the Convention on Biological Diversity (CBD). *Biodiversity*, *16*, 1-12. http://dx.doi.org/10.1080/14888386.2015.1074111

[22] Brondizio, E. S., Aumeeruddy-Thomas, Y., Fernandez Llamazares, A., Bates, P., Carino, J., et al. (2021). Locally Based, Regionally Manifested, and Globally Relevant: Indigenous and Local Knowledge, Values, and Practices for Nature. Annual Review of Environment and Resources, 46, 481-509. https://doi.org/10.1146/annurev-environ-012220-012127

[23] Indigenous Navigator. 2024. https://indigenousnavigator.org/

[24] For an example, see Indigenous Navigator. 2021. "Cuidar los bosques para acceder al agua" https://youtu.be/nkZNull1CSk

31. Data gathered by the Indigenous Navigator also contributes to informing and supporting the further development of official statistics. In the 2023 manual, *Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics*, published by the ILO, the data of the Indigenous Navigator is utilized to emphasize the critical role and contributions of CBMIS.[25]

32. The LBO and the Indigenous Navigator are examples of a growing field of CBMIS efforts. CBMIS has been an important tool for monitoring many Aichi Biodiversity Targets. Data and case studies reflecting local priorities and addressing local impacts will also be important for monitoring the overall implementation of the Framework, including in regard to data disaggregation for the headline and other indicators.

Indicators identified for potential disaggregation on indigenous peoples and local communities

33. Data disaggregation may be addressed at three levels:

- Potential disaggregation within each traditional knowledge indicator (e.g. disaggregation by gender and age in land tenure or traditional occupation indicators).
- Disaggregation of headline, component and complementary indicators of the monitoring framework by traditional knowledge issued related to indigenous peoples and local communities.
- Disaggregation is a key measure of equality and non-discrimination. The invisibility of indigenous peoples and local communities (compared to the general population) in national statistics and other population surveys needs to be addressed by the addition of appropriate census and survey questions, including those led by indigenous peoples and local communities.

34. Concerning the potential disaggregation of headline indicators, the AHTEG on Indicators identified up to 15 headline indicators for the goals and targets of the Framework for which information could be disaggregated by group, including indigenous peoples and local communities, as follows: A.1*, A.2*, B.1, C.1 C.2, and 1.1*, 2.2*, 3.1, 7.1*, 9.1, 10.1, 12.1, 15.1 and 21.1.

35. In addition to generating data and information related to the traditional knowledge indicators contained in Part III and related annexed metadata sheets below, CBMIS can also gather and provide data related to many of the indicators in the monitoring framework, including in relation to disaggregation of the headline indicators, thereby complementing data gathered by governments and relevant organisations, including filling data gaps. This data also considers a human rights-based approach as complementary to the monitoring methodology for the Framework.

36. The Expert Workshop on Traditional Knowledge Indicators identified and proposed ways to highlight the relevance of the traditional knowledge indicators for the Framework, including its goals and targets, and for potential disaggregation of headline indicators, as described below. It should be noted that local communities may benefit from separate disaggregation, distinct from that of indigenous peoples, for certain indicators.

IV. Overview of the status of the development of traditional knowledge indicators

37. This section summarises the current status of the four traditional knowledge indicators and next steps for their further development and operationalization. It is based on the metadata sheets that have been developed for the indicators, which are annexed to this paper.

Status and trends of linguistic diversity and numbers of speakers of indigenous languages

38. The indicator on trends in linguistic diversity and number of speakers of indigenous languages serves as a proxy for traditional knowledge under the Framework and its monitoring framework. The metadata for the Index of Linguistic Diversity – Trends in Bilinguistic diversity

[25] Hunter, David, Joji Cariño, Martin Oelz, Gabriela Balvedi, Sandra Mora Caballero, Mansour Omeira, and Kieran Walsh. Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics. Geneva: International Labour Organisation, 2023.

proposes to use, and update, the established and implemented methodology of the *Index of Linguistic Diversity*, which was last updated in 2010. The proposed update would focus on data collection and analysis on the national level and calls for a progressive transition to an indicator for linguistic vitality using participatory approaches.

39. This indicator is already a complementary indicator for Goal B, and is recommended as a component indicator for Targets 1, 2, 9, 21, 22 and 23. It is also very relevant to the operationalisation of Section C. As such, the protection of traditional knowledge and linguistic diversity will support the full realisation of these targets and goals.

40. Traditional knowledge is encoded in and expressed through the diverse languages spoken or signed by members of human societies worldwide. There are an estimated 6,000 to 8,000 spoken and signed languages worldwide. Counts of the number of speakers of languages over time provide a proxy indicator for trends in traditional knowledge. Existing evidence strongly suggests that languages, and the traditional knowledge encoded within them, are being lost at an alarming rate.

41. Following adoption of the indicator on linguistic diversity by COP-7, the Index of Linguistic Diversity (ILD) was developed by Terralingua based on a sample of 1,500 languages from the Ethnologue catalogue of languages for the period 1970 to 2005.[26] The main finding of work on the indicator was that global indigenous linguistic diversity has declined by 21% since 1970 and has declined in all regions. The indicator was classified as available in decision 13/28 in 2016 but has not been updated.

42. Counts of language speakers form part of indicators of *language vitality* consisting of six inter-related factors: a) intergenerational language transmission (e.g. are children learning the language); b) absolute number of speakers; c) proportion of speakers within the total population; d) trends in existing language domains (e.g. where a language is used such as home, school, work); e) response to new domains and media (e.g. internet, video, artificial intelligence); f) materials for language education and literacy.[27] The adoption of the UNESCO Global Action Plan of the International Decade of Indigenous Languages (2022-2032) in response to UN General Assembly Resolution 74/135 offers an important opportunity to further develop the linguistic diversity indicator under the Convention to address language vitality with the full and effective participation of indigenous peoples.

43. It is recommended that the existing indicator be updated without changing its fundamental structure and that up-to-date data from the Ethnologue Catalogue, which covers over 6,300 languages worldwide, be used, with a greater focus on disaggregation by country. It is proposed that future indicator development would focus on the national level. The indicator would be further developed after a call to Parties for submissions on best practices in participatory data collection with indigenous peoples and local communities. This would create a foundation for establishing pilot projects that would experiment in methodologies using robust data sources that may include Ethnologue, national census data, participatory indigenous data including census and survey data, NGO data and other data sources.

44. The transition from an indicator based purely on counts of language speakers towards an indicator of language vitality will require methodological work on issues such as the comparability between official statistics and contributions from indigenous peoples and local communities and civil society initiatives and experts.

45. It is therefore proposed that a multi-tiered approach to data collection is used that works with national statistics, existing data sources, participatory data from community-led initiatives and new approaches to data aggregation at scale (e.g. machine learning-based named entity recognition and large language models for tasks such as classification and summary). Combining these approaches will raise significant questions of data comparability for national and sub-national level data aggregation.

[26] Harmon, D., & Loh, J. (2010). The Index of Linguistic Diversity: A New Quantitative Measure of Trends in the Status of the World's Languages. Language Documentation & Conservation, 4, 97-151.
[27] UNESCO. (2003). Language Vitality and Endangerment. UNESCO Ad Hoc Expert Group on Endangered Languages.

46. A number of countries are preparing National Action Plans for implementation of the Global Action Plan on the International Decade of Indigenous Languages (2022-2032) and some of them (e.g. Australia, Brazil, Colombia, Guatemala, Norway, Peru and Ukraine) have already published details of their Nation Action Plans.[28] These plans may provide opportunities for further cooperation on national data collection and aggregation and could potentially form the basis for 'flagship' initiatives in relation to the indicator during the Decade.

Status and trends in the practice of traditional occupations

Current status

47. Decision 15/5 adopted as a headline indicator for Target 9.2: "Percentage of the population in traditional occupations" in place of the traditional knowledge indicator on "Status and trends in the practice of traditional occupations."

48. Traditional occupations is headline indicator 9.2 and is recommended as a component indicator for Targets 5, 10, 18, 21, 22 and 23.

49. For the operational measurement of traditional occupations, it is necessary to agree on a definition of a set of occupations embedded in a classification of occupations used for the compilation of official labour statistics.

Operationalizing the indicator

50. The International Labour Organisation (ILO) has an International Standard Classification of Occupations (ISCO) to guide the collection of labour statistics. ISCO-08 is a four-level, hierarchically structured classification that allows all jobs in the world to be classified into 436 unit groups. These groups form the most detailed level of the classification structure and are aggregated into 130 minor groups, 43 sub-major groups and 10 major groups, on the basis of their similarity in terms of the skill level and skill specialization required for the jobs. This allows the production of relatively detailed internationally comparable data as well as summary information for only ten groups at the highest level of aggregation. Many national classifications are based on ISCO-08 or on its predecessor, ISCO-88. Some countries have national occupation classifications that are not based on ISCO, but in most cases it is possible to map data from detailed levels of the national classification to a relatively detailed level of ISCO08. In countries that have not developed their own national classifications, a version of ISCO may be used directly.

51. A subset of these unit groups is used to identify jobs which could be considered as traditional occupations as detailed in Annex D Metadata Sheet on Traditional Occupations. However, national occupation classification schemes may frequently identify specific occupations that fit within the definition of traditional occupations that are not separately identified in ISCO. It would be preferable in such cases, therefore, to identify the groups in the national classification that fit the definition of traditional occupations, using the agreed list of ISCO groups as guidance.

Definition

52. For the purposes of this indicator, the following definition for traditional occupations is used:

> "Traditional occupations are occupations in which indigenous knowledge, cultural practices, innovations and technologies may influence the way the work is performed, if the work is performed by a person who identifies as belonging to an indigenous or tribal group. Indigenous knowledge refers to the constantly evolving information, skills, practices, science and technology passed from generation to generation within an indigenous or tribal group. The work performed in traditional occupations embraces production of goods and services for own use and other forms of unpaid work including volunteer work and unpaid trainee work, as well as employment for pay or profit."

[28] https://www.unesco.org/en/decades/indigenous-languages/idil-actions/national-action-plans?hub=67103

This definition is recommended in the ILO Technical Paper on Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics. [29]

Methodology and computation

53. This indicator will rely on the collection of data regarding the number of people in traditional occupations, in combination with known data on the total population of a country. The computation proposed by the ILO technical paper is "dividing the number of indigenous persons practicing traditional occupations by the total number of indigenous persons of working age in a country". As such, this approach is only functional in countries where data is available on population number of indigenous peoples and only covers traditional occupations of indigenous peoples and not local communities. Therefore, this indicator uses indigenous peoples engaged in traditional occupations as a percentage of the total population.

54. Two complementary methods are proposed for the collection of data:

a. A national approach using ILO International Standard Classification of Occupations (ISCO) in collaboration with national statistical offices.

b. Complemented by community-generated data through CBMIS, from the Indigenous Navigator[30] which is openly available online as a survey mechanism and reporting platform. A national survey could be used to cover indigenous peoples in the whole country; a community survey can be used as a sampling of specific indigenous communities. The Indigenous Navigator has established survey methods for both, with FPIC standards.

Data availability and further development

55. An initial review of the ILO Microdata Repository using ISCO to assess the prevalence of traditional occupations was undertaken to identify datasets that included both an indigenous or ethnic identifier and data on occupation ideally coded to the 4-digit level of ISCO. Datasets from the following 12 countries were identified as potentially being suitable for the compilation of estimates, for the indicators of the practice of traditional occupations: Brazil, Ecuador, Nicaragua, Bolivia, Uruguay, Lao People's Democratic Republic (Lao PDR), Mongolia, Nepal, Sri Lanka, Ghana, Liberia, and Sierra Leone. A complementary approach is information and case studies generated through Community-based Monitoring and Information Systems (CBMIS).

56. The metadata sheet was presented to the 6th meeting of the AHTEG on Indicators. Further operationalisation of the indicator for national use by Parties will be dependent on resourcing available for collection of ILO guided national data and Indigenous Navigator data by indigenous and tribal peoples.

57. Pilot testing using the national statistical approach in Lao Democratic Republic, Nepal and Ecuador is available in the ILO technical report. The Indigenous Navigator is well tested and ongoing in 30 countries and over 300 indigenous communities.

58. Potential disaggregation by gender, age, urban versus rural and educational level would require questions in the national census. Indigenous Navigator surveys already include questions on gender and location. Questions will need to be added for age. The education level is asked at the community level, not necessarily for the individual in a certain occupation.

Who could be involved in operationalizing the indicator?

59. The operationalization of the indicator is proposed to be led by the International Labour Organization (ILO) and national labor statistics, with support from Forest Peoples Programme (FPP,) the Indigenous Navigator consortium, UNESCO/LINKS, local/subnational governments, Biotrade Initiative, and the International Partnership of the Satoyama Initiative (IPSI), and the University of Michigan Tishman Centre for Social Justice and the Environment.

Essential capacity needs

[29] Technical Paper on Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics, Geneva: International Labour Office, 2023. https://www.ilo.org/global/publications/WCMS_862144/lang--en/index.htm

[30] https://indigenousnavigator.org/explore-and-use-our-community-based-monitoring-tools

60. Data collection methods relying on the Indigenous Navigator require training of indigenous peoples and local communities to broaden the coverage to additional communities and ensure inclusion and participation.

Remaining gaps

61. The indicator is operational for indigenous and tribal peoples, but not for local communities. The procedures used for this indicator are specific to people identifying as indigenous peoples. Local communities and non-indigenous individuals are not addressed, even if they participate in traditional occupations. The data collection methods of the ILO and Indigenous Navigator will need to be adapted to include local communities in order to cover the target text fully.

Status and trends in land-use change and land tenure in the traditional territories of indigenous peoples and local communities

62. For this indicator, two metadata sheets have been developed:

a. Proportion of lands and territories owned or used by indigenous peoples and local communities (a) with legal recognition or legally recognized documentation and (b) where there is perceived security of tenure.

b. Land use in lands and territories owned or used by indigenous peoples and local communities.

Current status of the proposed indicator

63. The land use and tenure indicator has a fully developed methodology and two associated metadata sheets (land tenure and land use). Currently, data for all components of the indicator at the earliest stages is available for more than 130 countries, with plans for further development of data quality and accuracy in a stage-based approach over the coming years.

64. The indicator provides relevant data on land tenure, land use, land use change, spatial planning, links to carbon sequestration, key biodiversity areas and global ecosystem types, while disaggregating for gender, age and disability where applicable. Inclusion of the indicator provides opportunities for cross monitoring and analysis, contributing to a better understanding of how land use change and land tenure link to several Goals and Targets, as outlined in the metadata.

65. Further, the indicator contributes to the realisation of Section C, recognizing the important contributions of indigenous peoples and local communities and ensuring a whole-of-society approach to monitoring biodiversity.

66. The land use and tenure indicator include four components, each of which relies on diverse data sources and methods of collection.

(a) Proportion of land and territories owned and used by indigenous peoples and local communities that is recognized;

(b) Proportion of indigenous peoples and local communities and individuals that feel secure in their tenure;

(c) Proportion of forest area owned or managed by indigenous peoples and local communities;

(d) Proportion of land and territories of indigenous peoples and local communities that is categorized as natural land.

67. For each of these components, stages have been developed to show how the indicator would evolve as better, more accurate and precise data becomes available in all countries, as outlined in the metadata sheets.

68. This indicator meets the criteria for headline indicators. An analysis carried out by the technical group on land use change and tenure coordinated by the FAO Global Land Observatory and the International Land Coalition (ILC) on how the land use and tenure data meets criteria for

headline indicators outlined in COP decision 15/5[31], as well as the general criteria established for all KMGBF indicators concluded that:

(a) The data and metadata are publicly available. On land tenure, data is available through the Landmark[32], the ICCA Registry[33], the Indigenous Navigator[34], Prindex[35] and LANDex[36] websites, among others. On land use, in addition, data is available through the FAO Forest Resource Assessment[37] (FRA), Global Forest Watch[38], as well as satellite imagery from Landsat Legacy[39] – USGS, Modis[40] and Copernicus[41]. Data will be centralized through a dedicated website in the framework of the FAO Global Land Observatory (GLO). The latest iteration of the metadata sheets are published on the International Land Coalition (ILC) website[42] and will be updated as new versions are released;

(b) The methodology has undergone a review by members of the technical working group and a scientific reference group has been established that includes custodians of SDG indicators. The SDG indicators and methodologies that serve as the basis for both the land tenure and use components of the indicator have undergone extensive scientific peer review;

(c) Data sources for the land use and tenure components of the indicator compile data regularly and with a time lag of less than five years;

(d) The mechanism for maintaining the indicator will be established at the Global Land Observatory (GLO) within FAO, working in close collaboration with the International Land Coalition (ILC) and other members of the technical working group that includes the data collectors listed above, custodian agencies and technical experts. Through GLO and these established partnerships, data generation and maintenance of the indicator will be ensured;

(e) The land use and tenure indicator monitors trends that are relevant to the Framework. The indicator provides relevant data on land tenure, land use, land use change and spatial planning, with important links to carbon sequestration, key biodiversity areas, sustainable agriculture and global ecosystem types (GET), among others. It is one of the four traditional knowledge indicators first established in COP decision XIII/28[43] and retained the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets. SBSTTA-25/1 asked the AHTEG on Indicators to fully account for the work of the Working Group on Article 8(j) on traditional knowledge indicators to further enhance the monitoring framework; WG8J/REC/12/4 invited the AHTEG and SBSTTA to consider development of indicators on land use and tenure;

(f) The indicator proposed has been developed with SDG custodians and is aligned to the extent possible with well-established SDG indicators that have served as the basis for methodology and calculation: SDG 1.4.2, SDG 15.1.1 and 15.4.2(b). Likewise, the indicator accounts for processes led by the Statistical Commission. Data from related accounts within the SEEA have potential to inform the indicator and members of the technical working group have been actively contributing to the development of the Copenhagen Framework on Citizen Data. Further alignment will take place in the context of the review undertaken by the scientific reference group;

(g) The indicator is calculated at the national level.

69. This indicator is recommended to be included as a headline indicator for Target 22 and as component indicator for Goals A and B, and Targets 1, 2, 3, 5, 8, 9, 10, 2 and 23. It may also

[31] https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-05-en.pdf
[32] https://www.landmarkmap.org
[33] https://www.iccaregistry.org
[34] https://indigenousnavigator.org
[35] https://www.prindex.net/data/
[36] https://www.landexglobal.org/en/
[37] https://data.apps.fao.org/catalog/dataset/fao-fra-global-forest-resources-assessment
[38] https://www.globalforestwatch.org/dashboards/global/
[39] https://www.usgs.gov/landsat-legacy
[40] https://modis.gsfc.nasa.gov
[41] https://land.copernicus.eu/global/index.html
[42] https://www.landcoalition.org/en/newsroom/a-land-use-and-tenure-indicator-to-protect-traditional-knowledge/
[43] https://www.cbd.int/decisions/cop/13/28

serve as a disaggregation of headline indicators A.1, A.2, B.1, 2.1, 3.1, 10.1, and 10.2. It would complement binary indicators in Targets 22 and 23.

What steps are needed to further develop and finalise the metadata? What is a realistic timeline for doing so? What, if any, implications does this have for using the indicator in national reporting?

70. There are currently no methodological gaps or limits to the metadata as presented. Metadata sheets for land use and tenure will undergo further peer review by a scientific reference group and be finalised by the technical working group, including data collectors, potential custodians and technical experts working on land use and tenure, by May 2024.

71. Further refinement of the indicator and agreement on common definitions and concepts across datasets will be required to ensure a standard approach that encompasses diverse data sources. The technical working group could lead efforts to collect data for more advanced stages of indicator components with preliminary results for all stages to be presented at the Conference of Parties in October 2024.

Are there organisations that can be requested to develop and/or operationalize the indicator? Have they been consulted or contacted?

72. The technical working group leading the development of the land use and tenure indicator includes relevant data collectors, experts and potential custodian agencies. These include the International Land Coalition (ILC), the Food and Agriculture Organization (FAO), UN Habitat, LandMark, Prindex, RRI and the Indigenous Navigator, among others.

Once the metadata is developed, is testing at the national level needed, and if so, how much testing is needed?

73. For the more advanced stages of data for the land tenure indicator – those calling for precise, fully geo-referenced map data for component (a) on area held, used and recognized, and for component (b) on tenure security perception data collected at the community level – further testing and data collection will be required. While some limited data collection is currently underway in Peru and Colombia, especially on component (b) of the land tenure component related to perceptions, the tools, questionnaires and methods used when collecting community-level data will need to be further tested and reviewed for the accuracy of resulting data. For the land use data, forest area is available globally at present, and preliminary data on natural lands is available globally, with further review and refinement of this data in process.

What steps are needed to operationalize the indicator? What is a realistic timeline for doing so? What, if any, implications does this have for using the indicator in national reporting?

74. The land use and tenure indicator is currently operational, with data available for indigenous peoples (including through the Indigenous Navigator). Further work is needed to enhance data coverage for local communities (LandMark data covers both the lands of indigenous peoples and the lands of local communities separately). The land use and land tenure indicator establish a distinction between ownership and tenure categories for indigenous peoples and local communities. It measures the proportion of legally recognized land own or used by indigenous peoples and local communties, allowing for national-level aggregation. The stage-based approach to improving data quality outlines the steps required to develop more precise, georeferenced, and community-level data. Targeted investment will be needed to ensure full data coverage for all indicator components.

75. The technical working group, including data collectors, technical experts and potential custodians, will develop a data flow and process by which national and global level data can be assembled and reported. In this process, the group will advance a proposal for FAO as a custodian of the land use and tenure indicator and establish relevant agreements to ensure close coordination with the International Land Coalition (ILC) and other data collectors in this process.

76. Preliminary data for all stages of data collection in a subset of countries will be ready by the Conference of Parties in October 2024. Some components of the indicator – total of land held and used by indigenous peoples and local communities, as well as recognized – will have data for all countries by the end of 2024 for the earliest stages of data development. For other

components, and for most advanced levels of data development, a global dataset is anticipated by 2030 pending sufficient investment and support.

Are gender perspectives to be reflected in the indicator?

77. Data will be disaggregated to allow for gender perspectives and analysis wherever possible. For the perception component of land tenure, data available in 140 countries can possibly be disaggregated by sex. Likewise, where documentation data is available at the individual and household level, further analysis for gender disparities is possible. Complementary and qualitative data collection, such as community-level focus groups, interviews and surveys, could shed further light on how women and men, members of indigenous peoples and local communities, experience land tenure and processes of land use change in distinct ways in their lands.

What are possible thematic or subject area disaggregations for the indicator and how can these be prepared?

78. All components of the land use and tenure indicator will be disaggregated for type of tenure, as well as gender, youth and disability when applicable. This will depend on the kind of data being collected for each component. Land held and used by indigenous peoples and local communities will be presented in disaggregated form wherever possible, reflecting different tenure types. Where documentation data is collected at the individual level, further disaggregation for gender and youth will be applicable. Data on perceptions of tenure security collected at individual or community level can be disaggregated by gender and age. Likewise, for forest and natural land areas, diverse tenure categories will be presented wherever such data is available. These categories will be harmonised with existing Global Ecosystem Typologies (GET) to the extent possible.

What are the essential capacity needs for countries to be able to use this indicator in national reporting? How do these needs vary between regions and between developed and developing countries?

79. Limited capacity development would be required for Parties to report on this indicator. For Parties to effectively use the data available through the indicator, the indicator custodian – with the technical working group and in support of the Secretariat of the Convention – could facilitate targeted training or develop concise resources and manuals that would help Parties to better understand and make use of available data.

Indicator on participation of indigenous peoples and local communities

Current status

80. Among the four traditional knowledge indicators, COP 13 adopted the following indicator:

"Trends in which traditional knowledge and practices are respected through their full integration, safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan."

81. The first part of the indicator "Trends in which traditional knowledge and practices are respected" is a crosscutting issue in the Convention and the Framework, and is particularly relevant to Target 21 (on data for biodiversity decision-making).

82. Considering the focus on participation as one of the main elements of Target 22 and its central importance for the implementation of Section C, the metadata sheet focuses on the participation of indigenous peoples and local communities. The following name of the indicator is proposed to bring it in line with the Framework:

Participation in decision-making of indigenous peoples and local communities in the implementation of the Kunming-Montreal Global Biodiversity Framework at all levels.

83. The right to participation is closely linked with the human rights to life and fundamental freedoms; land, territories and resources; culture and traditional knowledge; as well as access to justice and remedy; access to information; peaceful assembly and protection of environmental human rights defenders.

84. This indicator explicitly addresses a gap in the monitoring framework for Target 22, and is recommended as a component indicator for this target. Due to its cross-cutting nature, it is also proposed as a component indicator for Targets 1, 2, 3, 5, 9, 10, 11, 14, 21 and 23. It should be taken into account as potential disaggregation of headline indicators 1.1, 2.1, 3.1, 10.1, 10.2, 21.1.

85. It is proposed that this indicator should be measured through a combination of complementary methodologies and multiple data sources, including the Indigenous Navigator, a methodology based on human rights-based monitoring and indicator types.

86. Currently, the methodologies being considered include:

(a) Binary indicator[44] questions for Target 22, which have been developed by the AHTEG on Indicators. These address structural and process questions on the various elements of Target 22. The data would be provided by Parties in the national reports, in consultation with indigenous peoples and local communities;

(b) The Indigenous Navigator, considering that actual participation cannot be measured simply through structural and process questions/indicators, this methodology is proposed as a CBMIS tool that gathers data on structural, process and outcome indicators, using a combination of national-level and community questionnaires. The data is gathered by indigenous peoples and local communities and supporting organisations. The Indigenous Navigator established in 2014 is fully operational and already gathers data from national and community questionnaires on participation in 30 countries and 300 communities. The metadata sheet annexed to this technical review focuses on the Indigenous Navigator methodology;

(c) A proposed methodology developed by UNEP-WCMC and shared in the Online Forum on the monitoring framework. This methodology will be integrated in the biodiversity module of the Indigenous Navigator. This methodology complements the Indigenous Navigator as it addresses structural and process questions, but it is focused on the participation of indigenous peoples and local communities (not other elements of T22);

87. The proposed indicator would measure the extent to which countries are promoting and ensuring the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making of indigenous peoples and local communities, and their perceived actual participation. This could be monitored through structural, process and outcome indicators, including through the use of outcome indicators on the perception of actual participation by indigenous peoples and local communities themselves. The indicator is based on the human rights indicator methodology of the OHCHR and the Indigenous Navigator framework, which use a set of attributes, indicators, and data sources to reflect the human rights situation of a given context. The indicator is aligned with the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and other international human rights standards and obligations, as well as the principles of participation, equity, human rights and gender equality that are embedded in the Framework. The indicators can also be used to measure essential aspects of the Sustainable Development Goals (SDGs) as well as the commitments made by States at the 2014 World Conference on Indigenous Peoples.

What are the next steps in terms of finalizing the metadata and operationalizing the indicator?

88. The metadata was discussed at the Expert Workshop on Traditional Knowledge Indicators and submitted to the AHTEG on Indicators.

89. The Indigenous Navigator consortium and UNEP-WCMC will collaborate on the expansion of users of the indicator, including geographic representativeness and coverage. Further, the development of a biodiversity module in 2024 will generate additional data and

[44] The full name of the binary indicator (still to be finalised at SBSTTA-26 and COP-16) is: Number of countries [promoting the full, equitable, inclusive, effective and gender-responsive representation and participation] and [recognizing the rights of indigenous peoples and local communities with respect to their traditional territories, cultures and practices as well as the rights of environmental human rights defenders, women, youth, and persons with disabilities] [ensuring representation and participation in decision-making and access to justice and information in relation with biodiversity and ensuring the legal rights of indigenous peoples and local communities, including respecting their rights over lands, territories, resources and traditional knowledge, women and girls, children and youth and persons with disabilities, and ensuring the full protection of human rights of environmental defenders.]

information directly relevant for the monitoring of the Framework. Its use and deployment will require further resources, financial and technical support and capacity building. An update on the status of this additional work will be presented for consideration of the parties at COP16. It is expected to be fully operational within one year of COP16.

Who needs to be involved in finalizing the indicator, and have they been consulted or contacted?

90. The indicator is operational, with commitments for its further development from the following organisations: Indigenous Navigator consortium, SCBD, FPP, UNEP-WCMC, and IIFB Working Group on Indicators. OHCHR will be contacted and consulted to ensure alignment with human rights indicators.

Is testing at the national level needed?

91. The Indigenous Navigator has been tested and is being used in 30 countries. The new module on Biodiversity will be tested in 2024 with a sample of countries ensuring geographic balance.

What would the data flow look like (from compilation to reporting)?

92. The Indigenous Navigator data flow is established and operational, and is as follows: data collection, review, verification, and publishing with community consent and full respect for FPIC in a public database. This data is available for use by Parties to compile in their national reports.

What are possible thematic or subject area disaggregations?

93. Gender is expected to be integrated into the Indigenous Navigator as a cross-cutting aspect. Further disaggregation can also be done by indigenous peoples, women and girls, children and youth, and persons with disabilities.

94. The right to participation is closely linked with the following human rights to: life, fundamental freedoms, land, territories and resources, culture, traditional knowledge, access to justice and remedy, access to information, peaceful assembly, protection of environmental human rights defenders.

Are there any critical gaps with regard to the indicators identified for the goals and targets being considered by the subgroup?

95. Local communities are considered in the binary indicator. The Indigenous Navigator framework is published and publicly available but does not include local communities. The Indigenous Navigator and UNEP-WCMC will make efforts to facilitate adaptability to address the participation of local communities.

V. Conclusions and recommendations

96. Traditional knowledge is a cross-cutting theme under the Convention and its various programmes of work. The four indicators on traditional knowledge comprise a holistic suite of indicators to monitor the implementation of the goals and targets of the Framework and the new proposed programme of work on Article 8(j) and other provisions of the Convention related to indigenous peoples and local communities. The four indicators are integrative elements towards a whole-of-government and whole-of-society approach to monitoring nature and culture. They make substantive contributions to operationalizing Section C of the Framework with respect to indigenous peoples and local communities, women and girls, youth and intergenerational equity, and a human rights-based approach.

97. As discussed in this paper, the four indicators are operational, with committed agencies undertaking continuous development. In common with many other indicators for the Framework, the traditional knowledge indicators all require further work, capacity building and financial resources. The new programme of work and institutional arrangements on Article 8(j) and other provisions of the Convention related to indigenous peoples and local communities provide an ideal opportunity to take this work forward in pursuing successful implementation of the Framework in the period to 2030.

General recommendations

98. The traditional knowledge indicators are cross-cutting. They are relevant for monitoring the implementation of multiple goals and targets of the Framework. They should be considered in the monitoring framework as essential elements for applying the whole-of-government and whole-of society approach of the Framework.

99. The traditional knowledge indicators relate to key aspects of section C of the Framework and their operationalisation can support the implementation of these aspects.

100. Free, prior and informed consent and the CARE Principles for Indigenous Data Governance (Collective Benefit, Authority to Control, Responsibility, and Ethics) are principles and key elements to be applied in relation to collecting and processing information of indigenous peoples and local communities, and should be further considered in the operationalization of the traditional knowledge indicators.

101. The traditional knowledge indicators have been developed and re-named into operational indicators directly linked to and contextualized and adapted to address specific Goals and Targets of the Framework, as stated in the specific recommendations below.

Specific recommendations relating to the traditional knowledge indicators

(a) Index of Linguistic Diversity

102. The indicator is operational but requires updating.

103. Update the current Index of Linguistic Diversity, based on speaker counts, utilizing existing data from the Ethnologue Catalogue and redirecting the emphasis to the national level, before aggregating the data at a broader scale and transitioning in focus from measuring language endangerment to language vitality as a constructive contribution to the promotion of respect, preservation and maintenance of traditional knowledge and the implementation of the International Decade of Indigenous Languages.

104. Foster collaboration with key partners, including UNESCO, UNICEF, UNSD and ECLAC/CEPAL, on census data, national statistical offices, indigenous peoples and local communities, NGOs and language experts.

105. This indicator is already a complementary indicator for Goal B, and is recommended as component indicator for Targets 1, 2, 9, 21, 22 and 23.

(b) Trends in land-use change and land tenure in the traditional territories of indigenous peoples and local communities

106. For this indicator, two indicators have been developed:

(a) Proportion of lands and territories owned or used by indigenous peoples and local communities (a) with legal recognition or legally recognized documentation and (b) where there is perceived security of tenure;

(b) Land use in lands and territories owned or used by indigenous peoples and local communities.

107. The relevance of a land use and tenure indicator across multiple goals and targets of the Framework is well-established. This indicator is operational and its inclusion as a relevant indicator in the monitoring framework is strongly recommended.

108. This indicator is recommended to be included as a headline indicator for Target 22 and as component indicator for Goals A and B, and Targets 1, 2, 3, 5, 8, 9, 10, 2 and 23. It may also serve as disaggregation of headline indicators A.1, A.2, B.1, 2.1, 3.1, 10.1, and 10.2. It would complement binary indicators in Targets 22 and 23. For disaggregation in relation to some headline indicators, this indicator can be framed in a specific way, e.g.: disaggregation by indigenous and traditional territories for headline indicators A.1 and A.2, and disaggregation by cultural landscapes for headline indicator B.1.

109. Develop case studies to elucidate implications for national reporting and enhance understanding of this indicator in its entirety, including its interactions with other headline indicators. Studies on such interactions could be conducted in countries such as Colombia,

Botswana, South Africa, Ecuador, Norway, the Philippines, amongst others. With sufficient investment, these case studies could be completed within a year, providing insights for further policy development and implementation.

(c) Percentage of the population in traditional occupations

110. Traditional occupations is headline indicator 9.2 and is also recommended as component indicator for Targets 5, 10, 18, 21, 22 and 23.

(d) Participation in decision-making of indigenous peoples and local communities in the implementation of Kunming-Montreal Global Biodiversity Framework at all levels

111. It should be noted that this indicator is crosscutting and linked to all the goals and targets of the Framework. The indicator is operational and explicitly addresses a gap in the monitoring framework for Target 22, and should be considered as a component indicator for this target. Due to its cross-cutting nature, Parties are advised to consider it as a component indicator for Targets 1, 2, 3, 5, 9, 10, 11, 14, 21 and 23. It should be taken into account as potential disaggregation of headline indicators 1.1, 2.1, 3.1, 10.1, 10.2, 21.1.

Further recommendations on disaggregation

112. For Goal C and Target 13:

(a) C.1: By monetary benefits received by indigenous peoples and local communities;

(b) C.2: By non-monetary benefits received by indigenous peoples and local communities.

113. For Goal D and Target 19:

(a) D.1: By international public funding directly supporting the collective actions of indigenous peoples and local communities;

(b) D.2: By domestic funding directly supporting collective actions of indigenous peoples and local communities.

Annex B

Land Tenure and Land Use Indicator Metadata Sheet

Status and trends in land-use change and land tenure in the traditional territories of indigenous and local communities

For this indicator, two metadata sheets have been developed, reflected in two annexes:

B.1 Proportion of lands and territories held or used by Indigenous Peoples and local communities (a) with legal recognition or legally recognized documentation and (b) where there is perceived security of tenure.

B.2 Land use in lands and territories held or used by Indigenous Peoples and local communities.

The land use and tenure indicator include four components, each of which rely on diverse data sources and methods of collection.

1) Proportion of land and territories held and used by IPs and LCs that is recognized
2) Proportion of IP and LC communities and individuals that feel secure in their tenure
3) Proportion of forest area owned or managed by IPs and LCs
4) Proportion of IP and LC land and territories that is categorized as natural land

For each of these components, stages have been developed to show how the indicator would evolve as better, more accurate and precise data becomes available in all countries. It is important to note that not all stages are relevant for all components of the indicator – component two on perception, for example, has five stages of data quality development, while the proportion of land and territories held and used by IPs and LCs that is recognized will only have three. All components have been aligned at stage four, which represents the ideal dataset for each component, and worked backwards accordingly.

Data availability at earliest and more advanced stages of each component are summarized below, together with available data sources:

1. Proportion of land and territories held and used by IPs and LCs that is recognized
   - Stage 2 (nationally reported data): 130 countries
   - Stage 3 (indicative maps in addition to reported data): 30 countries
   - Stage 4 (precise, geo-referenced maps): 40 countries
   - Sources: LandMark, Rights and Resources Initiative, Global Land Observatory, ICCA Registry, CBMIS, and other local/national/regional sources.
2. Proportion of IP and LC communities and individuals that feel secure in their tenure
   - Stage 0 (national survey data on rural populations): 140 countries
   - Stage 1 (national expert informants, IP and LC reps): No data
   - Stage 2 (expert informants in IP and LC communities): No data
   - Stage 3 (focus group and community discussions, convenience sample): 2 countries
   - Stage 4 (survey in communities with probability-based sample): 5 countries
   - Sources: Prindex, LANDex-ILC, Indigenous Navigator, CBMIS and other local/national/regional sources.
3. Total forest area (as basis for proportion owned or managed by IPs and LCs)
   - Stage 3 (numerical data reported on tropical and boreal forest area): 138 countries
   - Stage 4 (geo-referenced maps of forest area: 195 countries
   - Sources: FAO Forest Resources Assessment (FRA) and Global Forest Watch, CBMIS and other local/national/regional sources.
   - Note: The calculation of this component depends on availability of data from component one.
4. Total natural land area (as basis for proportion located on IP and LC land and territories)
   - Stage 3 (indicative maps of natural land area): 195 countries
   - Stage 4 (geo-referenced maps of natural land area): No data
   - Sources: ESA, NASA, other Earth Observation System data providers.

- Note: The calculation of this component depends on availability of data from component one.

This indicator meets the criteria for headline indicators. An analysis carried out by the technical group on land use change and tenure coordinated by the FAO Global Land Observatory and the International Land Coalition (ILC) on how the land use and tenure data meets criteria for headline indicators outlined in decision 15/5, as well as the general criteria established for all KMGBF indicators concluded that:

- The data and metadata are publicly available. On land tenure, data is available through the LandMark, the ICCA Registry, the Indigenous Navigator, Prindex and LANDex websites, among others. On land use, in addition, data is available through the FAO Forest Resource Assessment (FRA), Global Forest Watch, as well as satellite imagery from Landsat Legacy – USGS, Modis and Copernicus. Data will be centralized through a dedicated website in the framework of the FAO Global Land Observatory (GLO). The latest iteration of the metadata sheets are published on the International Land Coalition (ILC) website and will be updated as new versions are released.
- The methodology has undergone a review by members of the technical working group and a scientific reference group has been established that includes custodians of SDG indicators. The SDG indicators and methodologies that serve as the basis for both the land tenure and use components of the indicator have undergone extensive scientific peer review.
- Data sources for the land use and tenure components of the indicator compile data regularly and with a time lag of less than five years.
- The mechanism for maintaining the indicator will be established at the Global Land Observatory (GLO) within FAO, working in close collaboration with the International Land Coalition (ILC) and other members of the technical working group that includes the data collectors listed above, custodian agencies and technical experts. Through GLO and these established partnerships, data generation and maintenance of the indicator will be ensured.
- The land use and tenure indicator monitors trends that are relevant to the KMGBF. The indicator provides relevant data on land tenure, land use, land use change and spatial planning, with important links to carbon sequestration, key biodiversity areas, sustainable agriculture and global ecosystem types (GET), among others. It is one of the four traditional knowledge indicators first established in decision XIII/28 and retained the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets. SBSTTA-25/1 asked the AHTEG to fully account for the work of the Working Group on Article 8(j) on traditional knowledge indicators to further enhance the monitoring framework; WG8J/REC/12/4 invited the AHTEG and SBSTTA to consider development of indicators on land use and tenure.
- The indicator proposed has been developed with SDG custodians and is aligned to the extent possible with well-established SDG indicators that have served as the basis for methodology and calculation: SDG 1.4.2, SDG 15.1.1 and 15.4.2(b). Likewise, the indicator accounts for processes led by the Statistical Commission. Data from related accounts within the SEEA have potential to inform the indicator and members of the technical working group have been actively contributing to the development of the Copenhagen Framework on Citizen Data. Further alignment will take place in the context of the review undertaken by the scientific reference group.
- The indicator is calculated at the national level.

This indicator is recommended to be included as a headline indicator for Target 22 and as component indicator for Goals A and B, and Targets 1, 2, 3, 5, 8, 9, 10, 2 and 23. It may also serve as disaggregation of headline indicators A.1, A.2, B.1, 2.1, 3.1, 10.1, and 10.2. It would complement binary indicators in Targets 22 and 23.

Annex B.1
Land Tenure Indicator Metadata Sheet

Indicator metadata sheet

Indicator metadata form for compilation of data relating to headline indicators in the first draft of the monitoring framework for the KMGBF

1. Indicator name

Insert full indicator name and number [number to be populated after the adoption of the post-2020 global biodiversity framework]

Traditional Knowledge: Proportion of lands and territories held or used by Indigenous Peoples and local communities (a) with legal recognition or legally recognized documentation and (b) where there is perceived security of tenure.

2. Date of metadata update

Insert date of metadata update

26 March 2024

3. Goals and Targets addressed

Please provide details about the proposed goals and targets of the Kunming-Montreal Global Biodiversity Framework for which the indicator will measure progress in the Kunming-Montreal Global Biodiversity Framework

In Decision XV/5 (December, 2022), the Conference of Parties invited the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions to "continue the development and operationalization of indicators related to traditional knowledge". SBSTTA-25 (October, 2023) "Requests the Expert Group to fully take into account the work of the Ad Hoc Open-ended Intersessional Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity on traditional knowledge indicators in order to further enhance the monitoring framework; (SBSTTA-25/1, paragraph 12). In WG8J/REC/12/4 (November, 2023), the AHTEG on Article 8(j) and Related Provisions invited the AHTEG on Indicators and SBSTTA to "consider the development of indicators on trends in land-use change and land tenure in the traditional territories of indigenous peoples and local communities."

3a. Goal

Provide the corresponding draft goal name, draft goal number, or N/A

While the secure land tenure of indigenous peoples and local communities acts as an enabling condition underpinning the realisation of several Goals and Targets, the indicator contributes notably to the following Goals and relevant headline indicators, listed below, providing further disaggregation and analysis of the intersection of IP and LC land tenure with headline indicators while also contributing to the monitoring of Section C:

Goal A

The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050;

Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels;

Indicator A.1: Red List of Ecosystems – ecosystems as they intersect with Indigenous and traditional territories; to understand how land use and tenure on Indigenous and traditional territories corresponds to measures of ecosystem health.

Indicator A.2: Extent of Natural Ecosystems – natural ecosystems as they intersect with Indigenous and traditional territories; to understand how land use and tenure on Indigenous and traditional territories corresponds to the extent of natural ecosystems.

Goal B

Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

Indicator B.1: Services provided by ecosystems – services provided by ecosystems as they relate to Indigenous and traditional territories; to understand how land use and tenure on Indigenous and traditional territories corresponds to the provision of ecosystem services.

3b. Target

Provide the corresponding draft target name, draft target number, or N/A

While the secure land tenure of indigenous peoples and local communities acts as an enabling condition underpinning the realization of several Goals and Targets, the indicator contributes notably to the following Targets and relevant headline indicators, listed below, providing further disaggregation and analysis of the intersection of IP and LC land use and tenure with this indicator, also contributing to the monitoring of Section C:

Target 1

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

(See above: Indicators A.1 and A.2 as headline indicators for Target 1, with disaggregation for Indigenous and traditional territories.)

Target 2

Ensure that by 2030 at least 30 percent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

Indicator 2.2: Area under restoration – potential for and effective restoration efforts as they relate to Indigenous and traditional territories; to understand how land use and tenure on Indigenous and traditional territories corresponds to potential for and progress towards restoration.

Target 3

Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

Indicator 3.1: Coverage of protected areas and other effective area-based conservation measures – land use and tenure on Indigenous and traditional territories as it relates to the effective conservation and management of land; to understand land use and tenure on Indigenous and

traditional territories as a governance and tenure type with relevance to measures of inclusive conservation.

Target 5

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

Relevance to Target 5: Secure tenure rights on Indigenous and traditional territories facilitates customary sustainable use of land – and land use change – with potential to prevent overexploitation and minimize impacts on species and ecosystems while respecting and protecting customary sustainable use by indigenous peoples and local communities.

Target 8

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

Relevance to Target 8: Secure tenure rights on Indigenous and traditional territories as an enabling factor, allowing these individuals communities to carry out sustainable land management – land use – forest and other ecosystems conservation and implementation of traditional knowledge and practices, thereby contributing to minimizing the impact of climate change on biodiversity and increasing its resilience.

Target 10

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

Indicator 10.1: Proportion of agricultural area under productive and sustainable agriculture – land use and tenure on Indigenous and traditional territories as it relates to sustainable agriculture in these areas; to understand how land use and tenure on Indigenous and traditional territories corresponds to sustainable agriculture, as well as aquaculture, fisheries and forestry.

Indicator 10.2: Progress towards sustainable forest management – land tenure and use on Indigenous and traditional territories as an indicator of sustainable forest management; to understand how land use and tenure on traditional territories corresponds to potential for or progress towards measures of sustainable forest measurement.

Target 22

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

Relevance to Target 22: Target language clearly calling for representation and participation of indigenous peoples and local communities with respect for their cultures and rights over land, territories, resources and traditional knowledge.; land use and tenure as a central measurement of the extent to which right to land, territories, resources and traditional knowledge are being respected.

Target 23

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

Relevance to Target 23: Target language clearly calling for a focus on gender equality as it pertains to equal rights and access to land and natural resources; measures of land use and tenure disaggregated and accounting for gender provide a fundamental indicator of their rights and access to land and natural resources.

4. Proposed rationale

Description of the purpose and rationale behind the indicator, noting its relevance to the corresponding goal or target

In decision XV/5 (December, 2022), the Conference of Parties invited the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions to "continue the development and operationalization of indicators related to traditional knowledge". Likewise, Decision XV/4, Section C recognizes the important role and contribution of Indigenous Peoples and local communities, calling for KMGBF implementation to ensure that their rights, knowledge, including traditional knowledge, are respected, documented and preserved.

SBSTTA-25 (October, 2023) "Requests the Expert Group to fully take into account the work of the Ad Hoc Open-ended Intersessional Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity on traditional knowledge indicators in order to further enhance the monitoring framework; (SBSTTA-25/1, paragraph 12[MOU1]). In WG8J/REC/12/4 (November, 2023), the AHTEG on Article 8(j) and Related Provisions invited the AHTEG on Indicators and SBSTTA to "consider the development of indicators on trends in land-use change and land tenure in the traditional territories of indigenous peoples and local communities."

The land tenure indicator originally considered in the KMGBF[45] – SDG 1.4.2 – is a component of the compound indicator originally adopted in decision XIII/28, retained in the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets: Trends in land-use change and land tenure in the traditional territories of indigenous and local communities (decision X/43). Together with this generic indicator, covering land use change and land tenure, decision XIII/28 identified two specific indicators that would be used for implementation:

a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights bearers of agricultural land, by type of tenure.

b) Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure.

Both of the land tenure indicators identified to monitor the Aichi Targets and considered within the KMGBF monitoring framework are established SDG indicators. The first corresponds to SDG indicator 5.a.1. The second, focused on legally recognized documentation and perceptions of tenure security, corresponds to SDG indicator 1.4.2, and forms the basis for the present indicator.

5. Concepts, definitions and classifications

5a. Concepts and definitions:

[45] The land tenure indicator SDG 1.4.2 is currently listed as a component under Target 22 and Target 23 . It is also a sub-indicator embedded within headline indicator 10.1, which is the equivalent of SDG 2.4.1.

International law provides important guidance and language that is relevant for this indicator, particularly as concerning the internationally recognized rights of indigenous peoples, tribal peoples and communities meeting criteria for collective rights to lands.

UNDRIP recognizes the urgent need to respect and promote the inherent rights of indigenous peoples, especially their rights to their lands, territories and resources. Article 26 further underlines their right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired. Furthermore, it calls on States to give legal recognition and protection to these land, territories and resources with due respect for the land tenure systems of the indigenous peoples concerned.

ILO Convention No. 169 provides further guidance, particularly in Articles 12-19, declaring that indigenous and tribal peoples are bearers of the rights to ownership over the lands and resources they have historically occupied, and therefore they have the right to be recognized as the legal owners of their territories, to obtain a formal legal title to property over their lands, and to the due registration of said title. The collective right to property of indigenous lands implies a collective title to territory, that is, the recognition of an equally collective title to property over such lands that reflects the community property of the land, with due respect for indigenous peoples' forms of internal organization regarding land tenure.

The Voluntary Guidelines on the Responsible Governance of Tenure (VGGTs) is another widely endorsed guidance that supports an understanding of the concepts presented here. Chapter 9 is on indigenous peoples and other communities with customary tenure systems, highlighting in paragraph 9.4 that States should provide appropriate recognition and protection of the legitimate tenure rights of indigenous peoples and other communities with customary tenure systems, consistent with existing obligations under national and international law.

Definitions of specific relevance to proxies (a) and (b) are listed below, subject to further development and input to ensure compatibility with the KMGBF and across data sources.

Greater detail on how the data for both components is generated can be found in annex I.

Proxy (a) legal recognition or the presence of a legally recognized document:

- *Indigenous lands or territories* refer to the collectively held and governed lands, territories and natural resources of Indigenous Peoples (see relevant frameworks above). As with other community lands, some indigenous lands may be allocated with group consent for use by individuals and families. Other indigenous land is managed as common property. In some cases, indigenous land is held by individuals or families.
- *Community lands* are all lands that fall under the customary governance of the community whether or not this is recognized in national law. Community land is variously described as the community domain, community land area, community territory, or other terms.
- *Land used or occupied* as a proxy for assertions generally by Indigenous groups over their ancestral lands and territories.
- *Legally recognized land and documentation* refers to the recording and publication of information on the nature and location of land, rights and right holders in a form that is recognized by government and is therefore official.
- *Indicative areas (maps) of Indigenous and community land rights* represent areas where Indigenous and community lands likely exist but the clear delimitation, recognition and/or documentation status of these land rights are not available at this time. These maps will transition to the indigenous lands or community lands layer once more information becomes available
- *Percent of the country held by Indigenous Peoples and communities* is a national level indicator representing the amount of land held or used by Indigenous Peoples and communities as a percentage of the country's total land area, further categorized by whether these lands are acknowledged by government or not.

Draft definitions relevant to methods to be used for proxy (b) the presence of perceived security of tenure are available in Annex I with detail on how data for both components will be generated.

The scope of the indicator is limited to terrestrial land and does not include freshwater, coastal and marine areas. The land tenure component of the land use and tenure indicator as it is currently built could accommodate data on freshwater, coastal and marine areas, so long as this data is presented as a total proportion of area held or used and area recognized. An in-depth assessment of freshwater, coastal and marine or coastal areas within the scope of the indicator – land use and land tenure – would require additional consideration, possibly the development of a separate sub-indicator, as well as additional data sources. The development of the land use and tenure indicator in this context could, however, inform the basis of further development of an indicator responding more closely to freshwater, coastal and marine areas.

5b. Method of computation

The proposed indicator has been developed and its components are operational. A joint methodology has been developed by organizations[46] belonging to an informal working group committed to operationalizing the indicator. Data sources have been identified and data is already being generated in more than 100 countries. The indicator is currently being piloted in select countries.

The proposed indicator includes two components, indicated as (a) and (b).

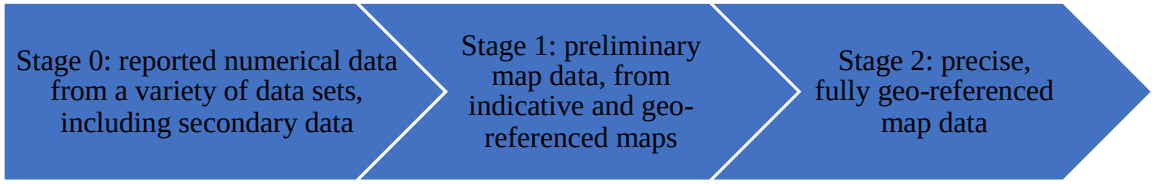
> Proportion of lands and territories held or used by Indigenous Peoples and local communities (a) with legal recognition or legally recognized documentation and (b) where there is perceived security of tenure.

For both components, a stage-based approach is used to show stages of development of the indicator and how a country could report against the indicator with varying levels of data availability as well as representativity of data and potential for disaggregation and associated complexity of the data.

On component (a), method and means of computation proposed is as follows:

$$\textit{Proportion (\%) of lands and territories held or used by Indigenous Peoples and local communities} = \frac{\textit{(a) with legal recognition or legally recognized documentation area held or used by Indigenous Peoples and local communities (ha)}}{\textit{total area held or used by Indigenous Peoples and local communities (ha)}}$$

Stages of component (a) development:



On component (b), method and means of computation (for Stages 3-4) proposed is as follows:

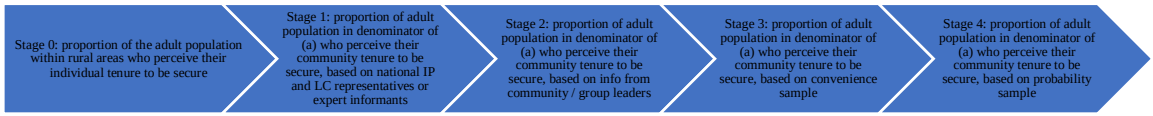
$$\textit{Proportion (\%) of the adult population in the area determined in denominator of component (a) who perceive their}$$

[46] The International Land Coalition (ILC), LandMark, the Indigenous Navigator, Prindex, Rights and Resources Initiative (RRI) and the Food and Agriculture Organization (FAO), among others.

$$community\ \ tenure\ to\ be\ secure$$

$$= \frac{Adult\ population\ in\ the\ area\ determined\ in\ demoninator\ of\ component\ (a)\ \ who\ perceive\ their\ community's\ tenure\ to\ be\ secure}{Total\ adult\ population\ in\ the\ area\ determined\ in\ denominator\ of\ component\ (a)}$$

Stages of component (a) development:



5c. Data collection method

Data collection is already being carried out by the data collectors and sources indicated. A joint effort would be required between an eventual custodian of the indicator and data collectors to aggregate and present the data at the national level and globally. See point 5b. for different stages of methodology that would correspond to data availability. See annex I for further detail on how data will be collected in each of the stages described above.

5d. Accessibility of methodology

The current methodology has not been shared publicly, only for internal review, but once final it can be shared publicly, either on the custodian website or otherwise.

5e. Data sources/methods and documentation on processes

Multiple data sources could potentially provide data for components (a) and (b) of the indicator. Official land administration data for SDG 1.4.2, if available, could be used for both components of the indicator. For component (a), complementary data sources include LandMark, the Rights and Resources Initiative (RRI), Indigenous Navigator and the Global Land Observatory (GLO) at FAO. For component (b) of the indicator, complementary data sources include Prindex, LANDex via the International Land Coalition (ILC), as well as other CBMIs. See references below for more information about these initiatives and their contributions to the indicator detailed here.

5f. Availability and release calendar

Data for stage 0 for component (b), will be available for over 100 countries by November 2024. Preliminary results from pilot countries for component (a) and some other aspects of component (b) will be presented in Q3 of 2024, while other case studies will be developed in parallel. On the basis of pilot results and other testing of the indicator, the indicator can be presented with concrete results for some of the stages as well as recommendations for further testing and subsequent operationalization at the sixteenth meeting of the Conference of the Parties in November, 2024.

5g. Time series

N/A

5h. Data providers

The International Land Coalition (ILC) is leading development of the indicator, together with members of the informal working group on IP and LC land tenure, comprised of the data collectors listed above and other strategic partners. FAO has been indicated as a potential custodian for this indicator as well as the component referring to land use change. This work will be further developed in close collaboration with the CBD Secretariat at the Working Group on 8(j) and Related Provisions.

5i. Data compilers

See 5e.

5j. Gaps in data coverage

Gaps in data coverage are accounted for in the methodology, recognizing that more initial stages will be necessary to give broader coverage as more detailed data and coverage accounting for targeted IP and LC populations continues to be developed. In more advanced stages, the data presented will need to clearly establish the scope of the data collected, as it is likely that data collection will be sub-regional and targeted as the indicator is tested and piloted, before scaling up to national-level coverage.

As mentioned in section 5(a), the scope of the indicator is limited to terrestrial land and does not include freshwater, coastal and marine areas. The land tenure component of the land use and tenure indicator as it is currently built could accommodate data on freshwater, coastal and marine areas, so long as this data is presented as a total proportion of area held or used and area recognized. An in-depth assessment of freshwater, coastal and marine or coastal areas within the scope of the indicator – land use and land tenure – would require additional consideration, possibly the development of a separate sub-indicator, as well as additional data sources. The development of the land use and tenure indicator in this context could, however, inform the basis of further development of an indicator responding more closely to freshwater, coastal and marine areas.

5k. Treatment of missing values

See 5j.

6. Scale

6a. Scale of use

The indicator would be reported at the national level, though depending on the stage of data development, the data presented could be a national estimate or an aggregate of community-level data collected.

6b. National/regional indicator production

For global indicators, please note whether a national/regional methodology available for use and provide links to any online documentation. Please also specify if underlying data can be accessed and used by countries to produce national indicators.

As a reference, SDG 1.4.2 metadata can be found online here. Likewise, the methods used by LandMark and Prindex, as two potential sources for the contextualized indicator, can also be found online. Once final, the metadata for this indicator will also be published online by the International Land Coalition on LANDex, together with preliminary findings from test countries.

6c. Sources of difference between global and national figures

The present methodology is designed for national-level reporting of data. National figures could eventually be aggregated at a global level while accounting for the different stages of data collection and availability across countries.

6d. Regional and global estimates & data collection for global monitoring

N/A

7. Other MEAs, processes and organizations

N/A

7a. Other MEA and processes

N/A

7b. Biodiversity Indicator Partnership

N/A

8. Disaggregation

Component (a):

(a) Proportion of land and territories held or used be Indigenous People and local communities with legal recognition or legally recognized documentation, by type of tenure

Component (b)

(b) Proportion of Indigenous Peoples and local communities in the area defined by (a) who perceive their community's tenure to be secure, by type of tenure
(c) Proportion of Indigenous Peoples and local communities in the area defined by (a) who perceive their community's tenure to be secure, by gender
(d) Proportion of Indigenous Peoples and local communities in the area defined by (a) who perceive their community's tenure to be secure, by age

9. Related goals, targets and indicators

The proposed indicator is a contextualization of SDG indicator 1.4.2, currently listed as a component indicator under Targets 22 and 23. See further detail on linkages under point 3, 3a. and 3b.

10. Data reporter

10a. Organization

International Land Coalition and FAO

10b. Contact person(s)

ILC: Eva Hershaw, Data and Land Monitoring Lead, e.hershaw@landcoalition.org

FAO: Ward Anseeuw, Senior Land Tenure Officer, ward.anseeuw@fao.org

11. References (if available)

Listing here references for concepts, definitions and sources of data that could contribute to this indicator:

1. Bonn report, July 2022. See Table 1: An expert assessment of SDG 1.4.2, considered as a potential headline indicator for Target 21 and Target 22 at the time, gave it a ranking of 1-2 where the highlight possible ranking (1) represented broad support for inclusion. Capacity building needs were considered low and the indicator was considered relevant to all Goals and Targets.
2. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), 2007.
3. International Labour Organization, Convention No. 169, Indigenous and Tribal Peoples Convention, 1989.
4. Voluntary Guidelines on Responsible Governance of Tenure (VGGTs)
5. Indigenous Navigator: https://indigenousnavigator.org/
6. LandMark: https://www.landmarkmap.org/
7. RRI Tenure Tracking Tool: https://rightsandresources.org/rri-tenure-tool/
8. Prindex: https://www.prindex.net/
9. FAO: https://www.fao.org/tenure/en/
10. LANDex: https://www.landexglobal.org/en/

Annex I

Proposed Stages of Development for Component (a) and (b)

Component (a) on documentation on IP and LC land and territories

Proportion of IP&LC lands that are documented and recognized =

$$(1) \quad \frac{\text{area of IP\&LC land recognised and document (ha)}}{\text{area of land used/occupied by IP\&LC (ha) (2)}}$$

Comments:

- *Area-based indicator*: Unlike the original SDG, the proxy for IP&LC is an area-based indicator. It was avoided to do a population-based indicator, as i) the traditionally used censuses and (agric, population or other) surveys do generally not distinguish for IP&LC population groups; ii) do not allow to account for collective land rights.
- *3 phases are proposed, related to data availability, and accuracy (with phase 3 the ideal case scenario)*:
    - Phase 1 is based on numerical data based on a variety of data sets (including secondary data)
    - Phase 2 is based on preliminary map data (from indicative maps to geo-referenced maps)
    - Phase 3 is based on precise, fully geo-referenced map data.
- Limitations of an area-based indicator is the limited degree of disaggregation possible (for example sex disaggregation is not possible).

Definitions:

- **Indigenous Lands** or territories refer to the collectively-held and governed lands (and natural resources) of Indigenous Peoples. As with other community lands, some indigenous lands may be allocated with group consent for use by individuals and families. Other indigenous land is managed as common property. In some cases, indigenous land is held by individuals or families (e.g., New Zealand). Traditional indigenous territories are estimated to encompass up to 22 percent of the world's land surface.
- **Community Lands** are all lands that fall under the customary *governance* of the community whether or not this is recognized in national law. Community land is variously described as the community domain, community land area, community territory, or other terms (*e.g*., Tanzania refers to village lands, Ghana to customary lands, China to collectives, Cambodia refers to indigenous lands, etc.).
- **Land used/occupied** as a proxy for assertions generally by Indigenous groups over their ancestral lands and territories.
- **Legally Recognized Land and Documentation**: Legal documentation of rights refers to the recording and publication of information on the nature and location of land, rights and right holders in a form that is recognized by government, and is therefore official.
- **Indicative Areas (maps) of Indigenous and Community Land Rights** represent areas where indigenous and community lands likely exist but the clear delimitation, recognition and/or documentation status of these land rights are not available at this time. These maps will

transition to the Indigenous Lands or Community Lands layer once more information becomes available

- **Percent of Country Held by Indigenous Peoples and Communities** are national-level data that represent the amount of land held or used by Indigenous Peoples and communities as a percentage of the country's total land area, categorized by whether these lands are acknowledged by government or not.

Stage 1	**Numerical data**
Data type	Numerical measurement of area of land (generally in hectares or km2)
Data sources and quantity: (1) area of IP&LC land recognised and document (2) area of land used/occupied by IP&LC (ha)	Sources (# countries with data) - LandMark present database for recognised and documented IP&LC lands (Land Mark % data layer) (50 countries) - RRI (73 countries) - GLO global tenure database (additional 15-20 countries) - LandMark present database for used/occupied IP&LC lands (130 countries)
Comments	- Coverage of approximate 90-100 countries - Available at present - Disaggregation between IP and LC is most cases but not always possible
Stage 2	**Preliminary map data**
Data type	Map-based data (from which numeric data generally in hectares or km2 is deducted)
Data sources and quantity: (1) area of IP&LC land recognised and document (2) area of land used/occupied by IP&LC (ha)	Sources (# countries with data) - LandMark present database of geo-referenced recognised and documented IP&LC lands (approx 70 countries) - LandMark present database for used/occupied IP&LC lands (100 countries) - LandMark additional indicative maps, based on indicative map drawing methodologies and/or statistical code-based assessment (All countries)
Comments	- Partial coverage of data layers for all countries, about 70 countries for both data layers - Availability expected in 2025 - Disaggregation between IP and LC possible - In addition to numerical data, availability of maps of IP&LC territories for other uses - Combination of data possible: Stage 2 data can be combined with stage 1 data increasing the number of countries covered to about 100.

Stage 3	
Data type	Precise geo-referenced map-based data (from which numeric data generally in hectares or km2 is deducted)
Data sources and quantity: (3) area of IP&LC land recognized and document (4) area of land used/occupied by IP&LC (ha)	Sources (# countries with data) - LandMark future database of georeferenced maps of recognised and documented IP&LC lands (all countries) - LandMark future database of georeferenced maps of used/occupied IP&LC lands (all countries)
Comments	- Over time, expected to be available for all countries in the world - Disaggregation between IP and LC possible - In addition to numerical data, availability of geo-referenced maps of IP&LC territories for other uses

Component (b) on IP and LC perceived tenure security

INTRODUCTION

This document outlines considerations, options, and an initial recommendation for an indicator to assess perceived land tenure security of Indigenous People (IP) and Local Communities (LC). The aim is to incorporate this indicator into the 'Contextualized IP and LC Land Tenure Indicator' proposal for the Kunming-Montreal Global Biodiversity Framework (KMGBF) monitoring framework being prepared by the informal IP and LC Land Tenure Working Group.

INDICATOR CHARACTERISTICS

The following characteristics of the indicator are the basis of the proposed options and the recommended selection.

Essential

- Quantitative
- Conceptually easy to understand and based on readily accepted terminology and concepts
- Easy to interpret and use for comparisons between countries
- Based on widely recognised and easily implemented data collection and analysis methodologies

Desirable

- Developable, i.e. it can commence with a simple lower cost option which can be developed into a more precise or informative indicator over time without the need to fundamentally change its definition.
- Supports community-based data collection and reporting in line with the recommendation in the CBD decision to adopt the monitoring framework for the KMGBF.
- Can be disaggregated by community level and individual level characteristics, e.g. legal status of community land or gender.
- Aligned with the proposed legally recognized documentation indicator, i.e. similar or relatable unit of analysis.
- Aligned with existing SDG 1.4.2 indicator

UNITS OF ANALYSIS, RESPONDENT AND DATA COLLECTION METHOD

- Three potential units of analysis have been considered:
    - area of land under collective tenure regimes
    - number of IP & LC communities under collective tenure regimes
    - IP & LC population under collective tenure regimes
- Three potential types of respondent have been considered. Data would be collected from each using a different methodology:
    - community / group leaders with data collected by key informant interview (KII) or focus group discussion (FGD)
    - convenience sample (not probability-based) of community members with data collected via FGDs
    - probability-based sample of community members with data collected through individual level interviews

POTENTIAL INDICATORS

The following tables contain details of potential indicators:

- Each table is for a different unit of analysis: IP & LC population, IP & LC communities / groups and area of IP & LC lands.
- Each column is for a different type of respondent. These are labelled as stages to show they represent a development of the indicator in terms of the representativity of data, potential for disaggregation and associated complexity of data collection.
- Each indicator will need to have three categories of response about security of tenure: secure, insecure and no consensus. This would align with the categories currently used for SDG 1.4.2, with "no consensus" equivalent to the "Don't know/refused" category.
- The population-based unit of analysis is the only option with individual level data collection. For the other two units of analysis, it is not possible to translate individual level responses on community tenure security to community and area-based units of analysis. Doing so would require an arbitrary cut-off for level of tenure insecurity to categorise the area or community as insecure or a more complex area weighted indicator. We have excluded these options as we feel they may not be conceptually robust or easy to understand.

TABLE 1
UNIT OF ANALYSIS - IP & LC POPULATION UNDER COLLECTIVE TENURE REGIMES

Stage 1	Stage 2	Stage 3
Respondent: Group / community leader(s).	Respondent: Community members: convenience sample (not probability-based)	Respondent: Community members: probability-based sample
Definition: Proportion of the adult population within the area determined in the denominator of (a) – # of hectares [claimed, held or used] by IPs and LCs, *whose community / group leader(s)* perceive the community's tenure to be secure.	Definition: Proportion of the adult population within the area determined in the denominator of (a) – # of hectares [claimed, held or used] by IPs and LCs, *in which the community* perceive the community's tenure to be secure.	Definition: Proportion of the adult population within the area determined in the denominator of (a) – # of hectares [claimed, held or used] by IPs and LCs, *in which the community* perceive the community's tenure to be secure.
Details: Communities categorized based on consensus in KII or FGD with group / community leader(s). Categorisation: ● Secure: Consensus that it is very unlikely or unlikely that the community will lose rights to some or all of their land. ● Insecure: Consensus that it is very likely or somewhat likely that the community will lose rights to some or all of their land. ● No consensus	Details: Communities categorised based on consensus in FGD with community. Categorisation: ● Secure: Consensus that it is very unlikely or unlikely that the community will lose rights to some or all of their land. ● Insecure: Consensus that it is very likely or somewhat likely that the community will lose rights to some or all of their land. ● No consensus	Details: Community members categorised based on responses to individual level survey. Categorisation: ● Secure: Respondent thinks it is very unlikely or unlikely that the community will lose rights to some or all of their land. ● Insecure: Respondent thinks it is very likely or somewhat likely that the community will lose rights to some or all of their land. ● Don't know or refused to answer
Headline indicator: Based on random sample of communities. # of adults living in communities or groups categorised as secure / # of adults in communities or groups in the areas surveyed	Headline indicator: Based on random sample of communities. # of adults living in communities or groups categorised as secure / # of adults in communities or groups in the areas surveyed	Headline indicator: Based on random sample of community members. # of adults categorised as secure / # of adults surveyed
Methods: KII or FGD with group or community leader(s).	Methods: FGD with group or community members utilizing existing community fora where possible.	Methods: Individual level survey with adult community members.
Disaggregation: Community-level characteristics, e.g. legal recognition of land: possible without additional data collection Individual-level characteristics: Very limited options	Disaggregation: Community-level characteristics, e.g. legal recognition of land: possible without additional data collection Individual-level characteristics: Possible but requires additional FGDs with groups possessing the required distinguishing characteristics, e.g. gender or age	Disaggregation: Community-level characteristics, e.g. legal recognition of land: possible without additional data collection Individual-level characteristics: Possible. Additional data collection may be required dependent on sample sizes
Sources: National officials, Prindex or ILC members, or community members implementing a KII or FGD on tenure security with community / group leader(s)	Sources: National officials, Prindex or ILC members, or community members implementing an FGD on tenure security with community members.	Sources: National officials, Prindex or ILC members, or community members implementing an individual level survey on tenure security with community members.

TABLE 2
UNIT OF ANALYSIS - IP & LC COMMUNITIES UNDER COLLECTIVE TENURE REGIMES

Stage 1	Stage 2
Respondent: Group / community leader(s).	Respondent: Community members: convenience sample (not probability-based
Definition: Proportion of communities or groups within the area determined in the denominator of (a) – # of hectares [claimed, held or used] by IPs and LCs, *whose community / group leader(s)* perceive the community's tenure to be secure.	Definition: Proportion of communities or groups within the area determined in the denominator of (a) – # of hectares [claimed, held or used] by IPs and LCs, *in which the community* perceive the community's tenure to be secure.
Details: Communities categorised based on consensus in KII or FGD with group or community leader(s). Categorisation: ● Secure: Consensus that it is very unlikely or unlikely that the community will lose rights to some or all of their land. ● Insecure: Consensus that it is very likely or somewhat likely that the community will lose rights to some or all of their land. ● No consensus	Details: Communities categorised based on consensus in FGD with community. Categorisation: ● Secure: Consensus that it is very unlikely or unlikely that the community will lose rights to some or all of their land. ● Insecure: Consensus that it is very likely or somewhat likely that the community will lose rights to some or all of their land. ● No consensus
Headline indicator: Based on random sample of communities. # of communities or groups categorised as secure / # of communities or groups surveyed	Headline indicator: Based on random sample of communities. # of communities or groups categorised as secure / # of communities or groups surveyed
Methods: KII or FGD with group or community leader(s).	Methods: FGD with group or community members. Could utilize existing community fora.
Disaggregation: Community-level characteristics, e.g. legal recognition of land: possible without additional data collection Individual-level characteristics: Very limited options	Disaggregation: Community-level characteristics, e.g. legal recognition of land: possible without additional data collection Individual-level characteristics: Possible but requires additional FGDs with groups possessing the required characteristics, e.g. gender or age
Sources: National officials, Prindex or ILC members, or community members implementing a KII or FGD on tenure security with community / group leader(s)	Sources: National officials, Prindex or ILC members, or community members implementing an FGD on tenure security with community members.

TABLE 3
UNIT OF ANALYSIS - AREA OF IP & IL LANDS UNDER COLLECTIVE TENURE REGIMES

Stage 1	Stage 2
Respondent: Group / community leader(s).	Respondent: Community members: convenience sample (not probability-based)
Definition: Proportion of the area determined in the denominator of (a) – # of hectares [claimed, held or used] by IPs and LCs, *whose community / group leader(s)* perceive the community's tenure to be secure.	Definition: Proportion of the area determined in the denominator of (a) – # of hectares [claimed, held or used] by IPs and LCs, *in which the community* perceive the community's tenure to be secure.
ails: Communities categorized based on consensus in KII or FGD with group / community leader(s). Categorisation: ● Secure: Consensus that it is very unlikely or unlikely that the community will lose rights to some or all of their land. ● Insecure: Consensus that it is very likely or somewhat likely that the community will lose rights to some or all of their land. ● No consensus	Details: Communities categorised based on consensus in FGD with community. Categorisation: ● Secure: Consensus that it is very unlikely or unlikely that the community will lose rights to some or all of their land. ● Insecure: Consensus that it is very likely or somewhat likely that the community will lose rights to some or all of their land. ● No consensus
Headline indicator: Based on random sample of communities. a of land for communities or groups categorised as secure / Area of land for communities or groups surveyed	Headline indicator: Based on random sample of communities. Area of land for communities or groups categorised as secure / Area of land for communities or groups surveyed
Methods: KII or FGD with group or community leader(s).	Methods: FGD with group or community members. Could utilize existing community fora.
Disaggregation: Community-level characteristics, e.g. legal recognition of land: possible without additional data collection Individual-level characteristics: Very limited options	Disaggregation: Community-level characteristics, e.g. legal recognition of land: possible without additional data collection Individual-level characteristics: Possible but requires additional FGDs with groups possessing the required characteristics, e.g. gender or age
Sources: National officials, Prindex or ILC members, or community members implementing a KII or FGD on tenure security with community / group leader(s)	Sources: National officials, Prindex or ILC members, or community members implementing an FGD on tenure security with community members.

ANALYSIS AND RECOMMENDATIONS

ANALYSIS

Table 4 contains an assessment of the three proposed headline indicators against the essential characteristics a headline indicator needs to possess and the desirable characteristics identified.

TABLE 4
COMPARISON OF THREE UNITS OF ANALYSIS FOR THE POTENTIAL HEADLINE INDICATORS

Criteria	IP & LC land area	IP & LC communities	IP & LC population	Comments
Essential				
Quantitative	√	√	√	All proposed indicators are quantitative in nature.
Conceptually easy to understand and based on readily accepted terminology and concepts	—	—	√	IP & LC population is probably the most readily understood and accepted conceptually as it can be based on internationally recognised definitions of IP & LC population. Complications with the definition of community may lead to queries, especially on how community was defined in hierarchical systems, and due to potentially differing definitions between and within countries. Area faces similar difficulties, although these will need to be resolved for the legal recognition indicator.
Easy to interpret and use for comparisons	—	—	√	Similar to the point above.
Based on widely recognised and easily implemented data collection and methodologies	√	√	√	The same data collection methods would be used for all three units of analysis. The data are simply translated into the indicators in different ways.
Desirable				
Developable in the future	—	—	√	As noted in the potential indicators section, we have excluded stage 3 (individual level data) from the area-based and community-based level of analysis as we feel they may not be conceptually robust or easy to understand.
Supports community-based data collection and reporting	√	√	√	The same data collection methods would be used for all three units of analysis.
Can be disaggregated by community level characteristics	√	√	√	All the potential indicators could be disaggregated based on community level characteristics, such as the legal status of the community / group land.
Can be disaggregated by individual level characteristics	—	—	√	As noted in the potential indicators section, we have excluded stage 3 (individual level data) from the area-based and community-based level of analysis as we feel they may not be conceptually robust or easy to understand.

Aligned with the proposed legally recognized documentation indicator	√	X	X	The legally recognized documentation indicator that is currently proposed uses an area-based unit of analysis.
Aligned with existing SDG 1.4.2 indicator	X	X	√	The existing SDG 1.4.2 indicator uses a population-based unit of analysis.

Key: √ = Meets criteria — = Partially meets criteria X = Does not meet criteria

RECOMMENDATIONS

- We propose that the headline indicator for perceived tenure security is based on a population unit of analysis, and that three stages of development for the indicator are proposed. The stages of development will be based on data from community / group leaders, data from a FGDs with community members selected using convenience sampling (not probability-based) and data from individual level interviews selected using probability-based sampling.
- We feel that this unit of analysis will be the most readily accepted conceptually, and it will be the easiest to interpret and use for cross country comparisons. A population-based unit of analysis will also allow development of the indicator towards an easily understood and interpretable indicator using individual-level responses (stage 3), which could be easily disaggregated into relevant subpopulations, for example by gender. It also aligns most closely with the existing SDG 1.4.2 indicator.
- The only drawback to using population as the unit of analysis for the headline indicator for perceived tenure security is alignment to the proposed legal recognition indicator. We do not believe this outweighs the benefits. The data collected in stages one and two could be used for reporting sub-indicators for area-based and/or community-based units of analysis.
- As noted, data collection could be carried out by a range of actors provided they use a compatible methodology. We suggest placing emphasis on the utilisation of community members and existing community fora for the data collection.
- There will be potential sources of bias at stages 1 and 2 (for any of the three proposed indicators) especially if there is only one source of data for the leaders' survey. We could carry out some testing to assess the compatibility of data collected from the three different types of sources and bias as part of indicator development.
- Based on our experiences in Colombia, some testing of the questions to assess perceived tenure security would be beneficial to determine the most effective wording in the context of IP & LCs.

As an example of how perception data is generated, as a potential source of data for Stage 0 of component (b), Prindex employs a central question in its global survey that is used to categorize respondents as tenure secure or insecure:

- *In the next five years, how likely or unlikely is it that you could lose the right to use this property, or part of this property, against your will?"*
- *Respondents have the following options:*
    - Very unlikely
    - Unlikely
    - Somewhat likely
    - Very likely
    - Don't know

- Refused to answer

Respondents are classified as follows, according to their response:

Response	**Tenure security classification**
Very likely or somewhat likely	Insecure
Very unlikely or unlikely	Secure
Don’t know or Refused	Don’t know / Refused

Annex B.2

Land Use Indicator Metadata Sheet

Indicator metadata sheet

Indicator metadata form for compilation of data relating to headline indicators in the first draft of the monitoring framework for the KMGBF

1. Indicator name

Insert full indicator name and number [number to be populated after the adoption of the post-2020 global biodiversity framework]

Traditional knowledge - Land use in lands and territories held or used by Indigenous Peoples and local communities

2. Date of metadata update

Insert date of metadata update

26 March 2024

3. Goals and Targets addressed

Please provide details about the proposed goals and targets of the Kunming-Montreal Global Biodiversity Framework for which the indicator will measure progress in the Kunming-Montreal Global Biodiversity Framework

In Decision XV/5 (December, 2022), the Conference of Parties invited the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions to "continue the development and operationalization of indicators related to traditional knowledge". SBSTTA-25 (October, 2023) "Requests the Expert Group to fully take into account the work of the Ad Hoc Open-ended Intersessional Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity on traditional knowledge indicators in order to further enhance the monitoring framework; (SBSTTA-25/1, paragraph 12). In WG8J/REC/12/4 (November, 2023), the AHTEG on Article 8(j) and Related Provisions invited the AHTEG on Indicators and SBSTTA to "consider the development of indicators on trends in land-use change and land tenure in the traditional territories of indigenous peoples and local communities."

3a. Goal

Provide the corresponding draft goal name, draft goal number, or N/A

While the secure land tenure of indigenous peoples and local communities acts as an enabling condition underpinning the realisation of several Goals and Targets, the indicator contributes notably to the following Goals and relevant headline indicators, listed below, providing further disaggregation and analysis of the intersection of IP and LC land tenure with headline indicators while also contributing to the monitoring of Section C:

Goal A

The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050;

Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels;

Indicator A.1: Red List of Ecosystems – ecosystems as they intersect with Indigenous and traditional territories; to understand how land use and tenure on Indigenous and traditional territories corresponds to measures of ecosystem health.

Indicator A.2: Extent of Natural Ecosystems – natural ecosystems as they intersect with Indigenous and traditional territories; to understand how land use and tenure on Indigenous and traditional territories corresponds to the extent of natural ecosystems.

Goal B

Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

Indicator B.1: Services provided by ecosystems – services provided by ecosystems as they relate to Indigenous and traditional territories; to understand how land use and tenure on Indigenous and traditional territories corresponds to the provision of ecosystem services.

3b. Target

Provide the corresponding draft target name, draft target number, or N/A

While the secure land tenure of indigenous peoples and local communities acts as an enabling condition underpinning the realization of several Goals and Targets., The indicator contributes notably to the following Targets and relevant headline indicators, listed below, providing further disaggregation and analysis of the intersection of IP and LC land use and tenure with this indicator, also contributing to the monitoring of Section C: the indicator contributes notably to the following Targets:

Target 1

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

(See above: Indicators A.1 and A.2 as headline indicators for Target 1, with disaggregation for Indigenous and traditional territories.)

Target 2

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

Indicator 2.2: Area under restoration – potential for and effective restoration efforts as they relate to Indigenous and traditional territories; to understand how land use and tenure on Indigenous and traditional territories corresponds to potential for and progress towards restoration.

Target 3

Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

Indicator 3.1: Coverage of protected areas and other effective area-based conservation measures – land use and tenure on Indigenous and traditional territories as it relates to the effective conservation and management of land; to understand land use and tenure on Indigenous and traditional territories as a governance and tenure type with relevance to measures of inclusive conservation.

Target 5

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

Relevance to Target 5: Secure tenure rights on Indigenous and traditional territories facilitates customary sustainable use of land – and land use change – with potential to prevent overexploitation and minimize impacts on species and ecosystems while respecting and protecting customary sustainable use by indigenous peoples and local communities.

Target 8

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

Relevance to Target 8: Secure tenure rights on Indigenous and traditional territories as an enabling factor, allowing these individuals communities to carry out sustainable land management – land use – forest and other ecosystems conservation and implementation of traditional knowledge and practices, thereby contributing to minimizing the impact of climate change on biodiversity and increasing its resilience.

Target 10

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

Indicator 10.1: Proportion of agricultural area under productive and sustainable agriculture – land use and tenure on Indigenous and traditional territories as it relates to sustainable agriculture in these areas; to understand how land use and tenure on Indigenous and traditional territories corresponds to sustainable agriculture, as well as aquaculture, fisheries and forestry.

Indicator 10.2: Progress towards sustainable forest management – land tenure and use on Indigenous and traditional territories as an indicator of sustainable forest management; to understand how land use and tenure on traditional territories corresponds to potential for or progress towards measures of sustainable forest measurement.

Target 22

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

Relevance to Target 22: Target language clearly calling for representation and participation of indigenous peoples and local communities with respect for their cultures and rights over land, territories, resources and traditional knowledge.; land use and tenure as a central measurement of the extent to which right to land, territories, resources and traditional knowledge are being respected.

Target 23

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

Relevance to Target 23: Target language clearly calling for a focus on gender equality as it pertains to equal rights and access to land and natural resources; measures of land use and tenure disaggregated and accounting for gender provide a fundamental indicator of their rights and access to land and natural resources.

Addressing the intersection between traditional knowledge indicators and existing Goals and Targets can also support Parties to operationalize parts of Section C of the KMGBF, particularly related to the "Contribution and rights of indigenous peoples and local communities" and committing to "ensure that the rights, knowledge, and traditional knowledge associated with biodiversity" are protected, documented and preserved with their free, prior and informed consent. Likewise, Section C of the KMGBF declares that nothing in the framework may be construed as "diminishing or extinguishing the rights that indigenous people currently have," further underlining the need for these to be documented and monitored in the context of the KMGBF and its Goals and Targets.

4. Proposed rationale

Description of the purpose and rational behind the indicator, noting its relevance to the corresponding goal or target

In decision XV/5 (December, 2022), the Conference of Parties invited the Ad Hoc Open-ended Working Group on Article 8(j) and Related Provisions to "continue the development and operationalization of indicators related to traditional knowledge". Likewise, Decision XV/4, Section C recognizes the important role and contribution of Indigenous Peoples and local communities, calling for KMGBF implementation to ensure that their rights, knowledge, including traditional knowledge, are respected, documented and preserved.

SBSTTA-25 (October, 2023) "Requests the Expert Group to fully take into account the work of the Ad Hoc Open-ended Intersessional Working Group on Article 8(j) and Related Provisions of the Convention on Biological Diversity on traditional knowledge indicators in order to further enhance the monitoring framework; (SBSTTA-25/1, paragraph 12[MOU1]). In WG8J/REC/12/4 (November, 2023), the AHTEG on Article 8(j) and Related Provisions invited the AHTEG on Indicators and SBSTTA to "consider the development of indicators on trends in land-use change and land tenure in the traditional territories of indigenous peoples and local communities."

Given the cross-cutting nature of the land use indicator focused on traditional territories of indigenous and local communities and its importance for the KMGBF, it is positive that both the AHTEG on Indicators and the Working Group on 8(j) have been requested to develop it.

The indicator proposed in this document shall be operationalized in stages. The first stage focuses on forests owned or managed by indigenous and local communities, derived from and utilizing the same data as SDG indicator 15.1.1 on forest area as the percentage of total land area, which was one of the indicators for the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets (Decision XIII/28). The second stage seeks to examine the extent of natural (forests, grasslands, wetlands, etc.) vs modified land cover types (croplands, pastures, settlements) within traditional territories of indigenous and local communities to assess land use patterns in these territories.

By disaggregating these results for land that is formally acknowledged by governments to be Indigenous Peoples and local communities' territories, and territories that are claimed but currently unacknowledged, it would also be possible to observe differences that may be driven by differences in land tenure status.

Land use and cover data document the various physically observable features on earth's surface such as forests, wetlands, agricultural land etc. and has a strong geospatial evidence base going back years. While land surfaces can be affected by causes beyond human intervention for various reasons, land use patterns shaped by activities such as agriculture and urbanization are clearly observed through this data. In particular, by allowing geospatial data on land use and cover and indigenous and local community territories to be overlaid and analysed, we can identify the status of land (e.g. natural or modified) in these territories.

Thus, the indicator can potentially contribute to assessing land use change over time provided it is reported consistently. The underlying data sources can be further anaylsed to identify specific transformations (desertification, crop expansion, urbanization etc.) in land cover. This information can be useful in formulating responses to address any land degradation thus identified.

5. Concepts, definitions and classifications

5a. Concepts and definitions:

Definitions relevant to both stages of the indicator remain under development in collaboration with partners to ensure alignment with the KMGBF and previous COP decisions and will be further tailored to national context and data availability.

International law provides important guidance and language that is relevant for this indicator, particularly as concerning the internationally recognized rights of indigenous peoples, tribal peoples and communities meeting criteria for collective rights to lands.

UNDRIP recognizes the urgent need to respect and promote the inherent rights of indigenous peoples, especially their rights to their lands, territories and resources. Article 26 further underlines their right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired. Furthermore, it calls on States to give legal recognition and protection to these land, territories and resources with due respect for the land tenure systems of the indigenous peoples concerned.

ILO Convention No. 169 provides further guidance, particularly in Articles 12-19, declaring that indigenous and tribal peoples are bearers of the rights to ownership over the lands and resources they have historically occupied, and therefore they have the right to be recognized as the legal owners of their territories, to obtain a formal legal title to property over their lands, and to the due registration of said title. The collective right to property of indigenous lands implies a collective title to territory, that is, the recognition of an equally collective title to property over such lands that reflects the community property of the land, with due respect for indigenous peoples' forms of internal organization regarding land tenure.

Draft definitions relevant to both stages of the indicator are as follows:

- *Indigenous lands or territories* refer to the collectively-held and governed lands (and natural resources) of Indigenous Peoples. As with other community lands, some indigenous lands may be allocated with group consent for use by individuals and families. Other indigenous land is managed as common property. In some cases, indigenous land is held by individuals or families (e.g., New Zealand). Traditional indigenous territories are estimated to encompass up to 22 percent of the world's land surface.
- *Community lands* are all lands that fall under the customary governance of the community whether or not this is recognized in national law. Community land is variously described as the community domain, community land area, community territory, or other terms (e.g., Tanzania refers to village lands, Ghana to customary lands, China to collectives, Cambodia refers to indigenous lands, etc.).
- *Land used or occupied* as a proxy for assertions generally by Indigenous groups over their ancestral lands and territories.

- *Indicative Areas (maps) of Indigenous and community land rights* represent areas where Indigenous and community lands likely exist but the clear delimitation, recognition and/or documentation status of these land rights are not available at this time. These maps will transition to the indigenous lands or community lands layer once more information becomes available.

Draft definitions relevant to stage 1: Proportion of forest area owned or managed by Indigenous People and Local Communities:

- *Forest* is defined as "land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds *in situ*. It does not include land that is predominantly under agricultural or urban land use".

Draft definitions relevant to stage 2: Proportion of natural land in territories held or used by Indigenous People and Local Communities:

- *Land cover* refers to the observed physical cover of the Earth's surface. It includes vegetation and man-made features as well as bare rock, bare soil and inland water surfaces[47]. The primary units for characterizing land cover are categories. For the purposes of this indicator, the following land cover categories shall be used: Forests, shrubland, herbaceous vegetation, herbaceous wetland, moss and lichen, bare/sparse vegetation, cropland, built up, snow and ice, permanent water bodies.

The scope of the indicator is limited to terrestrial land and does not include freshwater, coastal and marine areas. The land tenure component of the land use and tenure indicator as it is currently built could accommodate data on freshwater, coastal and marine areas, so long as this data is presented as a total proportion of area held or used and area recognized. An in-depth assessment of freshwater, coastal and marine or coastal areas within the scope of the indicator – land use and land tenure – would require additional consideration, possibly the development of a separate sub-indicator, as well as additional data sources. The development of the land use and tenure indicator in this context could, however, inform the basis of further development of an indicator responding more closely to freshwater, coastal and marine areas.

5b. Method of computation

The proposed indicator has been developed and its components are operational. A methodology has been developed by FAO in consultation with other organizations committed to operationalizing the indicator.

The proposed indicator includes two stages of operationalization. This stage-based approach is used to show stages of development of the indicator and how a country could report against the indicator with varying levels of data availability as well as representativity of data and potential for disaggregation and associated complexity of the data.

For stage 1 on forest area, method and means of computation proposed is as follows:

$$Proportion\ (\%)\ of\ forest\ lands\ and\ territories\ owned\ or\ managed\ by\ Indigneous\ Peoples\ and\ local\ communities = \frac{forest\ area\ owned\ or\ managed\ by\ Indigenous\ Peoples\ and\ local\ communities\ \ (ha)}{total\ forest\ area\ (ha)}$$

This indicator has two components:

- Use country reported statistical data to estimate share of forests a) owned by Indigenous peoples and local communities and b) forest area where Indigenous and Local people are the holder of management rights of public forests

[47] ESACCI-LC-Ph2-PUGv2_2.0 (ucl.ac.be)

- Use more expansive, geospatial datasets on acknowledged and unacknowledged territories held by Indigenous peoples and local communities for more precise, geo-referenced mapping

Stage 2: Proportion of natural land in territories held or managed by Indigenous peoples and local communities - method and means of computation proposed is as follows:

$$Proportion\ (\%)of\ natural\ land\ in\ territorries\ held\ or\ managed\ by\ Indigenous\ peoples\ and\ local\ commun = \frac{Area\ of\ natural\ land\ in\ territorries\ owned\ or\ managed\ by\ Indigenous\ peoples\ and\ local\ communities}{Total\ area\ of\ territories\ held\ or\ managed\ by\ Indigenous\ peoples\ and\ local\ communities}$$

where

numerator = Sum of area covered by natural forests, shrubland, herbaceous vegetation, herbaceous wetland, moss & lichen, bare/sparse vegetation, snow and ice and water bodies.

Denominator = Total area of acknowledged and unacknowledged territories of indigenous peoples and local communities

The indicator is a binary – natural/modified – quantification based on the analysis of data on land use and cover. Regular reporting of the indicator would allow an examination of land use changes over time.

The development of precise definitions for natural and modified land cover that is identifiable and distinguishable with the available geospatial tools in currently underway.

The primary output for both stages would be the calculated indicators at the national level, reflecting the extent of forest area and natural land cover within Indigenous Peoples' and local communities' territories. Additional outputs could include maps, trend analyses, and reports highlighting changes in land use over time. The underlying data sources can be utilized to go beyond this dichotomy of natural and modified land to examine the different transformations in various land use and cover types, which would enable identification of instances of land degradation.

5c. Data collection method

Data collection can be carried out from various sources.

- Forest tenure data for Stage 1 is collected through the FAO Forest Resource Assessment from FRA national correspondents every five years
- Geospatial data on forest cover can be harvested from exiting global forest or tree cover maps
- Geospatial data on indigenous peoples and local communities' territories from LandMark maps. This is a database where new maps and information are continuously added to the platform.
- Global land cover data can be harvested from the Copernicus Land Monitoring Service

A more detailed data collection plan can be shared with the AHTEG as the indicator continues to be developed.

5d. Accessibility of methodology

The current methodology has not been shared publicly, only for internal review, but once final it can be shared publicly, either on the custodian website or otherwise.

5e. Data sources/methods and documentation on processes

Multiple data sources could potentially provide data for the two stages.

- National land cover maps from national sources, FAO
- Official country data from FAO's Forest Resource Assessment.

- Forest and land cover from Earth Observations data such as satellite imagery Sentinel2 and 1, Landsat Legacy, MODIS, Copernicus Global Land Service and GIS datasets
- Landmark maps on indigenous and community lands

See references below for more information about these initiatives and their contributions to the indicator detailed here.

5f. Availability and release calendar

Data for stage 1 through the Forest Resource Assessment is available and ready for reporting on the indicator up to 2020 FRA round, with the next round of data to be released in 2025. Data on forest ownership by IP and LCs is available for 79 countries and forest management rights of IP and LCs for 138 countries is available (reported in 2015). Therefore, results based on the FRA can be presented in Q3 of 2024.

For the geospatial analysis element of stage 1 on forest area and stage 2 on the total IP and LC territories, preliminary results and recommendations for operationalization can be presented for countries with adequate geospatial data coverage of IP and LC territories in Q3 of 2024.

5g. Time series

Stage 1 based on the Forest Resource Assessment collects data for 1990, 2000, 2010, 2015, 2020, 2025 and every five years hence.

5h. Data providers

The Food and Agriculture Organization of the United Nations (FAO) is leading development of the indicator, together with members of the informal working group comprised of the data collectors listed above and other strategic partners. FAO would be a potential custodian for the indicator working in collaboration with the CBD Secretariat.

5i. Data compilers

See 5e.

5j. Gaps in data coverage

- Gaps in data coverage are accounted for in the methodology, since current community level and national level data layers have gaps in data coverage. As the data coverage of IP and LC territories expands, so will the scope of area covered under this indicator. While gaps may arise in accessing consistent and reliable ground data, especially at finer spatial scales and in regions with limited data coverage, they would be addressed through collaboration with relevant organizations and stakeholders, including through community-based monitoring and information systems (tools such as Indigenous Navigator and LandMark).
- Not all countries that have previously conducted the Forest Resource Assessment report on forest ownership by indigenous people and local communities.

As mentioned in section 5(a), the scope of the indicator is limited to terrestrial land and does not include freshwater, coastal and marine areas. The land tenure component of the land use and tenure indicator as it is currently built could accommodate data on freshwater, coastal and marine areas, so long as this data is presented as a total proportion of area held or used and area recognized. An in-depth assessment of freshwater, coastal and marine areas within the scope of the indicator – land use and land tenure – would require additional consideration, possibly the development of a separate sub-indicator, as well as additional data sources. The development of the land use and tenure indicator in this context could, however, inform the basis of further development of an indicator responding more closely to freshwater, coastal and marine areas.

5k. Treatment of missing values

See 5j.

6. Scale

6a. Scale of use

The indicator would be reported at the national level, though depending on the stage of data development, the data presented could be a national estimate or an aggregate of community-level data collected.

6b. National/regional indicator production

For global indicators, please note whether a national/regional methodology available for use and provide links to any online documentation. Please also specify if underlying data can be accessed and used by countries to produce national indicators.

As a reference, SDG 15.1.1 metadata can be found online here. Likewise, the methods used by LandMark and Forest Resource Assessment (Terms and Definitions and Guidelines and Specifications). Once final, the metadata for this indicator will also be published online by FAO (alongside SDG data, also part of a Global Land Observatory).

6c. Sources of difference between global and national figures

The present methodology is designed for national-level reporting of data. National figures could eventually be aggregated at a global level while accounting for the different stages of data collection and availability across countries.

6d. Regional and global estimates & data collection for global monitoring

N/A

7. Other MEAs, processes and organizations

N/A

7a. Other MEA and processes

N/A

7b. Biodiversity Indicator Partnership

N/A

8. Disaggregation

For both stages of the indicator, the total lands and territories held or used by Indigenous Peoples and local communities can be disaggregated as:

- Acknowledged (documented and undocumented by government) Indigenous lands
- Unacknowledged Indigenous lands
- Acknowledged (documented and undocumented by government) community lands
- Unacknowledged community lands

9. Related goals, targets and indicators

The proposed indicator is a contextualization of SDG indicator 15.1.1. Related goals and targets of the KMGBF are addressed in Section 3 (above).

10. Data reporter

10a. Organization

Food and Agriculture Organization of the United Nations

10b. Contact person(s)

Food and Agriculture Organization of the United Nations: Ward Anseeuw, Senior Land Tenure Officer, ward.anseeuw@fao.org

11. References (if available)

Listing here the sources of data that could contribute to this indicator:

- LandMark: https://www.landmarkmap.org/
- The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), 2007.
- International Labour Organization, Convention No. 169, Indigenous and Tribal Convention, 1989.
- Indigenous Navigator: Indigenous Navigator
- FAO: Metadata-15-01-01.pdf (un.org)
- FAO: Global Forest Resources Assessments | Food and Agriculture Organization of the United Nations (fao.org)
- Global Forest Watch: Global Forest Watch Open Data Portal
- Copernicus Land Monitoring Service: https://land.copernicus.eu/en

Annex C

Linguistic Diversity Indicator Metadata Sheet

Indicator metadata form

1. Indicator name

Trends in Linguistic Diversity

This is proposed in response to:

Traditional knowledge: Status and trends of linguistic diversity and numbers of speakers of indigenous languages (COP-13)

K-MGBF monitoring framework: Index of Linguistic Diversity - Trends of Bilinguistic[48] diversity and numbers of speakers of Indigenous languages (COP-15)

2. Date of metadata update

10 March 2024

3. Goals and Targets addressed

Please provide details about the goals and targets of the Kunming - Montreal Global Biodiversity Framework for which the indicator will measure progress in the Kunming - Montreal Global Biodiversity Framework

3a. Goal

If relevant, Provide the corresponding goal name, goal number

This indicator is mainly related to Goal B and is also related to Goals A and C

b. Target

Provide the corresponding target name, target number, or N/A

Considering languages as a vital reservoir for and proxy for measuring the loss or gain of traditional knowledge, this indicator is mainly related to Target 1, 2, 9, 21, 22. It is also related to targets 5, 12 and 23. It is also strongly related to Section C - considerations of the contributions and rights of Indigenous Peoples and local communities. Which is intended to inform all other targets. The protection of traditional knowledge will support all the above.

4. Rationale

Description of the purpose and rationale behind the indicator, noting its relevance to the corresponding goal or target

In 1991 linguist Michael Krauss issued a clarion call to the linguistics community by predicting a global mass extinction of the world's estimated 6,000 languages stating that "20 to 50 per cent already are or soon will be no longer spoken by children, i.e. are moribund, to become extinct during the twenty-first century" with only 5 to 10 classified as 'safe' and the final "... 40 to 75 percent are 'merely' endangered, may cease being spoken by children during this century" (Krauss 2007, Simons and Lewis 2011). The vast majority of what are now estimated to be the world's 7,000-8,000 languages are spoken by populations of 10,000 speakers or less, comprising the world's Indigenous Peoples and local communities embodying traditional lifestyles (Maffi 1999, Harmon 1995 based on Grimes 1992).

"Traditional knowledge" is a shorthand term that is widely used within the CBD and elsewhere to capture the diverse knowledge, innovations, practices and understandings of the world (cosmovisions) of Indigenous Peoples and local communities that are encoded and transmitted through their languages. In order to capture status and trends in traditional knowledge the COP

[48] This may need to be changed to 'linguistic' as we have been informed that bilinguistic is not an actual word in English, and it may be a COP error that was not tidied up.

has previously adopted an indicator on trends in linguistic diversity based on counts of the number of speakers of languages. In the discussion of the rationale behind this indicator and its relevance to the Global Biodiversity Framework that follows two main recommendations are made.

1. To update the existing indicator focusing on the further elaboration of the indicator on the national level;

2. To progressively transition from crude counts of numbers of speakers to indicators for *language vitality* in order to focus on the key indicator of cross generational language transmission. That is, are the youngest generations of children learning and speaking their mother tongue?

These two recommendations are intended to facilitate further refinement of the indicator through testing on the national level and to promote participatory approaches to future development of the indicator through cooperation between national statistical organisations, Indigenous Peoples organisations, non-governmental organisations, academic specialists and relevant UN agencies. This proposed transition is possible because counts of language speakers already form part of a key set of indicators developed by UNESCO to measure Language Vitality and Endangerment (UNESCO 2003). The two recommendations will move the indicator away from purely measuring language endangerment towards the constructive pursuit of language vitality as part of the human rights based approach to implementation of the Global Biodiversity Framework and the International Decade of Indigenous Languages.

Existing COP Decisions:

The COP has made four decisions on this indicator:

- COP decision 7/30 adopted status and trends in linguistic diversity and numbers of speakers of Indigenous languages as an indicator for immediate testing. This formed part of the provisional indicators for assessing progress towards the 2010 Biodiversity Target with respect to the status and trends of traditional knowledge, innovations and practices.

- COP decision 8/15 included the indicator in the provisional indicators for assessing progress in implementing the Strategic Plan under Goal 9 to maintain the socio-cultural diversity of Indigenous Peoples and local communities, Target 9.1 Protect traditional knowledge, innovations and practices.

- COP decision 13/28 adopted the indicator as part of the indicator set for the strategic plan 2011-2020 and the Aichi Biodiversity Targets in connection with Target 18 on traditional knowledge, innovations and practices. Trends in linguistic diversity and numbers of speakers of Indigenous languages as the generic indicator and the Index of Linguistic Diversity (ILD) is described as the specific indicator with Terralingua (the Biodiversity Indicators Partnership partner) as the source. The indicator was described as being available for immediate use based on aggregates of national data.

- COP decision 15/5 Annex I Table 2 included “Index of Linguistic Diversity - Trends of Bilinguistic diversity and numbers of speakers of Indigenous languages” as a complementary Indicator.

The COP has therefore already adopted and made repeated decisions with regard to this indicator.

The indicator is also relevant to wider processes involving Indigenous Peoples and local communities within the United Nations system as part of the human rights-based approach adopted by the Kunming-Montreal Global Biodiversity Framework (decision 15/4 C para 7(d)). In particular, the indicator is relevant to the fulfilment of the International Decade on Indigenous Languages (2022-2032) established by United Nations General Assembly Resolution A/74/396 and the UNESCO Global Action Plan of the International Decade of Indigenous Languages.

The adoption of the indicator on trends in linguistic diversity as a proxy indicator for traditional knowledge, innovations and practices, is an outcome of over three decades of cross-disciplinary

research alongside activism by the representatives of Indigenous Peoples and local communities which has resulted in recognition of the importance of understanding the relationships between biological and cultural diversity (biocultural diversity). What follows is a brief summary of the history of the underlying debates within the scientific and policy communities.

The 1990s witnessed an ongoing scientific reconsideration of the relationship between indigenous societies and biological diversity in places such as Amazonia. This reconsideration is informed by archaeological research on topics such as mound building, ridged fields and *terra preta* (dark earth or black soil) sites in Amazonia that suggest significant anthropogenic influences on biodiversity prior to the arrival of Europeans (Denevan 1970, Roosevelt 1991, Neves et al 2003). This growing body of evidence overturned a prevailing scientific representation of Amazonia as a 'pristine' tropical forest inhabited by 'simple' societies in favour of a more sophisticated debate on the various ways in which extended periods of human habitation have shaped and enriched the Amazonian environment (Denevan 1992, Levis et. al. 2017). The recent discovery of a large and complex 'lost city' in the Ecuadorian Amazon is the latest way marker in this ongoing reassessment (Rostain 2024).

Debates on human environmental relationships using archaeological evidence have also been shaped by increasing attention to the role of traditional knowledge and practices among existing Indigenous Peoples and local communities (e.g. Amazonian *caboclo* and rubber tapper communities) in the pursuit of alternatives to deforestation and the promotion of the rights of Indigenous Peoples both by Indigenous Peoples themselves and by scientific specialists and professional associations (Anderson 1990, Posey & Balee 1991). Linguistic diversity contains vital information about the protection and management of biodiversity (Frainer et. al. 2020). Lands managed by Indigenous Peoples have been shown to have a better status and a slower rate of decline than lands not managed by Indigenous Peoples (Ichii et, al. 2019). A growing body of evidence demonstrates the link between loss of languages and loss of traditional ecological knowledge, including the finding that 75% of traditional plant uses are linguistically unique - that is, the knowledge is contained in only one language (Harmon 1996, Oviedo et. al. 2000, Camera-Laret and Bascompte 2021). Thus, each Indigenous language is "a unique reservoir of medicinal knowledge - a Rosetta stone for unravelling and conserving nature's contributions to people" (Camera-Laret and Bascompte, 2021). For example, in the language of the Tofa peoples living in Tofalariya, Russia, each month is named after a hunting and gathering activity. The word for May means 'digging sarankiroot month' because it is the time at which bulbs of the saranki flower are to be collected to be used for the treatment of colds and other illnesses. Tofa children who speak Russian no longer remember this (Ebert 2005, Anderson and Harrison, 2020). The language is considered critically endangered by UNESCO (Moseley, 2010) with an estimated 40 speakers left as of 2007 (Endangered Languages Project).

Language is the main boundary marker between human social groups. Recognition that the intensity of diversity of human languages appears to coincide with biodiversity hotspots led to pioneering work to explore the status of the world's languages and potential formal links between linguistic diversity and species diversity (Harmon 1995, Harmon 1996). Growing recognition of the need to explore the relationship between cultural, linguistic and biological diversity gave rise to the concept, and new research field, of biocultural diversity (Posey 1999, Maffi 2005). Efforts at formal analysis on a global scale are marked by a shift to mapping and modelling with language as a key quantitative and geospatial variable, resulting in work which identifies correlations and co-occurrences between linguistic diversity and biodiversity (e.g. Oviedo et. al. 2000, Moore et. al. 2002, Gorenflo et. al. 2012, Bromham et. al. 2022). Results of some of this work include the finding that biodiversity hotspots coincide with considerable linguistic diversity, accounting for 70% of all languages on Earth (Gorenflo et. al. 2012).

Global linguistic diversity is also of importance in wider United Nations policy frameworks and processes. Article 19 of the Universal Declaration on Human Rights enshrines freedom of expression as a human right and that right is further elaborated in the International Covenants on Human Rights notably the International Covenant on Civil and Political Rights which in Article 26 prohibits discrimination on any grounds including language. Rights in relation to language

have been further elaborated with respect to the rights of minorities, Indigenous Peoples and children. The 1960 UNESCO Convention Against Discrimination in Education in its Article 5(c) recognises "the right of members of national minorities to carry on their own educational activities, including the maintenance of schools and, depending on the educational policy of each State, the use or the teaching of their own language…". The 1990 United Nations Convention on the Rights of the Child specifies in Article 30: "In those States in which ethnic, religious or linguistic minorities or persons of indigenous origin exist, a child belonging to such a minority or who is indigenous shall not be denied the right, in community with other members of his or her group, to enjoy his or her own culture, to profess and practise his or her own religion, or to use his or her own language." The 2007 United Nations Declaration on the Rights of Indigenous Peoples applies existing human rights provisions to Indigenous Peoples and contains a number of provisions on language. In particular, Article 13.1 establishes that: "Indigenous peoples have the right to revitalise, use, develop and transmit to future generations their histories, languages, oral traditions, philosophies, writing systems and literatures, and to designate and retain their own names for communities, places and persons." Article 14.1 establishes that: "Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own languages, in a manner appropriate to their cultural methods of teaching and learning" (see also Article 14.2 & 3 and Article 16). UNESCO by virtue of its mandate within the United Nations system has played a leading role in the promotion of languages, notably through its 1999 resolution establishing the International Mother Language Day which was formally recognised by the UN General Assembly in 2002 and is celebrated in February of each year (A/RES/56/262). In its periodic resolutions on multilingualism the General Assembly has observed that the United Nations pursues multilingualism "...as a means of promoting, protecting and preserving diversity of languages and cultures globally" and calls upon Member States "...to promote the preservation and protection of all languages used by peoples of the world" (A/RES/61/266 of 2007).

In 2019 the UN General Assembly, based on a recommendation from the United Nations Permanent Forum on Indigenous Issues, established the United Nations International Decade of Indigenous Languages in Resolution A/74/396 where it:

"*Proclaims* the period 2022–2032 as the International Decade of Indigenous Languages, to draw attention to the critical loss of Indigenous languages and the urgent need to preserve, revitalise and promote Indigenous languages and to take urgent steps at the national and international levels, and invites the United Nations Educational, Scientific and Cultural Organization to serve as the lead agency for the International Decade, in collaboration with the Department of Economic and Social Affairs of the Secretariat, and other relevant agencies, within existing resources;"

As such, the indicator on linguistic diversity should be seen in light of the complementary policy framework of human rights and as part of the human rights based approach adopted in the Global Biodiversity Framework (COP decision 15/4 C para 7(d)). In particular, UNESCO took the important early steps, under the leadership of linguist Stephen Wurm, of creating the Red Book of Endangered Languages at UNESCO in 1994, modelled initially on the IUCN Red Book. The Red Book of Endangered Languages subsequently evolved into the UNESCO Atlas of the World's Languages in Danger (Wurm 1996, 2001 and Moseley 2010). Building on this experience, in 2003, a UNESCO Ad Hoc Expert Group developed an influential report on Language Vitality and Endangerment which included criteria for the assessment of intergenerational language transmission in terms of endangerment (using six categories ranging from safe to extinct) that has formed an important focus for further elaboration in the linguistics community concerned with endangered languages (see below).

The existing indicator adopted by COP 13/28 is based on the Index of Linguistic Diversity (ILD) and consists of a measure of change in the distribution of languages spoken by any given population (national, regional or global) over time (see below). The last calculation of the Index of Linguistic Diversity, based on speaker number data from between 1970 and 2005, revealed, in

common with similar calculations, that linguistic diversity is declining on a global and regional level. At present, national level data is confined to a single demonstration case for Australia.

Recommendations:

The existing Index of Linguistic Diversity is currently out of date due to a lack of resources. We propose that the Index should be updated in its current form, with a focus on indicator development at the national level. Counts of numbers of speakers of a language already form part of existing metrics for the assessment of language vitality (UNESCO 2003). Informal consultations with members of the linguistics community have suggested a need to shift from the analysis and measurement of endangerment for its own sake to a focus on language vitality in the pursuit of positive outcomes for communities, peoples and countries. We therefore propose that the indicator should shift its emphasis to focus on the development of sub-indicators of language vitality rather than endangerment using existing established methods (UNESCO 2003). A focus on language vitality will allow language communities to identify actions that they themselves can take, in collaboration with governments and specialists, to pursue language vitality and thereby the conservation and promotion of traditional knowledge.

a) National and Sub-national level

We further propose that the focus of indicator development should be the national and sub-national level. This will allow for more robust testing of the existing methodology and improvements based on data that can be ground truthed. As emphasised by linguist John Paolillo (Indiana University), data comparability between government and non-governmental data sources is a significant issue in establishing accurate data on trends (Paolillo nd.). These data sources are commonly collected at very different scales (e.g. national, municipality, community etc.) and with different purposes in mind. Faith based organisations, notably SIL International, have nevertheless compiled the most detailed catalogue of the world's languages available in the form of the Ethnologue Catalogue, and have an important contribution to make. A national and sub-national emphasis on assessing language vitality using participatory methods will offer opportunities to identify and address accuracy and comparability issues prior to higher level indicator aggregation exercises.

b) The Role of the CBD and UNESCO

At a higher level, the new Article 8(j) and related provisions national focal points as well as UNESCO national focal points for the Decade of Indigenous Languages and UNICEF, which is active in promoting multilingual education policy and projects, could play an important role as convenors of national debates on the elaboration of local and national level indicators of linguistic vitality using participatory approaches. Indigenous Peoples organisations, community organisations and the scientific community have a vital role to play in national and sub-national work on language vitality. In the case of Indigenous Peoples Organisations the Indigenous Navigator initiative is already pioneering local level data generation through the use of standardised questionnaires in 11 countries (currently expanding to 29) that contribute to local biodiversity outlooks and assessment of the implementation of UNDRIP. Specialist international networks such as the non-profit Endangered Languages Project are serving as a global resource for specialists and speaker communities in collaborating to advance language vitality. The scientific community already makes contributions on multiple levels. For example, initiatives such as Glottolog, established at the Max Planck Institute for Evolutionary Anthropology, compile literature sources for the world's language in an open access format that are not readily available from other sources and have an important role to play in assessing the robustness of linguistic data. Anthropologists and ethnobotanists have pioneered participatory methodologies for assessing the status of traditional knowledge directly with communities (such as the methodology for the Vitality Index of Traditional Ecological Knowledge (VITEK) developed by Stanford Zent). Under the Biodiversity Indicators Partnership, Terralingua already plays a leading international role in the promotion of linguistic diversity and vitality.

The potential convening role of the national focal points on Article 8(j) of the CBD and their national counterparts for UNESCO therefore represent an important opportunity for cooperation and coherence in addressing the shared interest in language vitality in the context of the UNESCO Global Action Plan of the International Decade of Indigenous Languages as part of the Joint Programme between UNESCO and the CBD Linking Biodiversity and Cultural Diversity (endorsed in COP decision X/20). The forthcoming COP16 in Cali, Colombia in October 2024 is expected to agree a new programme of work on Article 8(j) and related provisions and a new institutional arrangement for the existing Ad Hoc Open Ended Working Group on Article 8(j) and related provisions. COP16 therefore presents an important opportunity to embed work on the linguistic diversity indicator and language vitality indicators in the future programme of work. The new institutional arrangement on Article 8(j) could serve as a forum for Parties, Indigenous Peoples and local communities and scientific specialists to share experience and data in constructing future versions of the indicator in support of implementation of the Global Biodiversity Framework.

Summary:

In summary, we propose the following:

1. Update the existing Index of Linguistic Diversity
2. Develop and test national and sub-national level indicators using participatory approaches
3. Transition towards assessments of language vitality using data from official and non-governmental (community) sources with the participation of scientific specialists
4. National focal points on Article 8(j) and focal points for UNESCO and other relevant agencies (e.g. UNICEF) cooperate to promote the work under 2 and 3.
5. Incorporate work on the indicator with a focus on language vitality into the programme of work on Article 8(j) and related provisions
6. The new institutional arrangement on Article 8(j) becomes a forum for indicator development involving Parties, Indigenous Peoples and local communities, the scientific community and stakeholders

This approach would maintain the indicator as is with an increased focus on the national level. In the course of implementation of the GBF, the approach would allow for the indicator to transition towards a focus on language vitality and its aggregation on the regional and global level. In assessing the status of traditional knowledge, that indicator would be able to answer the central question of whether the youngest generations of children are learning and speaking their mother tongue.

5. Definitions, concepts and classifications

5a. Definition:

Precise definition of the indicator, including references to standards and classifications. The indicator definition should be unambiguous and is expressed in universally applicable terms. It must clearly express the unit of measurement (proportion, dollars, number of people, etc.).

Traditional knowledge, innovations and practices are encoded in and transmitted through the diverse languages spoken or signed by members of human societies worldwide. Counts of the number of speakers of a given language and the number of languages worldwide over time provide a proxy indicator for trends in traditional knowledge, innovations and practices under Article 8(j) and related provisions of the CBD and within the Global Biodiversity Framework. The current indicator is based on counts of speaker numbers over time using a random sample of global languages, filtered to those with at least two data points (year x, year y).

The existing indicator was adopted in COP Decision XIII/28 for Aichi Target 18 and consists of a calculation of trends in the number of speakers of languages from 1970 to 2005 in the Index of Linguistic Diversity (ILD) developed by Terralingua using data from Ethnologue (Harmon and

Loh 2010). The indicator can be constructed on the global, regional and national level based on trends in shares of languages spoken over time within a given total population (national, regional, global).

Counts based purely on the number of speakers, and percentage shares of speakers, are crude but create a platform for the development of a more sophisticated sub-set of indicators on the vitality of languages and the transmission of traditional knowledge. UNESCO have identified six factors for the assessment of language vitality:

a) intergenerational language transmission (e.g. are the youngest generation learning the language);

b) absolute number of speakers;

c) proportion of speakers within the total population;

d) trends in existing language domains (e.g. measures of where a language is used such as home, school, work, public);

e) response to new domains and media (e.g. internet, video, artificial intelligence);

f) materials for language education and literacy (UNESCO 2003).

Counts of numbers of speakers of a language appear in the criteria for the measurement of language vitality. We propose that a transition from an indicator based purely on trends in numbers of speakers and percentage shares of speakers would be consistent with, and directly support, monitoring of implementation of Target 22 of the Global Biodiversity Framework and the Global Action Plan of the International Decade of Indigenous Languages (2022-2023) coordinated by UNESCO. Indicators related to the assessment of intergenerational transmission have been a focus of more detailed elaboration with respect to the assessment of language endangerment based on the UNESCO criteria.[49] These elaborations include the UNESCO World Atlas of Endangered Languages scale, the Language Endangerment Index (LEI) and the detailed Expanded Graded Intergenerational Disruption Scale (EGIDS) developed for Ethnologue and the more recent approach used by Glottolog (combining multiple scales).

A transition to an indicator that focuses on language vitality would also provide a platform for the promotion of participatory approaches to future indicator development and assessment involving official government data, data generated by Indigenous Peoples and local communities and informed by contributions from specialists using participatory methodologies such as the Vitality Index of Traditional Environmental Knowledge (VITEK) (Zent and Maffi 2008, Zent and Zent 2023). This transition to a focus on language vitality using participatory approaches would help ensure that data is directly useful to Indigenous Peoples and local communities, researchers and governments. Furthermore, such approaches could promote use of the FAIR Principles (that data is Findable, Accessible, Interoperable and Reusable) and the complementary CARE principles (Collective Benefit, Authority to Control, Responsibility and Ethics) with respect to Indigenous data governance (Wilkinson et. al. 2016, Carrol et. al. 2020).

The approach proposed above would maintain the definition of the indicator as ‘trends in linguistic diversity’ as previously decided by the COP, but promote the progressive elaboration of language vitality indicators under that heading to give meaningful substance to the indicator within the Global Biodiversity Framework and contribute to implementation of the UNESCO Global Action Plan of the International Decade of Indigenous Languages (2022-2032) as part of the UNESCO-CBD Programme Linking Biological and Cultural Diversity.

5b. Method of computation

The Index of Linguistic Diversity (ILD) “shows the trend in the fraction of the total population that speaks a language that is average or typical of all languages in the sample” (Harmon and Loh

[49] The UNESCO criteria are based on the pioneering work of Joshua Fishman (1991) on reversing language shifts. Fishman developed the Graded Intergenerational Disruption Scale (GIDS).

2010: 105) The indicator is based on counts of the number of speakers of a named language, including signed languages, in a specific country for which at least two data points have been recorded (Harmon and Loh 2010). The methodology was developed by Harmon and Loh (2010) for Terralingua. It involved identifying a random sample of 1,500 languages from the 15th edition of the Ethnologue Catalogue as a benchmark, then reviewing the nine previous editions of Ethnologue to find statistics on mother-tongue speakers for the sample languages. Any languages for which at least two data points could not be found were removed. Global, regional and country population data were collected from the UN Population Division (2006) for the period between 1950 to 2005. The number of speakers of a language in a given year (N_{ly}) is divided by the total population in that year (P_y). to produce a fraction representing that number of speakers as a proportion of the total number of speakers of all languages in a given year (F_{ly}). The geometric mean (M) of this fraction is calculated for each year, giving a representative fraction which reveals asymmetries in the distribution of the data. In the final step the geometric means are chained together to form an index and normalised so that the value in 1970 is set as the baseline against which future trends are determined. In the current version of the ILD, the computation is performed globally and regionally for Africa, the Americas, Eurasia (combining Europe and Asia due to sample size in Europe) and the Pacific, as well as for Indigenous languages overall and Indigenous languages in Australia. The methodology is based on national data but the original focus was on the elaboration of global and regional indicators. Further work is recommended on elaborating the indicator on the national level.

5c. Data collection method

Description of all methods used for data collection. This description should include, when applicable, the questions used to collect the data, the type of interview, the dates/duration of fieldwork, the sample size and the response rate. Hyperlinks to methodologies are acceptable.

There is no single methodology for collecting data on an estimated 7,000 to 8,000 recorded, spoken or signed languages worldwide.[50] Existing methodologies for data collection include: ethnographic fieldwork, recordings, tests of mutual intelligibility between different communities to identify language boundaries, interviews, focus groups, questionnaires, surveys, censuses, literature reviews and estimates.

The main current baseline indicator for trends in linguistic diversity is the Index of Linguistic Diversity (ILD) developed by Harmon and Loh 2010 for the non-governmental organisation Terralingua using data from Ethnologue. As described above, the ILD is a crude measure of trends in linguistic diversity based on the calculations of numbers of speakers of languages in given years relative to the global, national or regional population (Africa, Americas, Eurasia, Pacific). The ILD currently depends entirely on Ethnologue. Ethnologue was developed by the Christian faith based non-governmental SIL International (formerly the Summer Institute of Linguistics) as a tool to identify languages requiring Bible translation in support of missionary activity. Ethnologue data was collected by a combination of missionary workers and linguists carrying out fieldwork with language speakers, literature review and other expert input. A publicly searchable interface is available for Ethnologue but it requires a subscription for analysis of the type needed for the indicator. An independent scholarly review of Ethnologue consulted over 250 separate individuals and found that there is "really only one serious fault" with different editions of Ethnologue, "namely, that the source for the information presented is not systematically indicated" (Hammerstrom 2015: 735) - that is, that Ethnologue did not routinely include the source of its statistics. The review also notes that Ethnologue misses 500 extinct or living languages and contains several hundred spurious languages. A key issue in linguistics is the definition of language boundaries. Language boundaries are established by measuring the mutual intelligibility of a language between different communities (e.g. using recordings of a language in one community and testing comprehension in another). Ethnologue is criticised for incorrectly splitting languages that are mutually intelligible, and therefore overcounting, while

[50] The UNESCO World Atlas of Languages Online states that there are 8,324 languages recorded of which approximately 7,000 are still in use. Ethnologue states that its catalogue contains 7,164 living languages.

not citing the basis for such determinations. The review suggests that if language splits in the Ethnologue data were corrected based on mutual intelligibility the overall language count in edition 16 would reduce to 85% (e.g. reducing 6,909 living languages recorded in Ethnologue edition 16 to approximately 5,872) (Hammerstrom 2015: 735).[51] An additional criticism of Ethnologue identified in consultations in preparing the metadata for this indicator is that statistics are only updated when new statistics are available. That is, language speaker population counts from a historical year (e.g. 1970) are carried forward into future editions meaning that a population count may be seriously out of date but appear as current.

These methodological considerations matter because Ethnologue forms the basis of the International Organization for Standardization (ISO) ISO 639 *Code for individual languages and language groups* (currently ISO 639:2023) which contains language names and language codes for languages worldwide. In summary, the key criticisms are that Ethnologue undercounts some extinct[52] and living languages and, mainly through incorrect splitting, overcounts. However, the review of Ethnologue also concludes that: "Nevertheless, Ethnologue is an impressively comprehensive catalogue of world languages, and it is far superior to anything else produced prior to 2009. In particular, it is superior by virtue of being explicit. Most works with an overlapping goal produced by linguists contain extraordinary amounts of vagueness in language definition, borders, justification, and scope" (Hammerstrom 2015: 735). Ethnologue is also the only global level resource that records multiple data points for numbers of language speakers. In short, it is important to recognise the historical background to Ethnologue in Christian missionisation of Indigenous societies, and its methodological shortcomings. However, it is also the best resource currently available for use in an indicator and is used as the basis for the indicator adopted in COP decision 13/28. Furthermore, it is likely that Ethnologue has responded to criticism by providing greater attention to documenting sources. In light of its strengths, its continued use in indicator development is recommended. Ethnologue's strengths as a data source reflect historic investments over many years in data collection on Indigenous languages. However, in a similar way to dependence on private scientific indexes in research evaluation, the closed nature of Ethnologue presents issues in relation to a United Nations level international indicator over the medium to long term. We therefore recommend continued use of Ethnologue and a transition over time to increasing use of data from official statistics and non-governmental data generated by Indigenous Peoples and local communities using approaches that comply with the FAIR and the CARE principles in collaboration with open access projects such as the Indigenous Navigator, Endangered Languages Project, Glottolog and, subject to future development, the UNESCO World Atlas of Languages.

A growing number of countries worldwide now include language related questions in national censuses and a significant number of countries (notably in the Americas, Australia and New Zealand) ask questions about Indigenous Peoples based on self-identification and/or use specialised indigenous censuses or surveys and participatory methods. Some countries, such as Canada, also collect annual statistics on the enrollment of Indigenous children in Indigenous language programmes while others, such as in South America, collect data on intercultural bilingual education programmes. Recent decades have witnessed growing attention to the need to collect statistical information about Indigenous Peoples. As part of that process national statistics organisations are displaying an increasing engagement with and desire to make official statistics useful to Indigenous Peoples themselves. This is observable in the preparation of disaggregated statistical summaries of census data about Indigenous Peoples in a number of countries (e.g. Chile, Colombia and Canada to name only three) and to deliberately make data available in forms that are useful to Indigenous Peoples (e.g. Colombia, New Zealand, Brazil). In some countries, for example Venezuela, a periodic Indigenous Peoples census has been conducted in direct collaboration with Indigenous Peoples for over 30 years. Brazil has recently

[51] Edition 16 data from the Way Back When Machine archive for 30 November 2013 at: https://web.archive.org/web/20131203232239/http://archive.ethnologue.com/16/web.asp

[52] We note here that the use of the term 'extinct' has been criticised by those from language groups who are seeking to revitalise languages designated in this way. Terms such as 'sleeping' have been suggested as alternatives. This suggests a need for a degree of sensitivity in the use of categories.

expended considerable effort in enhancing its long running census with Indigenous Peoples in its reporting on the 2022 census (Santos et. al. 2019).[53]

In Latin America the United Nations Economic Commission for Latin America and the Caribbean (ECLAC/CEPAL) comprises 33 member Latin American and Caribbean countries as well as other member states from North America, Europe and Asia with connections to the region and associate member countries. CEPAL has proved to be an important regional forum for the discussion, development and dissemination of guidance on participatory approaches to the inclusion of Indigenous Peoples and local communities (notably Afro-descendants and Afro-Caribbean communities) in official statistics. ILO Convention 169 is commonly referred to as providing the impetus for the inclusion of Indigenous Peoples and the use of self-identification as the primary criteria for identification.

A review of the appearance of Indigenous Peoples and Afro-descendants in national population and housing census data in the decade for 2000-2010 in Latin America and the Caribbean concluded that: "Intense work has been observed in the region to improve the inclusion and quality of information about Indigenous peoples and Afro-descendants in the censuses of this decade. So far, all countries are applying—to a greater or lesser extent—the international recommendations that have mainly emerged from the debates and exchanges held in recent years among statistical institutes, organisations of Indigenous peoples and Afro-descendants, academics, and international cooperation agencies" (Popolo and Schkolnik 2013: 243). In the decade of the review 12 of 13 countries that conducted a census included a question on indigenous and afro-descendant identity based on self-identification rising to 18 for indigenous peoples and 16 for countries that were planning to conduct their census between 2015-2017.

On a global scale the United Nations Statistics Division compiles census questionnaires[54] from 183 member states and has developed a 'work in progress' census question repository containing census questions from 2005 onwards.[55] The 'Demographic and social characteristics' section of the question repository includes filters for the category of Indigenous Peoples (68 questions from the Americas, Australia and New Zealand until 2010) and for Language (250 questions from countries worldwide until 2010).

A key limitation of official census data on topics such as languages is that they are likely to be biased towards larger rather than smaller language communities, in part because smaller language communities are more likely to be in rural or remote areas that census takers may find difficult to reach (see also Paolillo nd. for discussion). In some countries, notably in Latin America, a specialised indigenous census or survey (e.g. in known indigenous territories and areas) will often assist with overcoming these issues and is more likely to address questions of direct relevance to indigenous peoples (e.g. Venezuela, Brazil).

An important recent development is community led questionnaires and surveys. Internationally these surveys have been led by the Indigenous Navigator initiative which has produced standardised national and local questionnaires for use by specialists and Indigenous Peoples organisations (see below). This includes the use of the UNESCO 2003 language criteria. To date, community surveys have been carried out in 11 countries and coverage is presently being extended to 29 countries. Also on a fine-grained level the Vitality Index for Traditional Ecological Knowledge (VITEK) is a standardised methodology for assessing the status of traditional knowledge that is intended to be used both by specialists and communities to generate internationally comparable data (Zent and Maffi 2008).

The Indigenous Navigator is an example of the use of a standardised methodology being deployed across multiple countries and communities. The methodology informs, and is informed by, the participatory methods used to create the Local Biodiversity Outlooks (https://localbiodiversityoutlooks.net/) that have been welcomed by the CBD COP. Other

[53] https://indigenas.ibge.gov.br/
[54] https://unstats.un.org/unsd/demographic/sources/census/censusquest.htm
[55] https://unstats.un.org/unsd/demographic-social/sconcerns/migration/census/index.html#!/home

important participatory initiatives include the Endangered Languages Project as a network of indigenous and non-indigenous language specialists and activists engaged in self-reporting and the creation of resources to support language vitality (see below).

Lastly, recent initiatives such as Glottolog aim to provide an open access catalogue of information about the world's languages. A distinctive feature of Glottolog is that language names and codes are explicitly linked to scientific publications and other documentation (e.g. dictionaries, grammars and other materials) about a language (e.g. for the Piaroa of Amazonas state in Southern Venezuela see (https://glottolog.org/resource/languoid/id/piar1243). The importance of this initiative is that it documents available literature resources about a language (and people) and also allows for the classification of resources (e.g. are grammars or dictionaries available). This approach allows for the development of a new metric on "descriptive status" in the assessment of language vitality based on the quantity and categories of literature available.[56] Finally, initiatives such as Glottolog draw attention to the growing availability of machine learning models (for named entity recognition) and large language models (LLMs) for automating the retrieval and classification of data on indigenous languages in large scale open access literature datasets such as OpenAlex. In short, there are opportunities to explore data collection on indigenous languages at scale using new methods to support indicator development.

It is therefore proposed that a multi-tiered approach to data collection is used that works with national statistics, existing data sources (e.g. Ethnologue), participatory data from community led initiatives and new approaches to data aggregation at scale (e.g. machine learning based named entity recognition and large language models for tasks such as classification and summary).

Combining these approaches will raise significant questions of data comparability and for that reason national and sub-national level activities are proposed prior to data aggregation.

A number of countries are preparing National Action Plans for implementation of the Global Action Plan on the International Decade of Indigenous Languages (2022-2032). A number of countries (e.g. Australia, Brazil, Colombia, Guatemala, Norway, Peru and Ukraine) have already published details of their Nation Action Plans (www.unesco.org/en/decades/indigenous-languages/idil-actions/national-action-plans?hub=67103). These plans may provide opportunities for further cooperation on national data collection and aggregation and could potentially form the basis for 'flagship' initiatives in relation to the indicator during the Decade.

5d. Accessibility of methodology

Note whether the methodology for the indicator and the underlying data are published in a peer reviewed location that can be accessed, and the methodology can be repeated by other scientists or agencies with the same overall result obtained. For "global indicators" please note whether a methodology is available for use at national or regional scales

The methodology for the existing Index of Linguistic Diversity was peer reviewed and published in Language, Documentation & Conservation Vol.4 2010 pp 97-452. The methodology used to calculate the indicator is transparent and repeatable and at present depends on the subscription based Ethnologue. However the methodology could be adapted to rely on alternative data sources should they become available. The indicator can be used on the global, regional and national level (demonstration only).

We propose that the existing indicator could be updated using Ethnologue (as the best current global level resource). Updates to the indicator should focus on generation of the indicator on the national level for further testing and refinement using participatory approaches involving national statistics agencies, Indigenous Peoples and local community organisations, non-governmental organisations and specialists.

[56] See for example the descriptive status toggle for languages in Africa: https://glottolog.org/langdoc/status/browser?macroarea=Africa&focus=sdt#3/2.35/16.97

Over the medium to long term the indicator would increasingly mobilise open data using participatory methods. In this scenario data would progressively comply with emerging standards of best practice such as the FAIR (Findable, Accessible, Interoperable and Reusable) principles and complementary CARE principles (Collective Benefit, Authority to Control, Responsibility and Ethics). This would provide a foundation for open collaboration in future data collection and indicator construction that recognises the contributions of all participants, and ensures that the focus of data collection is relevant and meaningful to the communities it pertains to, while avoiding dependency on private individual data sources.

5e. Data sources

Description of all actual and recommended sources of data.

There are currently five significant data sources for the indicator and its future development. These range from official statistics, to the work of UNESCO and the International Labour Organisations, and non-governmental organisations. Increasingly, data collection initiatives directly involve or are led by Indigenous Peoples organisations and specialists using participatory approaches to survey design and data collection.

1. **Governments**. A number of countries include questions related to languages and/or to Indigenous Peoples in their national census questionnaires. Other countries perform periodic or regular Indigenous censuses, surveys or studies including language information. National census questionnaires vary significantly in the framing of language questions.

2. **UN Statistics Division**. For official census data the UN Statistics Division maintains a portal containing population questionnaires at https://unstats.un.org/unsd/demographic-social/census/document-resources/. A searchable National Census Questions Repository is located at https://unstats.un.org/unsd/demographic-social/sconcerns/migration/census/index.html#!/home. The Demographic and Social Characteristics section of the data includes filters for languages and a separate filter is available for Indigenous Peoples related questions. It is currently difficult to download the data.

3. **Regional Organisations.** Regional organisations have an important role to play in indicator development. In Latin America and The Caribbean the United Nations Economic Commission for Latin America and the Caribbean plays a key role in developing and disseminating guidance and sharing experience and lessons learned. In Africa, the African Union declared 2006 as the year of African Languages in collaboration with UNESCO and established the African Academy of Languages (ACALAN-AU) which launched the annual Africa Languages Week in 2021 in collaboration with UNESCO.

4. **UNICEF**. As noted above, the key to language vitality is that children are free to learn and speak their own language. The United Nations Children's Fund plays an active and important role in the promotion of multilingual education in many regions of the world and has paid special attention to language education in South Asia and in supporting 'language nests' (*nichos linguisticos*) in work with Indigenous Peoples Organisations in countries such as Venezuela (e.g. UNICEF 2019). In South East Asia and the Pacific UNICEF is a participant (with UNESCO) in the multi-organisation Asia-Pacific Multilingual Education Working Group (originally established in Bangkok in 2004) which is dedicated to promoting a "vibrant Mother Tongue-based Multilingual Education (MTB MLE) community" (https://asiapacificmle.net/).

5. **UNESCO** (https://en.wal.unesco.org/): The UNESCO World Atlas of Languages established in 2014 has its origins in the World Atlas of Endangered Languages (Wurm 1996, Wurm 2001, Moseley 2010) and is under development as an online resource. UNESCO reports that there are 129 national focal points for the World Atlas, of which around 94 are very active. The current Atlas allows government focal points to upload language statistics, which are then reviewed by an Ad Hoc Expert Committee whereupon

feedback is conveyed to the focal point if any statistics need to be reviewed. At present summary statistics by language and country are not available. A 2003 UNESCO expert group developed a methodology for measuring Language Vitality and Endangerment through the Language Vitality and Endangerment (LVE) scale, building on the earlier GIDS criteria, that informed further methodological development such as the Expanded Graded Intergenerational Disruption Scale (EGIDS) from SIL International (see Fishman 1991, UNESCO 2003, Simons and Lewis 2011, Camara-Leret and Bascompte 2021).

UNESCO serves as the co-lead with UNDESA for the International Decade on Indigenous Languages and has established the Global Action Plan of the Decade of Indigenous Languages (https://en.unesco.org/idil2022-2032/globalactionplan). A Global Task Force was formed to assist with the creation of the International Decade but its status in ongoing work is unclear (https://en.unesco.org/idil2022-2032/globaltaskforce).

6. **Ethnologue Catalogue** (https://www.ethnologue.com/): Ethnologue is a catalogue of languages information worldwide compiled and maintained by SIL International (formerly the Summer Institute of Linguistics), which describes itself as "a global, faith-based nonprofit that works with local communities around the world to develop language solutions that expand possibilities for a better life." Ethnologue was previously used for the development of the Index of Linguistic Diversity based on the availability of multi-year data points (Harmon and Loh 2010). Ethnologue currently contains data on 7,168 distinct languages of which 6,213 have at least two distinct year data points suitable for use in the indicator from 245 named geographical entities including the 193 UN recognised countries. Two thirds of the 6,213 languages with multiple year data points have more than 2 data points. Codes used in the Ethnologue Catalogue are the basis for the International Organization for Standardization (ISO) ISO 639 *Code for individual languages and language groups* (current ISO 639:2023). Ethnologue provides limited public access to the Catalogue but requires a paid subscription or licensing for full access.

7. **The Endangered Languages Project** (https://www.endangeredlanguages.com/): is based on the Catalogue of Endangered Languages (ELCat) that was developed by the linguistics departments at the University of Hawai'i at Manoa and Eastern Michigan with financial support from the National Science Foundation and Henry Luce Foundation. The Endangered Languages Project data is now a registered non-profit in the United States, its data is open access and the 10 member governing board and approximately 30 regional advisers include Indigenous specialists. A distinctive feature of the ELP is that it encourages communities and individuals to submit information and materials (recordings, video, documents) that can be used as a resource for maintaining linguistic vitality. The ELP is structured around a board with 10 members and approximately 30 regional advisors around the world encompassing the major world regions. The Endangered Languages project developed the Language Endangerment Index (LEI) as a measure of endangerment. However, current activities are increasingly focusing on projects supporting language vitality.

8. **Glottolog** (https://glottolog.org/): Glottolog is an initiative of the Max Planck Institute for Evolutionary Anthropology and aims to be a comprehensive reference source for the world's languages and in particular less known languages with coverage of 8,595 languages. Glottolog is deliberately intended to be open access and FAIR compliant (data must be findable, accessible, interoperable and reusable) and federates its data with other sources (e.g. Wikipedia). Glottolog does not include counts of speakers but does include extensive dynamically generated references. It also includes a metric on language documentation, that is the extent to which efforts have been made to record the language, which it uses to map the distribution of linguistic documentation across the world. This is unique to Glottolog.

9. **Indigenous Navigator** (https://indigenousnavigator.org/): Community led data collection on the level of support for and implementation of Indigenous rights, in support of the

implementation of the United Nations Declaration on the Rights of Indigenous Peoples, the CBD, the Sustainable Development Goals and related processes. The Indigenous Navigator is hosted by the International Working Group for Indigenous Affairs (IWGIA) in Denmark and funded by the European Commission. The Indigenous Navigator promotes the collection of national level and community level data by Indigenous Peoples and specialists. It is responsible for the Local Biodiversity Indicators and Outlooks that have been welcomed by the CBD. The Navigator is currently expanding from 11 countries to 29 countries. The Indigenous Navigator uses standard questionnaires designed with Indigenous specialists and includes language questions based on the 6 measures of vitality from the UNESCO methodology (UNESCO 2003). Data is collected with FPIC and while it is hosted by the Indigenous Navigator, rights to the data remain with the community. To date, 19 countries have published surveys with 176 local surveys involving over 300 communities. Approximately 600 surveys are in progress. As a recent initiative the current focus is on expansion. In time, repeat surveys would provide a basis for longitudinal analysis.

10. **Native Land Digital** (https://native-land.ca/): Native Land Digital is an indigenous led Canadian non-profit organisation that produces maps displaying Indigenous territories and languages with a current focus on the Americas, Australia and New Zealand. Native Land Digital illustrates the use of technology to promote participatory mapping exercises by Indigenous Peoples themselves.

11. **Legal and Policy Frameworks:** The single best source of information on the legal and policy frameworks with respect to languages worldwide is the remarkable work of linguist Professor Jacques Leclerc at Laval University, Canada and is available at https://www.axl.cefan.ulaval.ca/.

5f. Availability and release calendar

Please note whether the indicator is available now or in development. If in development, please state the year it will be available. Additionally, state how often the indicator will be updated with additional data. (e.g. annually, every five years etc). For existing indicators, please note whether data/indicator are freely available/available on request. Please provide a link for the relevant website where the indicator is accessible.

Updates to the indicator stalled due to lack of resources after the publication of the Index of Linguistic Diversity (ILD) in 2010, which was based on data from 1970 to 2005. Summary data from the UNESCO World Atlas of Endangered Languages was used in reporting on Target 18 in the 2014 Global Biodiversity Outlook 4. The original ILD was based on a random sample of 1,500 languages from Ethnologue's total dataset. Additions to the Ethnologue dataset are ongoing, and at the time of writing, Ethnologue reports that multi-year data is available for over 6,000 language-in-country records (in the Ethnologue data, speaker numbers per language are always recorded per-country). The ILD indicator could therefore be expanded if the work was repeated. Ethnologue data is currently available under licence.

Data from the Endangered Languages Project, Glottolog and data from the Indigenous Navigator that communities have chosen to share are also currently and freely available. Some language records are currently publicly accessible through the UNESCO World Atlas of Languages, although at present the generation of summary statistics is not possible.

5g. Time series

Date range for which indicator is available, e.g. 1993 – 2021 and date of next update.

The current indicator, the Index of Linguistic Diversity is based on data available from versions of Ethnologue released between 1971 and 2005.

The first version of Ethnologue became available in 1971 and it is still regularly updated.

The first edition of the Atlas of the World's Languages in Danger, edited by Stephen Wurm was published in 1996, with subsequent editions in 2001 and 2010. This was eventually replaced by the online Atlas of Endangered Languages and the World Atlas of Languages online, although it does not appear that the World Atlas of Languages Online directly builds on data from the Atlas of the World's Languages in Danger.

The Indigenous Navigator was launched in 2014 and continues to collect data, however while surveys have been repeated in a few instances, the duration required for expansion of the project and for longitudinal data to reveal trends means it may be some time before longitudinal data is available.

Cycles for national census data (typically once per decade) and specialised surveys with respect to Indigenous Peoples will vary as will the availability of time series data on specific issues such as languages..

5h. Data providers

Identification of data provider(s), where relevant noting any national data providers. Specify the organisation(s) responsible for producing the data. For BIP partners only: if needed, please provide updated partner logos

See data sources above.

5i. Data compilers

Organisation(s) responsible for compilation of this indicator. For BIP partners only: if needed, please provide updated partner logos

Terralingua is the BIP partner and has expressed an interest in continued work to update the indicator going forward.

It is recommended that future development of the indicator under Article 8(j) should involve the formation of a technical group to coordinate on methodologies between partners in indicator updates and transitioning to the development of participatory sub-indicators of language vitality.

5j. Gaps in data coverage

Please note any gaps in the data coverage for this indicator (e.g. taxonomic, thematic, or geographic data gaps)

The main source of comprehensive data on languages spoken is often national censuses. Gaps in data coverage in relation to national censuses can include missed censuses, unsurveyed populations and variation in the presence of language questions in surveys. Where language questions are absent, no data will be collected, however, where questions about languages spoken in surveys are present, the framing of the question will determine the kind of data collected and whether or not it is likely to capture all languages spoken within the country. For example, some questions focus mainly on whether respondents speak the national language, thus linguistic diversity will not be captured. Some language questions are also restricted to a 'checkbox' style answer format, where respondents are only able to select from a predetermined list of languages. Again, this may result in an inability to capture the extent of linguistic diversity within a surveyed population and will favour larger language groups. It may be that figures on language populations may not be comparable between source types (for example data collected by government national statistics authorities and data collected by NGOS) (Paolillo nd.). In this case it may be that NGO population figures would ideally be measured against other NGO population figures. In this circumstance the limitation becomes that these studies are often not carried out repeatedly using the same methodologies in the same locations over set time scales (e.g. every year, every five years, every ten years). As this suggests, greater cooperation between national statistics organizations, Indigenous Peoples Organisations, NGOs and academic specialists is desirable.

5k. Treatment of missing values

Description of the methodology employed for producing estimates for the indicator when country data are not available, including any mathematical formulas and description of additional variables used as input into the estimation process.

Global/International context only: Description of how missing values for individual countries or areas are imputed or otherwise estimated by international agencies to derive regional or global aggregates of the indicator

Prior to digitisation, Ethnologue released their data in several iterative editions. For each edition, Ethnologue would update statistics for any languages where new statistics became available. In any instances where new statistics weren't available (this would most likely be many cases) the most recent statistic is brought forward to the new edition. In this manner the statistic may stay the same for several editions until a new statistic becomes available, at which point it is updated, then it may remain the same for several subsequent editions. There is often a delay to the update of these statistics, due to many factors including the sporadic measurement of the populations of many language speakers. It is common with language statistics that there is a delay between a measure of speaker numbers on the ground, and the availability of that statistic for analysis (Paolillo pers comm.). This means that trends detected may be slightly out of date by the time they become apparent. For example, in the Ethnologue the average most recent statistic for languages used to be 13 years old, but it has since increased to 20 years (Harald Hammarström pers comm.). In the case of the UNESCO Atlas of the World's Languages in Danger this dataset is no longer available online in digital form and the new World Atlas of Languages does not presently present data in a form suitable for statistical use.

6. Scale

6a. Scale of use

Indicate if indicator data is applicable at the global, national, regional scale. Specify whether global or regional scale indicators can be disaggregated for national use, and/or whether national data can be collated to form global indicator. Additionally, please mention any plans to nationalise the indicator.

Global, national, regional

6b. National/regional indicator production

For global indicators, please note whether a national/regional methodology available for use and provide links to any online documentation. Please also specify if underlying data can be accessed and used by countries to produce national indicators.

Data in language databases is commonly organised by or can be filtered by country. This can be scaled up for regional use. Databases also commonly use the ISO-639 *Code for individual languages and language groups* (currently ISO-639:2023). Some databases such as the freely available World Atlas of Language Structures, Glottolog and Endangered Languages Project include coordinates in their datasets as well as ISO-639 language codes. While not all of these databases track trends in speaker numbers, the use of these codes would allow for database joins which would allow for the collection of information about languages at the regional level. This is with the understanding that in some cases ISO-639 language codes may be absent, overcount or undercount in the case of some languages.

6c. Sources of differences between global and national figures

Explanation on the differences between country produced and internationally estimated data on the indicator, highlighting and summarising the main sources of differences.

The statistics in Ethnologue used to calculate speaker proportions will be the same whether the calculation is global, regional, or country based. So in that regard there should not be any difference in data outcome.

The main source of difference between statistics used in Ethnologue and official country data is likely to be due to data collection methods. A statistically significant difference between

government and NGO sources of statistics has been detected in a comparative review of UNESCO data (Paolillo nd.). The reasons for this may be due to selection bias, in that there may be differences between populations surveyed by national statistics authorities (favouring larger speaker communities) and NGOs (favouring smaller speaker communities). Thus, depending on the data source used for either global or national figures, results may vary.

6d. Regional and global estimates & data collection for global monitoring

6d.1 Description of the methodology

Include any mathematical formulas, used for the calculation of the regional/global aggregates from the country values. Description of the weighting structure used for aggregating country indicator values to regional and global levels.

See above.

6d.2 Additional methodological details

Description of how the data from countries or areas is assembled by custodian international agencies to provide regional and global aggregates. This is distinct from the method of computation section), which looks at how the indicator is compiled at a national level.

See above.

6d.3 Description of the mechanism for collecting data from countries

Include: (i) the official counterpart at the country level; (ii) description of any validation and consultation process; (iii) description of any adjustments with respect to use of standard classifications and harmonisation of breakdowns for age group and other dimensions, or adjustments made for compliance with specific international or national definitions.

See above.

As previously mentioned, language questions in national censuses are a reliable way to continually collect data on language population. UNESCO has 129 designated focal points from which they collect and confirm language information.

7. Other MEAs, processes and organisations

7a. Other MEA and processes

Please note where the indicator is already in use (e.g. by the CBD, other MEAs (such as CITES, CMS, Ramsar, UNCCD),SDGs, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services – IPBES, and the name of the IPBES assessment it is included in).

UNESCO is the designated lead on the International Decade of Indigenous Languages and has been joined by United Nations Department for Economic and Social Affairs (UNDESA) which is described as a co-lead.

The Joint Programme of Work on the Links Between Biological and Cultural Diversity between UNESCO and the Secretariat of the Convention on Biological Diversity was adopted at COP 10 in Nagoya, Japan, (Decision 10/20) and described by COP14 as "... a useful platform for collaboration between the CBD and UNESCO in pursuit of common objectives with respect to nature and culture" of ongoing relevance for the post-2020 Global Biodiversity Framework (Decision 14/30, para. 25 and 26).

7b. Biodiversity Indicator Partnership

Is the indicator include in those approved and promoted by the Biodiversity Indicators Partnership?

Yes: ☒ No: ☐

8. Disaggregation

Specification of the dimensions and levels used for disaggregation of the indicator (e.g., species, taxa, ecosystem, geographic location, income, sex, age group, disability status, etc.)

The current Ethnologue based indicator is constructed from disaggregated data by language, country and year.

Government census data can normally be disaggregated by common census categories including sex, ethnic background, occupation and disability, as well as by country and region.

Language questions asked within surveys conducted through community participation with the Indigenous Navigator are asked in the context of many other questions about the fulfilment of Indigenous Peoples rights, as well as location, country and region.

9. Related goals, targets and indicators

Description of linkages to other indicators proposed in the monitoring framework for the Kunming – Montreal Global Biodiversity Framework

The indicator is relevant to Article 8(J) and related provisions as a cross-cutting issue within the GBF.

10. Data reporter

10a. Organization

Organization of the contact person(s) for the data or metadata

Terralingua is the lead partner in the Biodiversity Indicators Partnership (BIP) and has indicated its continued willingness to work on the indicator. As noted above, further development of the indicator on the national, regional and international level will involve cooperation between a range of different governmental, Indigenous Peoples and non-governmental organizations.

10b. Contact person(s)

Person(s) and email addresses to be contacted with any questions regarding the data or metadata.

Luisa Maffi, Co-founder and Director of Terralingua: maffi@terralingua.org

David Harmon, Executive Director of the George Wright Society, associated with Terralingua: dharmon@georgewright.org

Gary Simons: Executive Editor at Ethnologue and Chief Research Officer at SIL International: gary_simons@sil.org

This metadata sheet was written by Paul Oldham (poldham@oneworldanalytics.com) and Jasmine Kindness (jasmine@oneworldanalytics.com).

11. References

Links to other literature helpful in understanding, interpreting and using the indicator.

Anderson, A (ed.). 1990. Alternatives to Deforestation. Steps Towards Sustainable Use of the Amazon Rain Forest. Colombia University Press: New York.

Bickford, J. A., M. P. Lewis, and G. F. Simons. 2014. Rating the vitality of sign languages. *Journal of Multilingual and Multicultural Development* 36(5):513–527.

Bromham, L et. al. 2022. Global predictors of language endangerment and the future of linguistic diversity. *Nature Ecology & Evolution* 6: 163-173 .

Camera-Laret, R and Bascompte, J. 2021. Language extinction triggers the loss of traditional medicinal knowledge. *Proceedings of the National Academy of Sciences of the United States of America* 18 (24).

Carroll, Stephanie Russo, Ibrahim Garba, Oscar L. Figueroa-Rodríguez, Jarita Holbrook, Raymond Lovett, S. A. Materechera, Parsons, M et al. 2020. "The CARE Principles for Indigenous Data Governance." *Data Science Journal* 19 (1): 43–43. https://doi.org/10.5334/dsj-2020-043.

Denevan, W. 1970. Aboriginal Drained Field Cultivation in the Americas, *Science*, 169:647-54

Denevan, W. 1992. The Pristine Myth: The Landscape of the Americas in 1492. *Annals of the Association of American Geographers*, 82: 369-85

Ebert, J. 2005. Tongue Tied. *Nature*.

Fishman, J. A. 1991. Reversing language shift. Clevedon: Multilingual Matters.

Frainer et. al. 2020. Cultural and linguistic diversity are underappreciated pillars of biodiversity. *Proceedings of the National Academy of Sciences of the United States of America*.

Gorenflo, L. Romaine, S. Mittermeier, R.A. Walker-Painemilla, K. 2012. Co-occurrence of linguistic and biological diversity in biodiversity hotspots and high biodiversity wilderness areas. *Proc. Natl. Acad. Sci. U.S.A.*

Hammarström, H. 2015. Ethnologue 16/17/18th editions: A comprehensive review. *Language* 91(3): 723-737.

Harmon, D. 1995. The status of the world's languages as reported in Ethnologue. *Southwest J. Ling*. 14:1–33

Harmon, D. 1996. Losing species, losing languages: Connections between biological and linguistic diversity. *Southwest J. Ling*. 15:89–108

Harmon, D and Loh, J. 2010. The Index of Linguistic Diversity: A new Quantitative Measure of Trends in the Status of the World's Languages. *Language, Documentation & Conservation*, Vol. 4: 97-151 - ILD

Harrison, K. D and Anderson, G. 2020. Hunter Gatherers in South Siberia in Güldemann McConvell and Rhodes ed. The Language of Hunter Gatherers. Cambridge University Press.

Lewis, M. P. and G. F. Simons. 2010. Assessing endangerment: Expanding Fishman's GIDS. *Revue Roumaine de Linguistique* 55(2):103–120.

Levis et al 2017 Persistent effects of pre-Columbian plant domestication on Amazonian forest composition. *Science*. 355: 925-931.

Loh, J and Harmon, D. 2005. A global index of biocultural diversity. *Ecological Indicators* 5: 231-241.

Maffi, L. 1999. Linguistic diversity. In Posey, D. A. (ed.). 1999. Cultural and Spiritual Values of Biodiversity. London: United Nations Environmental Programme & Intermediate Technology Publications.

Maffi, L. 2005. Linguistic, cultural, and biological diversity. *Annual Review of Anthropology*, 29: 599-617

Moore, J et al. 2002. The distribution of cultural and biological diversity in Africa. Proceedings of the Royal Society of London B.

Moseley, C. (ed). 2010. Atlas of the World's Languages in Danger. UNESCO.

Neves, E.G., Petersen, J.B., Bartone, R.N., Augusto Da Silva, C. (2003). Historical and Socio-cultural Origins of Amazonian Dark Earth. In: Lehmann, J., Kern, D.C., Glaser, B., Wodos, W.I. (eds) Amazonian Dark Earths. Springer, Dordrecht.

Oviedo, G,. Maffi, L. and Larsen, PB. 2000. Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World's Biological and Cultural Diversity. Gland, Switzerland: WWF- International, Terralingua.

Paolillo, J (nd.) Evaluation of a Language Population Database: Trends in the Diversity and Endangerment of Languages.

Popolo, F and Schkolnik, S 2013 Pueblos indígenas y afrodescendientes en los censos de población y vivienda de América Latina: avances y desafíos en el derecho a la información. *CEPAL Notas de Población* 97.

Posey, D. A., & Balée, W. L. (eds.). 1989. Resource Management in Amazonia: Indigenous and Folk Strategies. *Advances in Economic Botany*, 7. New York: New York Botanical Garden Press

Posey, D. A. (ed.). 1999. Cultural and Spiritual Values of Biodiversity. London: United Nations Environmental Programme & Intermediate Technology Publications.

Roosevelt, A. 1991. Moundbuilders of the Amazon: Geophysical Archaeology on Marajo Island, Brazil. Academic Press: San Diego

Rostain, S. et al. 2024 Two thousand years of garden urbanism in the Upper Amazon. *Science* 383,183-189(2024).DOI:10.1126/science.adi6317

Santos, RV. 2019. The identification of the Indigenous population in Brazil's official statistics, with an emphasis on demographic censuses. *Statistical Journal of the IAOS* 35: 29-46.

Simons, G. and Lewis, P. 2011 The world's languages in crisis: A 20-year update. In Mihas, E et. al. (eds) 2013 Responses to language endangerment. In honor of Mickey Noonan. Studies in Language Companion Series 142. Amsterdam: John Benjamins. pp. 3-19.

Wilkinson, M et al. 2016. "Scientific Data - the FAIR Guiding Principles for Scientific Data Management and Stewardship." *Scientific Data* 3 (1): 160018–18. https://doi.org/10.1038/sdata.2016.18.

Zent, S and Maffi, L 2008 Final Report on Indicator No. 2: Methodology for Developing a Vitality Index of Traditional Environmental Knowledge (VITEK) for the Project "Global Indicators of the Status and Trends of Linguistic Diversity and Traditional Knowledge."

Zent, S and Zent, E. 2023. Collaborative Action Research with the Jotï in Venezuela: Experiences in Autoethnography and TEK Vitality Assessment. In Rozzi, R et. al. (eds.) Field Environmental Philosophy: Education for Biocultural Conservation. Springer.

12. Graphs and diagrams

Provide updated images of any graphs and diagrams, with captions

Annex 1

The methodology used to calculate the Index of Linguistic Diversity

This is the methodology used to calculate the Index of Linguistic Diversity, taken directly from Harmon and Loh (2010). It can be applied to global, regional and national populations:

The method has three steps that remain the same whether the global level or a regional grouping is being analysed:

The fraction *F* of the total population (global or regional) represented by each datapoint (*N* speakers of language *l* in year *y*) was calculated.

$F_{ly} = N_{ly}/P_y$

where

N_{ly} is the number of speakers of language *l* in year *y*, and
P_y is the total population in year *y*.

The total populations from 1950 to 2005 of the world and five regions—Africa, Asia, Pacific, Europe, and the Americas—were taken from UN Population Division (2006 revision), downloaded from http://esa.un.org/unpp/index.asp.

The geometric mean of the *F* values in each year was calculated:

$M = (F_1.F_2.F_3...F_n)^{1/n}$

where

n = total number of languages.

Finally, the geometric means in each year were chained together to form an index, such that:

$I_y = I_{y-1} (M_y/M_{y-1})$

Where

I_y = the Index of Linguistic Diversity in year y
M_y = the geometric mean F value in year y, and
M_{y-1} = the geometric mean F value the previous year

and the index value in 1970 was set to unity
$I_{1970} = 1.0$

In this way, the ILD shows the trend in the fraction of the total population that speaks a language that is average or typical of all languages in the sample.

Annex 2

Figures from the Index of Linguistic Diversity (Harmon and Loh, 2010)

The Index is calculated by giving each language spoken equal weighting and calculating how the share of each language changes over time in relation to the whole. The declining trend depicted here indicates that for all languages spoken in the overall population. These figures depict global trends of decline in diversity of languages spoken by the global population between the years of 1970 and 2005. Globally the average share of all languages declined by 20% between 1970 and 2005. The ILD Global Indigenous graph was produced by only focusing on how Indigenous languages fared. The authors labelled languages as Indigenous on an ad-hoc basis, mainly through use of their ethnographic knowledge.

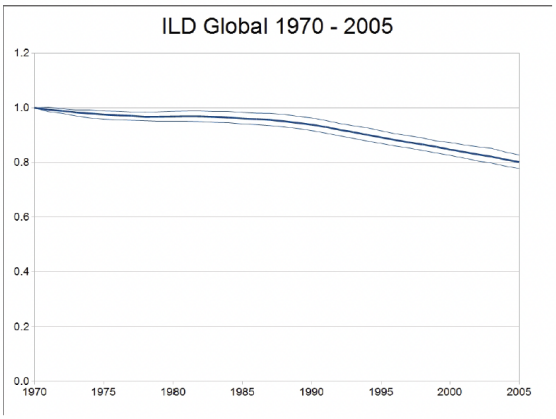


FIGURE 1: ILD Global, 1970–2005.
In Figures 1–7, The upper and lower confidence limits (CLs), showing the boundaries of the 95% confidence interval, are depicted as small lines above and below the main trendline.

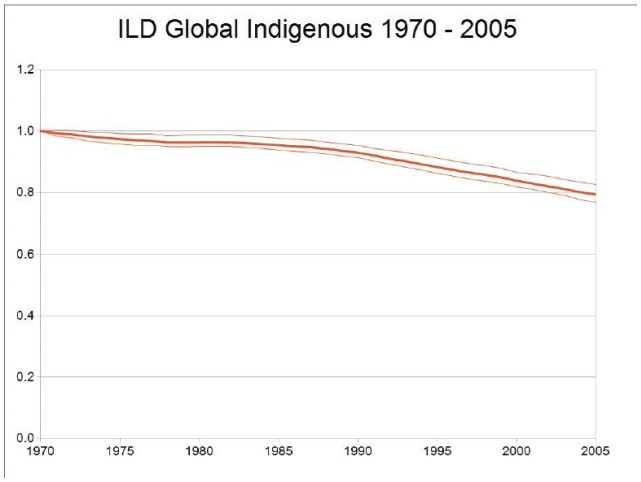


FIGURE 2: ILD Global Indigenous, 1970–2005.

Regional Indigenous graphs were generated using population data from the United Nations Population Division. A graph of Indigenous linguistic diversity in Australia was generated using a combination of data from Ethnologue and data from the Australian Bureau of statistics.

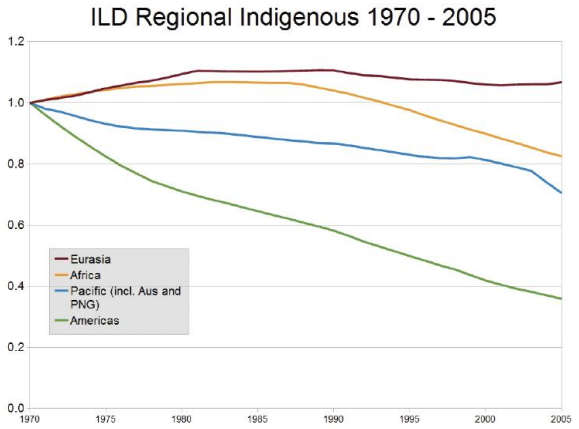


FIGURE 8: Regional Indigenous ILDs, 1970–2005.

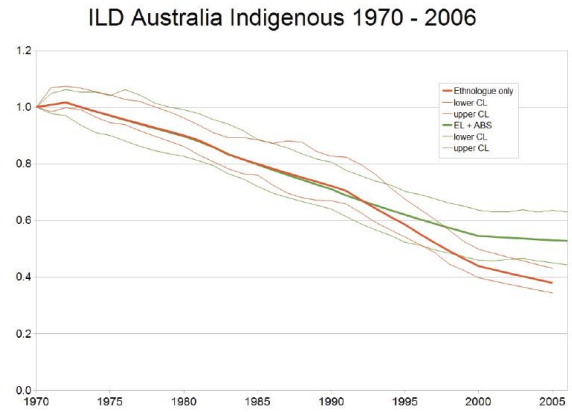


FIGURE 7: ILD Australia Indigenous, 1970–2005, and ABS Data, 1996–2006.

Annex 3

Map of Current Patterns of Language Endangerment (Bromham et al. 2022)

Bromham et al (2022) use data provided from worldgeodatasets.com, owned by SIL International, who own Ethnologue, the likely source of language data for the above, to calculate geographic patterns of language endangerment.

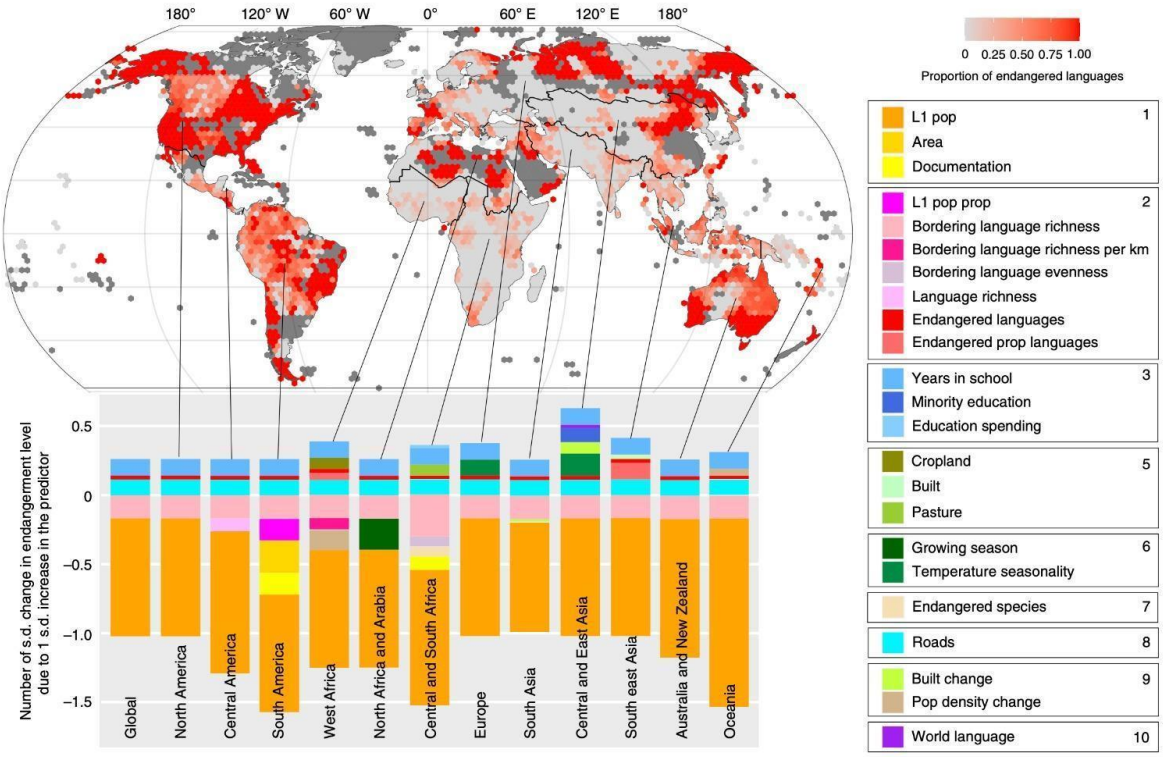
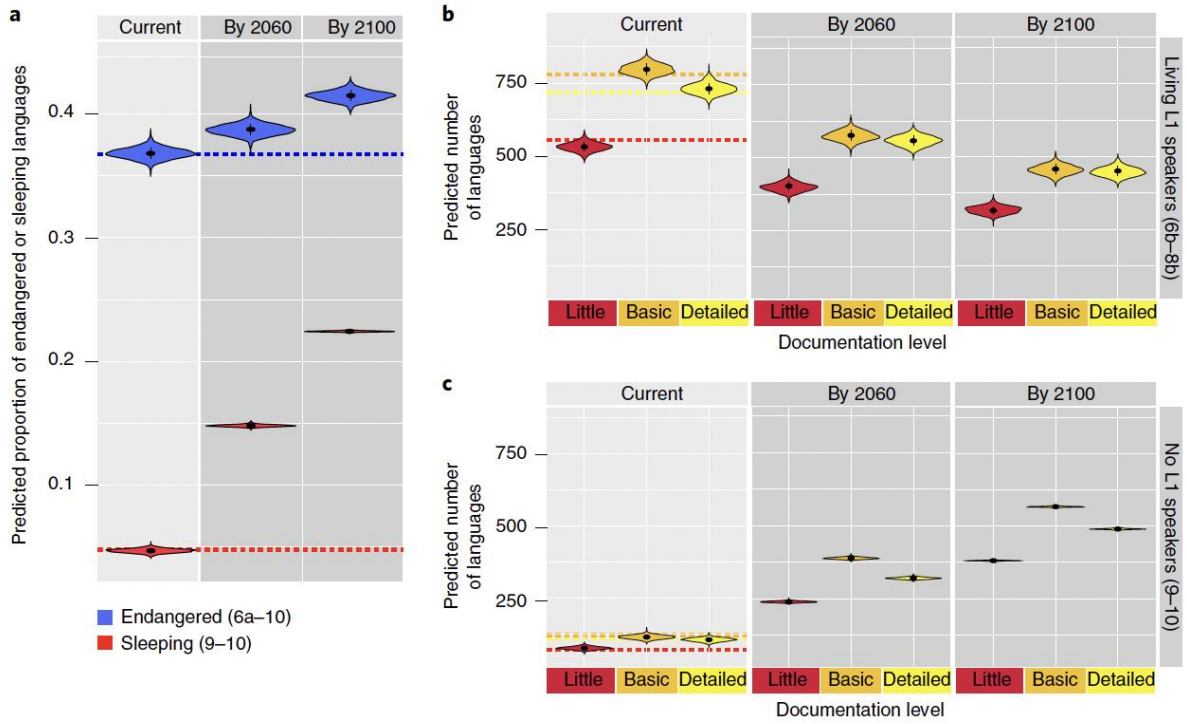


Fig. 1 | Current patterns of language endangerment expressed as the proportion of languages overlapping each hex grid that are currently rated threatened or above (EGIDS 6b–10; see Supplementary Information Table 1). Each hexagon represents approximately 415,000 km². The coloured bars show the predictors of level of endangerment identified in the best model for a global language database of 6,511 languages, and for each of 12 regions any additional influences on patterns of language endangerment (see Supplementary Data 3). Dark grey areas on the map do not have data for all the independent variables in the best model for language endangerment level. Language distribution data are from WLMS 16 (worldgeodatasets.com).

Annex 4

Graphs of Projected language loss using data from Glottolog (Bromham et al. 2022)

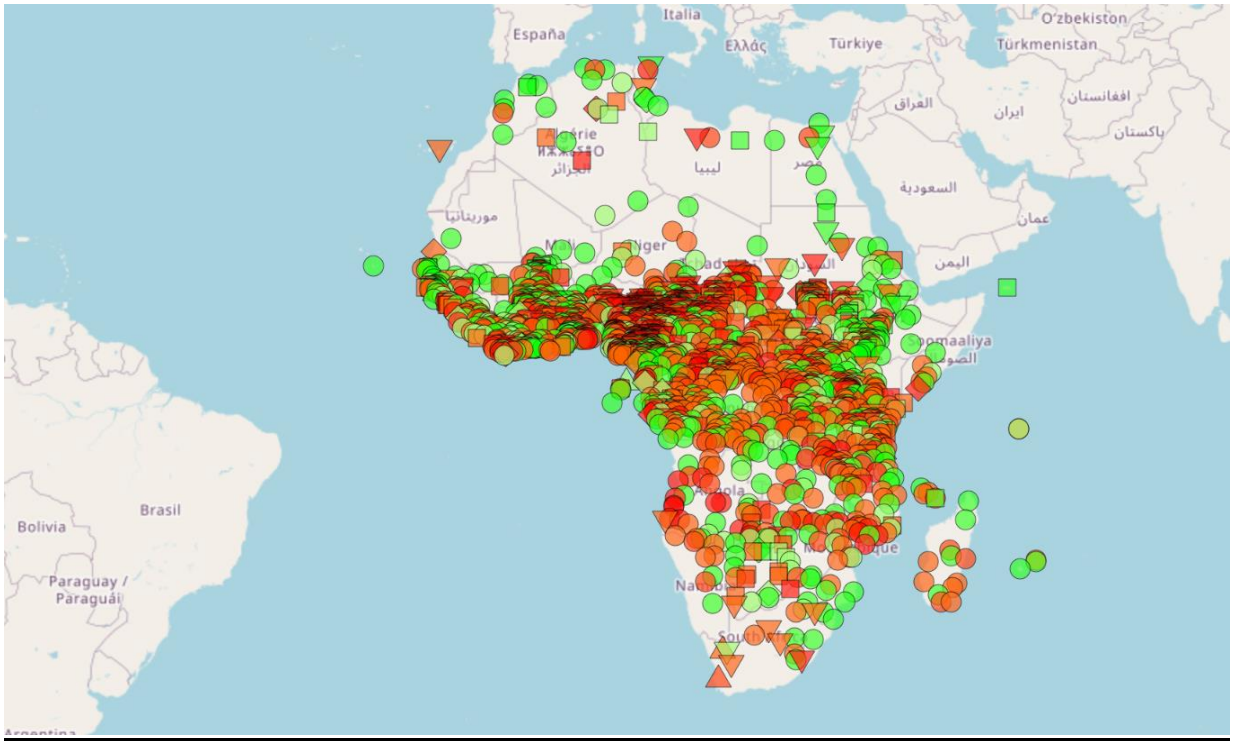
Bromham et al. (2022) use data sourced from Glottolog to predict the number future of languages by endangerment level, using the Expanded Graded Intergenerational Disruption Scale (EGIDS), (Lewis and Simons, 2010). The authors estimate at least a five-fold increase in sleeping languages by the end of the century, with at least 1,500 languages being lost.



Annex 5

Map of the endangerment of languages for the macroarea of Africa (Glottolog, 2024)

Glottolog is an initiative of the Max Planck Institute for Evolutionary Anthropology. This map of language documentation level by language endangerment level (as measured by the Agglomerated Endangerment Scale (AES) as calculated by Glottolog) for the macroarea of Africa (as calculated by Glottolog). When made available to communities for whom this data is most directly relevant, information on linguistic documentation level could promote action focussed on the encouragement of linguistic vitality, as well as directing efforts towards those languages for which more documentation is necessary for successful linguistic revitalisation to be possible.



Below is a summary of language documentation level by endangerment as determined by Glottolog, based on data aggregated by Glottolog from a variety of sources.

		not endangered	threatened	shifting	moribund	nearly extinct	extinct	
Most extensive description is a ...		○	○	□	◇	△	▽	**total**
long grammar	🟢	376	76	57	6	0	5	520
grammar	🟢	159	35	31	9	3	1	238
grammar sketch	🟠	359	99	88	8	11	16	581
phonology/text	🟠	231	62	57	10	3	10	373
Wordlist or less	🔴	204	97	111	18	7	56	493
	total	1329	369	344	51	24	88	2205

Annex 6

Language Endangerment Scales

Language grading scales go beyond absolute speaker numbers to focus on the sustainability of the language with a focus on endangerment, vitality, or both. A language with a small number of speakers which is spoken in all areas of life with robust intergenerational transmission may be much less in danger of disappearing than a language with a greater number of speakers that is now only spoken by the oldest generation of the population. Language grading scales attempt to draw out these subtleties, often with the aim of raising awareness of any potential risk of language loss and directing prioritised action. The content of a scale is often shaped by the specific purposes for which the scale is intended to be used.

Expanded Graded Intergenerational Disruption Scale (EGIDS)

EGIDS (Lewis and Simons, 2010) is an expanded version of Fishman's (1991) Graded Intergenerational Disruption Scale. The GIDS was developed to measure the vitality of endangered languages, whereas the EGIDS as a measure can be applied to all languages. The EGIDS has also been reworded to take into account signed languages (Bickford et al. 2014). The EGIDS consists of 13 levels with higher numbers on the scale representing higher levels of disruption of language transmission. Languages with a score of 6b or above are considered to be endangered languages. It also includes alternative labels at equivalent rankings to account for special cases. The EGIDS is the metric used by Ethnologue and the scale is shown in the table below:

Level	Label	Description
0	International	The language is widely used between nations in trade, knowledge exchange, and international policy.
1	National	The language is used in education, work, mass media, and government at the national level.
2	Provincial	The language is used in education, work, mass media, and government within major administrative subdivisions of a nation.
3	Wider Communication	The language is used in work and mass media without official status to transcend language differences across a region.
4	Educational	The language is in vigorous use, with standardization and literature being sustained through a widespread system of institutionally supported education.
5	Developing	The language is in vigorous use, with literature in a standardized form being used by some though this is not yet widespread or sustainable.
5 (alt.)	Dispersed	The language is fully developed in its home country, so that the community of language users in a different country has access to a standardized form and literature, but these are not promoted in the country in focus via institutionally supported education.
6a	Vigorous	The language is used for face-to-face communication by all generations and the situation is sustainable.
6b	Threatened	The language is used for face-to-face communication within all generations, but it is losing users.

7	Shifting	The child-bearing generation can use the language among themselves, but it is not being transmitted to children.
8a	Moribund	The only remaining active users of the language are members of the grandparent generation and older.
8b	Nearly Extinct	The only remaining users of the language are members of the grandparent generation or older who have little opportunity to use the language.
9	Dormant	The language serves as a reminder of heritage identity for an ethnic community, but no one has more than symbolic proficiency.
9 (alt.)	Reawakening	The ethnic community associated with a dormant language is working to establish more uses and more users for the language with the results that new L2 speakers are emerging.
9 (alt.)	Second language only	The language was originally vehicular, but it is not the heritage language of an ethnic community and it no longer has enough users to have significant vehicular function.
10	Extinct	The language is no longer used and no one retains a sense of ethnic identity associated with the language

Indigenous Navigator

Community surveys conducted by the Indigenous Navigator are a community self-assessment tool aimed to capture the lived realities and perceptions of those living in those communities. As such, the metric used must be straightforward enough to allow for ease of use and minimise the risk of misinterpretation. The response options for the question "Is your Indigenous language (or languages) considered" are based on the 2003 UNESCO scale to measure language vitality and endangerment. Criteria and are shown below:

Safe	The language is spoken by all generations and the intergenerational transmission is uninterrupted
Vulnerable	Most children speak the language, but it may be restricted to certain domains e.g. only spoken at home
Definitely Endangered	Children no longer learn the language as mother tongue in the home
Severely Endangered	The language is spoken by grandparents and older generations; while the parent generation may understand it, they do not speak it to children or among themselves
Critically Endangered	The youngest speakers are grandparents and older, and they speak the language partially and infrequently
Extinct	There are no speakers left

The Endangered Language Project primarily focuses on cataloguing, collecting resources for, and supporting the revitalization of endangered languages. The Endangered Languages Project developed the Language Endangerment Index (LEI) to assess and quantify language endangerment. The LEI uses four parameters to estimate level of endangerment: intergenerational transmission, Absolute number of speakers, speaker number trends and domains of use:

Level of Endangerment	5 Critically Endangered	4 Severely Endangered	3 Endangered	2 Threatened	1 Vulnerable	0 Safe
Intergenerational Transmission	There are only a few elderly speakers	Many of the grandparent generation speak the language, but younger people generally do not.	Some adults in the community are speakers, but the language is not spoken by children.	Most adults in the community are speakers, but children generally are not	Most adults and some children are speakers.	All members of the community, including children, speak the language.
Absolute Number of Speakers	1--9 speakers	10--99 speakers	100--999 speakers	1,000--9999 speakers	10,000--99,999 speakers	>100,000 speakers
Speaker Number Trends	A small percentage of the community speaks the language, and speaker numbers are decreasing very rapidly.	Less than half of the community speaks the language, and speaker numbers are decreasing at an accelerated pace.	Only about half of community members speak the language. Speaker numbers are decreasing steadily, but not at an accelerated pace.	A majority of community members speak the language. Speaker numbers are gradually decreasing.	Most members of the community or ethnic group speak the language. Speaker numbers may be decreasing, but very slowly.	Almost all community members or members of the ethnic group speak the language, and speaker numbers are stable or increasing.
Domains of use of the language	Used only in a few very specific domains, such as in ceremonies, songs, prayer, proverbs, or certain limited domestic activities.	Used mainly just in the home and/or with family, and may not be the primary language even in these domains for many community members.	Used mainly just in the home and/or with family, but remains the primary language of these domains for many community members.	Used in some non-official domains along with other languages, and remains the primary language used in the home for many community members.	Used in most domains, including official ones such as government, mass media, education, etc.	Used in most domains, including official ones such as government, mass media, education, etc.

Data from Glottolog derives from several different origins, including the UNESCO World Atlas of Languages, the Endangered Languages Project and earlier versions of Ethnologue. Serving as a data aggregator Glottolog created the Agglomerated Endangerment Scale which is a ranked scale of mappings between endangerment categories for languages from Ethnologue, the Endangered Languages Project and the UNESCO Atlas of the World's Languages in Danger, with rankings also informed by other sources where available.

Language endangerment or vitality scales are an important way of identifying the status of any particular language, allowing greater insight than absolute speaker counts into the likely future

of a language if further support is not given. The authors note a shift from an endangerment to a vitality discourse. The value of a language scale is highly related to the context in which it is used, thus it is not accurate to state that any metric is superior to any other, rather any choice of metric used in any future indicator must be as efficient as possible and as comprehensive as necessary to meet the needs of the indicator.

Annex D

Traditional Occupations Indicator Metadata Sheet

Indicator metadata form

1. Indicator name

Insert full indicator name

9.2 Percentage of the population in traditional occupations

Decision 15/5 adopted this headline indicator for Target 9.2: in place of the traditional knowledge indicator on "Status and trends in the practice of traditional occupations."

2. Date of metadata update

Insert date of metadata update

10 March 2024

3. Goals and Targets addressed

Please provide details about the goals and targets of the Kunming - Montreal Global Biodiversity Framework for which the indicator will measure progress in the Kunming - Montreal Global Biodiversity Framework

3a. Goal

If relevant, Provide the corresponding goal name, goal number, or N/A

Goal B

Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

3b. Target

Provide the corresponding target name, target number, or N/A

Target 9. Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

4. Rationale

Description of the purpose and rationale behind the indicator, noting its relevance to the corresponding goal or target

Traditional occupations are closely linked to customary sustainable use practices and the implementation of Article 10(c) of the Convention, as well as the Plan of Action on Customary Sustainable Use. Actions to implement Target 9 need to take into account indigenous and local systems for the control, use and management of natural resources and seek to protect and encourage these. The practice of traditional occupations is a key element of this target which is essential not only to the identity, cultural, spiritual, social and economic wellbeing of Indigenous Peoples and local communities but is also a key element in ensuring that the management and use of wild species is sustainable.

Traditional occupations are central indigenous peoples' rights to subsistence and livelihoods, as well as their rights to identity, culture and non-discrimination. Indigenous peoples and local communities, being highly dependent on biodiversity, whether as pastoralists, hunter-gatherers, forest dwellers, shifting cultivators or workers in the informal economy, face high levels of

poverty, vulnerability and discrimination. Indigenous women face additional gender-based marginalisation and discrimination.

A computation for this indicator by "dividing the number of Indigenous People practicing traditional occupations by the total number of working age indigenous people in a country" was originally proposed in the technical paper on *Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics.* However, based on existing data, it is not yet possible beyond pilot studies to measure this indicator on a global and national level due to the lack of identifiers for Indigenous Peoples in countries' census processes. The International Labor Organization (ILO) observed that "Comprehensive official statistics on traditional occupations are rarely available, partly owing to the continuing poor visibility of indigenous and tribal peoples in official statistics, and partly owing to the absence of an agreed definition of traditional occupations for statistical purposes."[57]

5. Definitions, concepts and classifications

5a. Definition:

Precise definition of the indicator, including references to standards and classifications. The indicator definition should be unambiguous and in expressed in universally applicable terms. It must clearly express the unit of measurement (proportion, dollars, number of people, etc.).

Traditional occupations are generally understood as the activities that indigenous and local communities have traditionally undertaken to provide for their subsistence needs and livelihoods. The practice of these occupations relies on intimate knowledge of ancestral lands, the environment, and natural resources passed on from generation to generation. These occupations and the skills and knowledge underlying them are not static. They have evolved over time and will continue to do so. The concept of traditional occupations to be measured in statistics should not therefore be limited to the economic and cultural activities that indigenous peoples and local communities have traditionally undertaken in the past, but should also embrace other occupations in which indigenous peoples and local communities are using their traditional knowledge today and will do so in the future, for example in life sciences, climate research and tourism.

The concept of work adopted in 2013 by the 19th International Conference of Labour Statisticians for the purposes of official statistics is very broad and includes any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use. Traditional occupations may be practiced in any of the forms of work recognized in official labour statistics, including own-use production work, employment for pay or profit, unpaid trainee work, volunteer work, and other work activities.

The 2023 ILO technical paper on Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics developed a possible statistical definition for traditional occupations. For the purposes of this indicator, traditional occupations is defined as follows:

> Traditional occupations are occupations in which indigenous knowledge, cultural practices, innovations and technologies may influence the way the work is performed, if the work is performed by a person who identifies as belonging to an indigenous or tribal group. Indigenous knowledge refers to the constantly evolving information, skills, practices, science and technology passed from generation to generation within an indigenous or tribal group. The work performed in traditional occupations embraces production of goods and services for own use and other forms of unpaid work including volunteer work and unpaid trainee work, as well as employment for pay or profit.

For the operational measurement of traditional occupations, it is necessary to reflect this definition in terms of a set of occupations defined in a classification of occupations used for the compilation of official labour statistics.

[57] Technical Paper on Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics, Geneva: International Labour Office, 2023. https://www.ilo.org/global/publications/WCMS_862144/lang--en/index.htm

The International Standard Classification of Occupations (ISCO-08) provides a system for classifying and aggregating occupational information obtained by means of statistical censuses and surveys, as well as from administrative records (see annex 1). Many national classifications are based on ISCO-08 or on its predecessor, ISCO-88. Some countries have national occupation classifications that are not based on ISCO, but in most cases it is possible to map data from detailed levels of the national classification to a relatively detailed level of ISCO08. In countries that have not developed their own national classifications, a version of ISCO may be used directly. ISCO-08 is a four-level, hierarchically structured classification that allows all jobs in the world to be classified into 436 unit groups. These groups form the most detailed level of the classification structure and are aggregated into 130 minor groups, 43 sub-major groups and 10 major groups, on the basis of their similarity in terms of the skill level and skill specialization required for the jobs. This allows the production of relatively detailed internationally comparable data as well as summary information for only ten groups at the highest level of aggregation. A subset of these unit groups (see annex) are used to identify jobs which could be considered as traditional occupations. However national occupation classification schemes may frequently identify specific occupations that fit within the definition of traditional occupations that are not separately identified in ISCO. It would be preferable in such cases, therefore, to identify the groups in the national classification that fit the definition of traditional occupations, using the agreed list of ISCO groups as guidance.

These definitions were applied to microdata sets from three pilot countries – Nepal, Lao Democratic Republic and Ecuador with some interesting results. However, the study also shows that official data collected by countries often does not allow for the identification of IPs and LCs. Countries that do collect such disaggregated statistical data, however, may currently not publish, or report this data to the ILO. In addition, where such disaggregated data is reported to the ILO, the ILO does not process and publish it due to the absence of an agreed methodology. Instead, as described above, there are other possible ways to compute this indicator.

5b. Method of computation

The indicator can be measured at national and/or community scales.

National

Census data will be collected and computed following existing processes at national level. The number of people participating in a set of identified traditional occupations will be counted and can be summed up to identify the total number of people, used to calculate the percentage of the country's population.

National and/or community level

Community generated data are publicly available from the Indigenous Navigator, following an FPIC process.

At present, the Indigenous Navigator asks communities to identify the five most important traditional occupations for women and for men. Further, communities report on the status and trends of those occupations and on restrictions in practicing those traditional occupations. The Indigenous Navigator surveys currently do not capture the number or percentage of people in those occupations. Community surveys are also a good source for case studies that could provide qualitative data.

The present data are disaggregated by sex; not yet by age; there is a separate question on education level in terms of completion rates but not by traditional occupations.

The Indigenous Navigator also asks a binary question answered by yes or no: Has the State developed special measures to provide vocational training according to indigenous peoples' special needs or traditional occupations?

A future update, planned for 2025, will have a biodiversity module. The draft module, in consultation with indigenous peoples, intends to incorporate a quantitative question on

percentage of persons, disaggregated by sex, practicing each traditional occupation among the five most important occupations identified by the community).

5c. Data collection method

Description of all methods used for data collection. This description should include, when applicable, the questions used to collect the data, the type of interview, the dates/duration of fieldwork, the sample size and the response rate. Hyperlinks to methodologies are acceptable.

Data will be collected or reported from national census or national reports, for the national level data using ILO ISCO classifications. Information and proposals for the collection of data are available in: Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics.

Data can be collected from the Indigenous Navigator platform, which is openly available online. The methodology for data collection at national and community level, within the Indigenous Navigator, is published and available at the link above.

5d. Accessibility of methodology

Note whether the methodology for the indicator and the underlying data are published in a peer reviewed location that can be accessed, and the methodology can be repeated by other scientists or agencies with the same overall result obtained. For "global indicators" please note whether a methodology is available for use at national or regional scales

A 2023 discussion paper *Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics* has been prepared by the International Labour Organization which provides further information, including on the limitations of this approach.

The Indigenous Navigator methodology including framework and index calculation, as well as structure of the tool, contents of surveys and accompanying guidance is publicly available on their website. A knowledge product indicating how the methodology is applied for different contexts will be published in 2025, by the Danish Institute for Human Rights and the Indigenous Navigator consortium.

5e. Data sources

Description of all actual and recommended sources of data.

Data will be sourced in two main ways:

- National census-based data: National labour offices or equivalent will have census-based data using ISCO classifications. Countries would report these data directly.
- National and/or community data: Survey-based data and information from the Indigenous Navigator platform are publicly available, following an FPIC process.

5f. Availability and release calendar

Please note whether the indicator is available now or in development. If in development, please state the year it will be available. Additionally, state how often the indicator will be updated with additional data. (e.g. annually, every five years etc). For existing indicators, please note whether data/indicator are freely available/available on request. Please provide a link for the relevant website where the indicator is accessible.

Data are already available for 3 countries based on the micro-data analysis of the ILO using existing ISCO classifications relevant for traditional occupations. Following the expected revision of the ISCO classification, data releases will follow the calendars of the national labour offices, which are annual in many cases.

For the national and/or community-level information, the Indigenous Navigator is a survey-based platform. As of March 2024, data are available for 29 countries and over 300 communities on the Indigenous Navigator platform. The frequency of release is connected to the capacity and commitments made for surveys by country partners.

5g. Time series

Date range for which indicator is available, e.g. 1993 – 2021 and date of next update.

The indigenous Navigator collects data every three years. There are data points for 2018, 2021 and 2023. Next update of data is expected in 2025. This and future updates is dependent on funding and resources. The collection of data points through time will allow countries to update the index value and see trends over time.

5h. Data providers

Identification of data provider(s), where relevant noting any national data providers. Specify the organisation(s) responsible for producing the data. For BIP partners only: if needed, please provide updated partner logos

The Indigenous Navigator consortium is composed of the International Work Group for Indigenous Affairs (IWGIA), Tebtebba, Asia Indigenous Peoples Pact (AIPP), Forest Peoples Programme (FPP) and the Danish Institute for Human Rights (DIHR), with the financial support of the European Union.

5i. Data compilers

Organization(s) responsible for compilation of this indicator. For BIP partners only: if needed, please provide updated partner logos

The Forest Peoples Programme (FPP) is leading the development of the indicator, together with the International Labour Organization (ILO) and a team from the Tishman Centre for Social Justice and the Environment, University of Michigan. The Indigenous Navigator consortium would be a custodian for data from CBMIS related to the indicator.

5j. Gaps in data coverage

Please note any gaps in the data coverage for this indicator (e.g. taxonomic, thematic, or geographic data gaps)

The Indigenous Navigator currently covers 30 countries with national partners using the Indigenous Navigator surveys with over 300 communities.

For national census-based data, at least 13 countries have classifications relevant for traditional occupations.

5k. Treatment of missing values

Description of the methodology employed for producing estimates for the indicator when country data are not available, including any mathematical formulas and description of additional variables used as input into the estimation process.

Global/International context only: Description of how missing values for individual countries or areas are imputed or otherwise estimated by international agencies to derive regional or global aggregates of the indicator

There will be no imputation.

6. Scale

6a. Scale of use

Indicate if indicator data is applicable at the global, national, regional scale. Specify whether global or regional scale indicators can be disaggregated for national use, and/or whether national data can be collated to form global indicator. Additionally, please mention any plans to nationalise the indicator.

The indicator will be applied at sub-national and national scale.

National data can be aggregated to regional and/or global scale. A global aggregation is possible because the percentage of the total country population is used; given known country populations,

the number of self-identified Indigenous and tribal people involved in traditional occupations can be back-calculated to permit regional and global aggregations. Sub-national data can also contribute to a global value.

The information available for communities within a country can be used to indicate trends in the process (e.g. number of communities reporting on this indicator) and in the outcomes (trends in the population involved in traditional occupations, and surrounding processes, for the communities represented in the surveys).

6b. National/regional indicator production

For global indicators, please note whether a national/regional methodology available for use and provide links to any online documentation. Please also specify if underlying data can be accessed and used by countries to produce national indicators.

The data for the indicator will be produced at sub-national and national scale.

6c. Sources of differences between global and national figures

Explanation on the differences between country produced and internationally estimated data on the indicator, highlighting and summarising the main sources of differences.

Data will be produced at sub-national and national scale. The global figure will be calculated based on the national reporting under the CBD.

6d. Regional and global estimates & data collection for global monitoring

6d.1 Description of the methodology
Include any mathematical formulas, used for the calculation of the regional/global aggregates from the country values. Description of the weighting structure used for aggregating country indicator values to regional and global levels.

Number of persons with traditional occupations from all reporting countries divided by the total population of reporting countries.

6d.2 Additional methodological details

Description of how the data from countries or areas is assembled by custodian international agencies to provide regional and global aggregates. This is distinct from the method of computation section), which looks at how the indicator is compiled at a national level.

The data for the indicator will be produced at sub-national and national scale.

6d.3 Description of the mechanism for collecting data from countries

Include: (i) the official counterpart at the country level; (ii) description of any validation and consultation process; (iii) description of any adjustments with respect to use of standard classifications and harmonization of breakdowns for age group and other dimensions, or adjustments made for compliance with specific international or national definitions.

Official counterpart: CBD Focal Point

Validation and consultation: The national census process and the Indigenous Navigator process

Standard classifications: The ILO ISCO-08 classification system will be used.

7. Other MEAs, processes and organisations

7a. Other MEA and processes

Please note where the indicator is already in use (e.g. by the CBD, other MEAs (such as CITES, CMS, Ramsar, UNCCD),SDGs, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services – IPBES, and the name of the IPBES assessment it is included in).

Recently published is the IPBES Assessment on Sustainable Use with relevant information on customary sustainable use practices by indigenous peoples and local communities.[58]

7b. Biodiversity Indicator Partnership

- ***Is the indicator included in those approved and promoted by the Biodiversity Indicators Partnership?***

- **Yes:☐ No:☒**

8. Disaggregation

Specification of the dimensions and levels used for disaggregation of the indicator (e.g., species, taxa, ecosystem, geographic location, income, sex, age group, disability status, etc.)

Under the current approach, both data sources are already disaggregated to Indigenous Peoples only using self-identified status.

National census-based data:

The ILO ISCO classifications as used in national census processes are, in most cases, possible to link with characteristics of the respondent including: Education level (ISCED standard), Age (youth), Urban vs. rural (based on the location of residence if provided), and sex.

National and/or community-based data:

Within the Indigenous Navigator, the present data are disaggregated by sex. The data are not yet disaggregated by age; there is a separate question on education level in terms of primary, secondary and tertiary completion rates but not by traditional occupations. The revised survey intends to incorporate urban vs. rural information.

9. Related goals, targets and indicators

Description of linkages to other indicators proposed in the monitoring framework for the Kunming – Montreal Global Biodiversity Framework

Traditional occupations is headline indicator 9.2 and could be considered as a component indicator for Targets 5, 10, 18, 21, 22 and 23.

10. Data reporter

10a. Organization

Organization of the contact person(s) for the data or metadata

International Labor Organization [to be confirmed]

Forest Peoples Programme (FPP) and International Work Group for Indigenous Affairs (IWGIA) on behalf of the Indigenous Navigator consortium>

10b. Contact person(s)

Person(s) and email addresses to be contacted with any questions regarding the data or metadata.

Indicator under development. To be determined.

Indigenous Navigator:

db@iwgia.org, David Berger, Advisor - IWGIA.

[58] IPBES (2022). Summary for Policymakers of the Thematic Assessment Report on the Sustainable Use of Wild Species of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Fromentin, J.M., Emery, M.R., Donaldson, J., Danner, M.C., Hallosserie, A., Kieling, D., Balachander, G., Barron, E.S., Chaudhary, R.P., Gasalla, M., Halmy, M., Hicks, C., Park, M.S., Parlee, B., Rice, J., Ticktin, T., and Tittensor, D. (eds.). IPBES secretariat, Bonn, Germany. https://doi.org/10.5281/zenodo.6425599.

11. References

Links to other literature helpful in understanding, interpreting and using the indicator. A maximum of ten.

Indigenous Navigator: https://indigenousnavigator.org/

Local Biodiversity Outlook: https://localbiodiversityoutlooks.net

Traditional Occupations of Indigenous and Tribal Peoples in Labour Statistics, Geneva: International Labour Office, 2023: https://www.ilo.org/global/publications/WCMS_862144/lang--en/index.htm

Team from University of Michigan's Spreadsheet

IPBES (2022). Summary for Policymakers of the Thematic Assessment Report on the Sustainable Use of Wild Species of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Fromentin, J.M., Emery, M.R., Donaldson, J., Danner, M.C., Hallosserie, A., Kieling, D., Balachander, G., Barron, E.S., Chaudhary, R.P., Gasalla, M., Halmy, M., Hicks, C., Park, M.S., Parlee, B., Rice, J., Ticktin, T., and Tittensor, D. (eds.). IPBES secretariat, Bonn, Germany. https://doi.org/10.5281/zenodo.6425599

12. Graphs and diagrams

Provide updated images of any graphs and diagrams, with captions

Annex 1

ISCO-08 groups to be used for operational measurement of traditional occupations (when information on the use of indigenous knowledge at work is not directly available).

Unit groups

The following ISCO-08 unit groups could be used or help guide relevant categories in national occupation classification schemes. In addition, all unit groups in sub-major group 92 (Agricultural, forestry and fishery labourers) should be included if the status in employment of the indigenous worker is employer, independent worker without employees (own-account worker), or contributing family worker.

1113 Traditional Chiefs and Heads of Villages

2131 Biologists, Botanists, Zoologists and Related Professionals

2132 Farming, Forestry and Fisheries Advisers

2133 Environmental Protection Professionals

2230 Traditional and complementary medical practitioners

2341 Primary School Teachers

2342 Early Childhood Educators

2354 Other Music Teachers

2355 Other Arts Teachers

2641 Authors and Related Writers

2642 Journalists

2643 Translators, Interpreters and Other Linguists

2651 Visual Artists

2652 Musicians, Singers and Composers

2653 Dancers and Choreographers

2654 Film, Stage and Related Directors and Producers
2655 Actors
2656 Announcers on Radio, Television and Other Media
2659 Creative and Performing Artists Not Elsewhere Classified
3141 Life Science Technicians (excluding Medical)
3142 Agricultural Technicians
3143 Forestry Technicians
3230 Traditional and Complementary Medicine Associate Professionals
3413 Religious Associate Professionals
3434 Chefs
5113 Travel Guides
5120 Cooks
5311 Child Care Workers
5312 Teachers' Aides
6111 Field Crop and Vegetable Growers
6112 Tree and Shrub Crop Growers
6113 Gardeners; Horticultural and Nursery Growers
6114 Mixed Crop Growers
6121 Livestock and Dairy Producers
6122 Poultry Producers
6123 Apiarists and Sericulturists
6129 Animal Producers Not Elsewhere Classified
6130 Mixed Crop and Animal Producers
6210 Forestry and Related Workers
6221 Aquaculture Workers
6222 Inland and Coastal Waters Fishery Workers
6223 Deep-sea Fishery Workers
6224 Hunters and Trappers
6310 Subsistence Crop Farmers
6320 Subsistence Livestock Farmers
6330 Subsistence Mixed Crop and Livestock Farmers
6340 Subsistence Fishers, Hunters, Trappers and Gatherers
7111 House Builders
7115 Carpenters and Joiners [includes wooden boat builders]
7312 Musical Instrument Makers and Tuners
7313 Jewellery and Precious Metal Workers
7314 Potters and Related Workers

7315 Glass Makers, Cutters, Grinders and Finishers

7316 Signwriters, Decorative Painters, Engravers and Etchers

7317 Handicraft Workers in Wood, Basketry and Related Materials

7318 Handicraft Workers in Textile, Leather and Related Materials.

7511 Butchers, Fishmongers and Related Food Preparers

7512 Bakers, Pastry-cooks and Confectionery Makers

7513 Dairy Products Makers

7514 Fruit, Vegetable and Related Preservers

7531 Tailors, Dressmakers, Furriers and Hatters

7535 Pelt Dressers, Tanners and Fellmongers

7536 Shoemakers and Related Workers

9624 Water and Firewood Collectors.

Minor groups

When data are only available at the ISCO-08 minor group (3-digit) level, indigenous persons employed in the following groups should be considered to be practising traditional occupations.

213 Life Science Professionals

264 Authors, Journalists and Linguists

265 Creative and Performing Artists

323 Traditional and Complementary Medicine Associate Professionals

611 Market Gardeners and Crop Growers

612 Animal Producers

613 Mixed Crop and Animal Producers

621 Forestry and Related Workers

622 Fishery Workers, Hunters and Trappers

631 Subsistence Crop Farmers

632 Subsistence Livestock Farmers

633 Subsistence Mixed Crop and Livestock Farmers

634 Subsistence Fishers, Hunters, Trappers and Gatherers

731 Handicraft Workers

921 Agricultural, Forestry and Fishery Labourers (only if status in employment is employer, independent worker without employees (own-account worker), or contributing family worker).

Sub-major groups

When data are only available at the ISCO-08 sub-major group (2-digit) level, indigenous persons employed in the following groups should be considered to be practising traditional occupations.

61 Market-oriented Skilled Agricultural Workers

63 Subsistence Farmers, Fishers, Hunters and Gatherers

92 Agricultural, Forestry and Fishery Labourers (only if status in employment is employer, independent worker without employees (own-account worker), , or contributing family worker)

Annex E

Participation Indicator Metadata Sheet

Indicator metadata form

1. Indicator name

Insert full indicator name and number

*CBD Article 8(j), Traditional Knowledge indicator**, "Trends in which traditional knowledge and practices are respected through their full integration, safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan."***[59]

Considering the focus on participation as one of the main elements of Target 22, the name of the indicator is proposed to be revised to the following:

Participation in decision-making of Indigenous Peoples and local communities in the implementation of the Kunming-Montreal Global Biodiversity Framework at all levels.

It should also be noted that this indicators complements the proposed binary indicator (questions) for Target 22 being developed by the AHTEG on Indicators as it can provide more detailed information regarding the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by IPs and LCs, respecting their cultures and their rights over lands, territories, resources and traditional knowledge.

2. Date of metadata update

26 March 2024

3. Goals and Targets addressed

Please provide details about the goals and targets of the Kunming - Montreal Global Biodiversity Framework for which the indicator will measure progress in the Kunming - Montreal Global Biodiversity Framework

- **3a. Goal**

If relevant, Provide the corresponding goal name, goal number

The proposed indicator is cross-cutting across all goals.

- **3b. Target**

Provide the corresponding target name, target number, or N/A

The proposed indicator addresses a gap in regard to the monitoring framework adopted for Target 22: "Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders." [60]

[59] Decision 15/6, four indicators for traditional knowledge were adopted in decisions XIII/28, and 15/22:
[60] Kunming-Montreal Global Biodiversity Framework, December 2022. www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf

However, the proposed indicator is cross-cutting across all targets. Recognizing that the methodology is under further development particularly in relation to guidance on the application of the traditional knowledge indicators on participation to the relevant targets of the KMGBF and to disaggregation of relevant headline indicators, Parties are advised to use the indicator as a component indicator for Target 22 and Targets 1, 2, 3, 5, 9, 10, 11, 14, 21 and 23. It should be taken into account as potential disaggregation of headline indicators 1.1, 2.1, 3.1, 10.1, 10.2, 21.1.

4. Rationale

Description of the purpose and rationale behind the indicator, noting its relevance to the corresponding goal or target

Section C of decision 15/4 recognizes the important role and contribution of Indigenous Peoples and local communities as custodians of biodiversity and as partners in its conservation, restoration and sustainable use. Likewise, it calls for the Kunming-Montreal Global Biodiversity Framework (K-MGBF) implementation to ensure that the rights, knowledge, including the traditional knowledge associated with biodiversity, innovations, worldviews, values and practices of Indigenous Peoples and local communities are respected, documented and preserved. Section C also calls for a whole-of-society and a human rights-based approach in the implementation, reporting and evaluation of the K-MGBF. Participation is fundamental to these Section C considerations.

Central to the ability of Indigenous Peoples and local communities to continue acting as custodians of biodiversity is the cross-cutting procedural human right to full, effective, meaningful and gender-sensitive participation. The cross cutting right of participation refers to the human right of all people to take part in the conduct of public affairs, to express their views and opinions, and to influence decisions that affect their lives.

Purpose of the indicator:

1. Target 22 relates to participation in decision-making and access to justice and information related to biodiversity. This procedural right to participation, is pivotal in emphasizing the crucial role of Indigenous Peoples and local communities (IP and LC) in biodiversity conservation and sustainable use.

2. An indicator on participation is also relevant in the broader social and human rights context, as it reflects the commitment to use a human rights-based approach throughout the K-MGBF. Moreover, it recognizes that biodiversity conservation is intrinsically linked to cultural values, traditional governance, and the rights of vulnerable and marginalized groups, thereby fostering a holistic and inclusive approach to biodiversity conservation and sustainable use.

3. Although participation is cross-cutting, Target 22 underlines the importance of IP and LC's cultural, holistic understanding, and traditional knowledge of nature, which is integral to the conservation and sustainable use of biodiversity. Recognizing that IP and LC's insights into local ecosystems are fundamental in developing effective conservation initiatives, the right to participation is integral to all targets and goals of the K-MGBF, as it aims to integrate IP and LC's perspectives into broader biodiversity conservation and sustainable use strategies.

4. To achieve the 2050 Vision and Goals of the K-MGBF, the full, equitable, inclusive and gender-responsive representation and participation of IP and LC must be ensured. Furthermore, access to justice and information and the full protection of environmental human rights defenders is crucial to halt the loss of existing biodiversity on both land and sea. Therefore, an indicator tracking the full, equitable, inclusive, effective and gender-responsive participation is directly relevant to this target and will help to monitor progress towards its attainment.

5. Target 22, and an indicator on participation, is also relevant to all of the other targets in the Kunming-Montreal Global Biodiversity Framework. It requires considering the broader context of the K-MGBF, particularly section C on considerations for implementation,

reporting and evaluation. Achieving this target will contribute to all other targets, but notably targets 1, 2, 3, 4, 5, 6, 8, 9, 10, 13, 21, and 23, while progress on targets 21 and 23 will reciprocally support Target 22. Additionally, Target 22 echoes the commitments made under Aichi Biodiversity Target 18 and intersects with several Sustainable Development Goals, including targets 1.4, 5.5, 5.a, 10.2, 10.3, 16.3, 16.7, and 16.10.

6. Establishing a dedicated indicator on participation for Target 22 would therefore be instrumental in tracking progress and identifying areas needing improvement in the inclusive and equitable participation of diverse groups in biodiversity governance. Further such an indicator aims to address a gap in the monitoring framework for the K-MGBF, namely, the lack of indicators to measure the extent of representation and participation of IP and LC in decision-making related to biodiversity.

Complementarity and relationship with the Target 22 binary indicator and other relevant methodologies

The proposed Target 22 Binary indicator aims to monitor, through the national reports from parties to the CBD, the realization of the rights to participation in decision-making and access to justice and information related to biodiversity. However, this methodology, targeted at Parties, leaves a gap, in regard to the monitoring the actual participation of IP and LC. Measuring their participation requires a methodology which considers not only structural and process questions/indicators, but outcome indicators as well, reported by the IP and LC themselves. As a result, we propose in this metadata sheet that the Indigenous Navigator's methodology supplement the reporting done by parties, as a CBMIS tool that gathers data on structural, process and outcome indicators, using a human rights-based approach be considered to report on the proposed indicator.

A Human rights-based approach to the indicator:

1. Currently, the involvement and participation of Indigenous Peoples and local communities in decision-making related to biodiversity vary significantly among different regions and countries. One of the reasons for this variability is that there is no comprehensive global analysis to assess the extent and effectiveness of their participation in biodiversity-related governance. This variability is partly due to the absence of universally recognized standards or metrics for measuring the inclusiveness and effectiveness of their participation in decision-making processes. However, there are a number of initiatives which have developed and implemented indicators using a human rights-based approach grounded in the Office of the High Commissioner on Human Rights (OHCHR) guidelines on development of human rights indicators.[61]

2. However, this lack of a global analysis indicates a significant gap in monitoring and evaluating the effective participation of these groups in biodiversity governance. The lack of precise, updated data on the representation of these groups in decision-making processes, as well as the effectiveness of their involvement in terms of outcomes for biodiversity conservation and sustainable use, further complicates the implementation and assessment of Target 22.

3. The International human rights normative framework, including the international human rights treaties and the general comments and recommendations adopted by the bodies monitoring their implementation, provide a valuable reference and guidance for the development of the participation indicator. The human rights normative framework embodies cross-cutting human rights norms or principles, including non-discrimination and equality, participation, access to remedy, access to information, accountability, the rule of law and good governance. These cross-cutting norms are expected to guide the State and other duty bearers in their

[61] Indigenous Navigator, 2023. www.indigenousnavigator.org

implementation of human rights. There are clear linkages between these crosscutting norms and Target 22.

4. Establishing a dedicated indicator for Target 22 would therefore be instrumental in tracking progress and identifying areas needing improvement in the inclusive and equitable participation of diverse groups in biodiversity governance.

Applying the human rights-based approach to a participation indicator:

1. To develop a human rights-based indicator for participation, linked to KMGBF Target 22, we propose to use the Indigenous Navigator framework as a foundational initiative to inform the indicator. The Indigenous Navigator framework is a set of tools and methods that enable Indigenous Peoples and local communities to monitor and report on the status of their rights and well-being in relation to the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and other international human rights standards. The framework was developed using the human rights indicator methodology of the Office of the High Commissioner on Human Rights (OHCHR), which provides a systematic and participatory approach to identify, formulate, and use indicators that reflect the human rights situation of a given context. By using the Indigenous Navigator framework as a basis, we aim to ensure that the indicator for Target 22 is aligned with the human rights' normative framework, reflects the perspectives and priorities of Indigenous Peoples and local communities, and captures the diverse and complex dimensions of participation and recognition of rights in biodiversity governance. In the following sections, we will explain the steps and processes involved in applying the Indigenous Navigator framework to the participation aspects of the K-MGBF, as well as the expected outcomes and benefits of the framework.

2. The Indigenous Navigator framework was developed using the human rights indicator methodology developed by the OHCHR[62]. It takes as its starting point the UN Declaration on the Rights of Indigenous Peoples and the Declaration's underpinning legally binding human rights standards and obligations.

3. To address the K-MGBF, the first step in the process was to build upon the substantive links established with the Convention on Biological Diversity, and to initiate a mapping of the K-MGBF's goals and 23 targets to the rights enshrined in the UN Declaration on the Rights of Indigenous Peoples. These substantive links result in a mapping of how UNDRIP and related international human rights instruments are linked to specific K-MGBF Goals and Targets, and this can be refined to an examination of how the cross-cutting procedural right of participation is integrated. Through a combined reading of the UNDRIP articles, its related human rights standards and the linked K-MGBF target(s), the methodology identified in this metadata sheet a) identify whether the relevant attributes in the existing Indigenous Navigator Framework are sufficient to monitor the human rights elements in the K-MGBF targets.

Additional considerations toward a global cross-cutting participation indicator.

1. The indicator must monitor not only broader mechanisms for participation but must also address the specific needs and requirements posed by the K-MGBF. In order to do so, the indicator must monitor the mechanisms and platforms through which IP and LC participation is facilitated, monitored and evaluated. This includes an examination of national biodiversity strategies and action plans, representation in national and local level governance structures and methodology to capture specific platforms designed for include IP and LC in decision-making platforms.

2. The indicator must account for and address barriers to participation, as well as the role of proxy indicators.

[62] OHCHR, 2012. "Human Rights Indicators, A Guide to Measurement and Implementation." http://www.ohchr.org/Documents/Publications/Human_rights_indicators_en.pdf

5. Definitions, concepts and classifications

5a. Definition:

Precise definition of the indicator, including references to standards and classifications. The indicator definition should be unambiguous and in expressed in universally applicable terms. It must clearly express the unit of measurement (proportion, dollars, number of people, etc.).

Definition of the indicator:

The indicator is defined as the extent to which countries are promoting and ensuring the full, equitable, inclusive, effective and gender-responsive representation and participation, in decision making of Indigenous Peoples and local communities, and their perceived actual participation.

The proposed indicator measures the extent to which countries are promoting and ensuring the full, equitable, inclusive, effective and gender-responsive representation and participation of Indigenous Peoples and local communities[63], in biodiversity-related decision-making and access to justice and information. This is monitored through Structural, Process and Outcome indicators, including through the use of CBMIS, and through outcome indicators to measure the perception of actual participation by IP and LC themselves. The indicator is based on the human rights indicator methodology of the Office of the High Commissioner on Human Rights (OHCHR) and the Indigenous Navigator framework, which use a set of attributes, indicators, and data sources to reflect the human rights situation of a given context. The indicator is aligned with the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and other international human rights standards and obligations, as well as the principles of participation, equity, human rights and gender equality that are embedded in the K-MGBF.[64] The indicator is cross-cutting across all goals and targets of the K-MGBF, especially Target 22, which focuses on ensuring participation in decision-making and access to justice and information related to biodiversity for all. The unit of measurement for this indicator is the number and percentage of countries that meet the criteria for each attribute and indicator.

Efforts are being made to ensure complementarity with questions included under the global binary indicator for Target 22, which is being developed by the Ad Hoc Technical Expert Group on Indicators (AHTEG on Indicators), and information provided in document CBD/SBSTTA/25/2.

Full, equitable, inclusive, effective and gender-responsive representation and participation of Indigenous People and local communities

Full representation and participation means that all people have the opportunity and the ability to express their views and interests, and to influence the decisions that affect their lives, without any discrimination or exclusion.

Equitable representation and participation means that all people have fair and equal access to the resources, opportunities, and benefits of representation and participation, and that their needs and preferences are taken into account and balanced.

Inclusive representation and participation means that all people, especially those who are marginalized, vulnerable, or discriminated against, are recognized, respected, and valued as part of the society, and that their voices and perspectives are heard and considered.[65]

[63] In this document, it is proposed to use the terminology Indigenous Peoples (capitalized reflecting current UN protocol) and local communities and the acronym IPs and LC.

[64] The full comparative framework of the Indigenous Navigator, including the comparative matrix between the UNDRIP and other international human rights standards is available at: https://indigenousnavigator.org/explore-and-use-our-community-based-monitoring-tools in the Tools Database.

[65] Inclusive: Inclusion is understood as a process by which efforts are made to ensure equal opportunities for all, regardless of their background, so that they can achieve their full potential in life. It is a multi-dimensional process aimed at creating conditions which enable full and active participation of every member of the society in all aspects of life, including civic, social, economic, and political activities, as well as participation in decision-making processes. www.un.org/esa/socdev/documents/compilation-brochure.pdf

Effective representation and participation means that all people have the power and the capacity to influence the outcomes and the quality of representation and participation, and that their contributions lead to positive and meaningful changes in their lives and in the society.

Gender-responsive representation and participation means that all people, regardless of their sex, gender identity or expression, have equal rights, opportunities, and responsibilities in representation and participation, and that their specific needs and interests related to gender are addressed and integrated.

Indigenous peoples and local communities: The Convention on Biological Diversity does not define the terms indigenous and local communities or Indigenous Peoples and local communities. The United Nations Declaration on the Rights of Indigenous Peoples does not adopt or recommend a universal definition for Indigenous Peoples (Decision CBD/COP/DEC/14/13). As used in the IPBES global assessment 2022[66], "Indigenous Peoples and Local Communities (IP and LC) is a term used internationally by representatives, organizations, and conventions to refer to individuals and communities who are, on the one hand, self-identified as indigenous and, on the other hand, are members of local communities that maintain intergenerational connection to place and nature through livelihood, cultural identity and worldviews, institutions and ecological knowledge. The term is not intended to ignore differences and diversity within and among Indigenous Peoples and between them and local communities; Indigenous Peoples have recognized and distinct rights, which are not extendable to the broader and encompassing concept of local communities."

Free, prior and informed consent:

Free implies that Indigenous Peoples and local communities are not pressured, intimidated, manipulated or unduly influenced and that their consent is given, without coercion;

Prior implies seeking consent or approval sufficiently in advance of any authorization to access traditional knowledge respecting the customary decision-making processes in accordance with national legislation and time requirements of Indigenous Peoples and local communities;

Informed implies that information is provided that covers relevant aspects, such as: the intended purpose of the access; its duration and scope; a preliminary assessment of the likely economic, social, cultural and environmental impacts, including potential risks; personnel likely to be involved in the execution of the access; procedures the access may entail and benefit- sharing arrangements;

Consent or approval is the agreement of the Indigenous Peoples and local communities who are holders of traditional knowledge or the competent authorities of those Indigenous Peoples and local communities, as appropriate, to grant access to their traditional knowledge to a potential user and includes the right not to grant consent or approval; Involvement refers to the full and effective participation of Indigenous Peoples and local communities, in decision-making processes related to access to their traditional knowledge. Consultation and full and effective participation of Indigenous Peoples and local communities are crucial components of a consent or approval process. (CBD, CBD/COP/DEC/14/13)[67]

The whole-of-society approach is herein understood as: a principle that recognizes that the conservation and sustainable use of biodiversity requires the involvement and contribution of all relevant actors and stakeholders, including Indigenous Peoples and local communities (IP and LC), women, youth, elders, and persons with disabilities. Further, civil society, private sector, academia, and media should contribute to the monitoring and realisation of the right to participation. The whole-of-society approach aims to foster a broad-based and inclusive participation, collaboration, and partnership among these actors and stakeholders, as well as to respect and protect their rights, interests, and perspectives in biodiversity-related decision-making, implementation, monitoring and

[66] This language is taken from the IPBES glossary here: www.ipbes.net/glossary-tag/indigenous-peoples-and-local-communities; For full deliberation see IPBES. 'Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-policy Platform on Biodiversity and Ecosystem Services'. Zenodo, 4 May 2019. https://doi.org/10.5281/zenodo.6417333.
[67] https://www.cbd.int/doc/c/c3ab/388d/950ddc02586468a814120acf/wg2020-05-04-en.pdf

reporting. The whole-of-society approach is essential for the effective and equitable implementation of the K-MGBF, as it reflects the diversity and complexity of the biodiversity challenges and opportunities, as well as the shared responsibility and benefits of all people and society.

Procedural rights: In relation to human rights standards and cross-cutting norms: a cross-cutting norm may also be addressed as a "procedural right" that has a bearing on the realization of a specific "substantive right"; hence, it is defined in reference to that right. Further, it should be noted that substantive rights have a relatively clear content and may also have a "level/progressive" component in their realization, such as the right to education or the right to participate in public affairs. The procedural rights like the right not to be discriminated against or the right to participation are critical to the process of realizing substantive rights and may be easier to define in the specific context of substantive rights.[68]

The cross-cutting procedural right of participation refers to the human right of all people to take part in the conduct of public affairs, to express their views and opinions, and to influence decisions that affect their lives. It is a cross-cutting right because it applies to various domains and contexts, such as political, social, economic, cultural, and digital. For the human rights principle of participation, the aim is to reflect whether segments of the population in a country have been participating in the adoption of measures that the duty bearer is implementing and that concern its obligations (e.g., proportion of targeted populations reporting satisfaction with how involved they feel in decision-making affecting their enjoyment of the right to adequate housing, or access of targeted populations to channel(s) of participation in decision-making or implementation of programmes by the State in fulfilling its human rights obligations), or the extent to which they have been consulted in the selection of indicators included in the country's reporting procedure.[69] Indicators on work participation and educational attainment of the population, in general, and of specific groups, in particular (for instance, women and minorities), are also useful in this context as proxies to capture cross-cutting norms as well as the right to participate in public affairs).

A human rights indicator is specific information on the state or condition of an object, event, activity or outcome that can be related to human rights norms and standards; that addresses and reflects human rights principles and concerns; and that can be used to assess and monitor the promotion and implementation of human rights. Such a broad understanding of the term indicator allows it to assume various forms, of a qualitative or a quantitative nature. This, in turn, may lead to plurality in the understanding of the concept and methodologies to identify and develop indicators, which can sometimes be a source of confusion.

Indicators[70] can be quantitative or qualitative. The former are narrowly viewed as equivalent to "statistics", while the latter cover any information articulated as a narrative or in a "categorical" form. Unless otherwise specified, the term "quantitative indicator" is used in this publication to designate any kind of indicator that is expressed primarily in quantitative form, such as numbers, percentages or indices. At the same time, "check- lists" or sets of questions, narrative and categorical data that seek to complement or elaborate on information—numerical or otherwise—related to the realization of human rights are also widely used. These checklists are seen as useful indicators of the situation being monitored or analysed. In such cases, the use of the word "indicator" refers to information

[68] A substantive right is a right that is inherent to human dignity and well-being, such as the right to life, liberty, property, or reputation. It is a right that exists independently of any legal procedure or rule and is based on the fundamental principles of law and justice. Substantive rights are contrasted with procedural rights, which are rules that govern how substantive rights can be enforced or protected.

[69] OHCHR. 2012. Human rights indicators: a guide to measurement and implementation. United Nations Human Rights, New York. p. 40. https://www.ohchr.org/sites/default/files/Documents/Publications/Human_rights_indicators_en.pdf

[70] Information that indicates a state or level of an object, event or activity. It provides an indication of prevailing circumstances at a given place and a given point in time. Often based on some form of quantification (e.g., proportion of children immunized) or qualitative categorization (e.g., a treaty ratified/not ratified). In the context of this work, an indicator can be considered as a human rights indicator if it can be related to human rights norms and standards, addresses and reflects human rights principles and concerns and is used to assess and monitor the promotion and implementation of human rights.

beyond statistics that is qualitative in nature. Experts in many agencies in the United Nations system and within the human rights community have often favoured such an interpretation of the word indicator, implicitly emphasizing the qualitative aspect.

Types of human rights indicators: Structural, Process and Outcome.

All Human Rights instruments comprise standards on specific rights and cross-cutting human rights norms. The first step towards identifying indicators has therefore been to identify the attributes – or building blocks – contained in the instruments.

Subsequently, measurable indicators have been identified with a view to capturing States' duties to respect, protect and fulfil Indigenous Peoples' human rights.

The indicators framework comprises:

- Structural indicators, which assess the legal and policy framework of a given country.
- Process indicators, which measure the states' ongoing efforts to implement human rights commitments through programs, budget allocations, etc.
- Outcome indicators, which capture the actual enjoyment of human rights by Indigenous Peoples.

Proxy indicators (or indirect indicators)

Refer to the subject of interest in an indirect way. For example, using statistics on the proportion of women in parliaments to assess women's participation in public affairs. There are several reasons for working with proxy indicators: the subject of interest cannot be measured directly, or it can, but it is a sensitive issue such as income or safe sex and it may not be cost-effective to collect information on the actual indicator. A good proxy indicator has to weigh the reliability of the information and the efforts/resources needed to obtain the data.

Development of Domains, Categories, Key Attributes and Indicators:

According to the OHCHR[71], human rights indicators can be organized into four levels: domains, categories, areas and key attributes.

Domains are broad fields of human rights concerns, such as Freedom of Expression and media within civil and political rights, Health or Education within economic, social and cultural rights, or cross-cutting issues like equality and non-discrimination.

Categories or areas are sub-divisions of domains that group together related human rights norms and standards. An example is the categories the right to food, the right to development, social protection and Housing, water & sanitation within the domain General economic and social development.

Key attributes are the essential elements of each human right that define its normative content and scope, such as availability, accessibility, acceptability, or quality. The attributes are specified within a category. An example could be key attributes such as Equal access to services and security of tenure within the category Housing, water and sanitation.

Concepts applied to development of the indicator framework and data collection methodology:

1. *The indicators should be based on the UNDRIP, but also have **direct relevance for other human rights instruments**, thereby allowing the data to be directly relevant for existing human rights monitoring mechanisms.*
2. *The intertwined elements of **self-determination** and **non-discrimination** should be monitored throughout the framework.*

[71] OHCHR. "Human Rights Indicators: A Guide for Measurement and Implementation," 2012. https://www.ohchr.org/en/publications/policy-and-methodological-publications/human-rights-indicators-guide-measurement-and.

3. *To the extent possible, the indicators should be carefully conceptualized in order **to serve multiple purposes** – for example, guiding Indigenous Peoples' own strategies while also holding governments accountable for their human rights obligations.*
4. *To the extent possible, the indicators should be **universal**, i.e. they should be relevant for Indigenous Peoples across the globe in order to allow for comparisons across communities, peoples, countries and regions.*
5. *To the extent possible, the framework should **make use of existing indicators**, such as those adopted to monitor the SDGs, which may already be measured through recurrent general data collection. By doing this, even small-scale data collection by Indigenous Peoples' communities can be compared to data on the general population, and thereby measure discrimination.*
6. *The framework should **include process indicators** to measure States' efforts to implement Indigenous Peoples' rights, as this information will be useful for both guiding the implementation process and holding States to account.*

- **5b. Method of computation**

The proposed indicator is operational and updates on the further elaboration of elements related to biodiversity will be presented to COP 16 for operationalisation within 1 year. The Indigenous Navigator, the cross-cutting right to participation is integrated across 12 domains, namely: Self-determination; Cultural integrity; Lands, territories and resources; Fundamental rights and freedoms; Participation in public life; Legal protection, access to justice and remedy; Cross border contacts; Freedom of expression and media; General economic and social development; Education; Health; Employment and occupation.

The methodology could be applied to the calculation of an indicator on participation by computing the indicator as if it were a domain within the Indigenous Navigator's framework. Doing so would result in the index score being calculated and presented in a range of values from 0 to 100, where 0 = no participation of IPs and LC in biodiversity decision-making, and 100 = full, equitable, inclusive, effective and gender-responsive representation and participation in biodiversity decision-making.

Data sources have been identified and data is already being generated using the methodology of the Indigenous Navigator in more than 30 countries.

Computation and operationalisation of the indicator

The indicators should be operationalized through questions, implemented in the Indigenous Navigator questionnaires. The questions can either be relevant on a national level (implemented through the national questionnaire) or on a community level (implemented through the community questionnaire), where as the indicator can be relevant at both levels.

One of the tools within the Indigenous Navigator framework is the Indigenous Navigator index. The Indigenous Navigator Community Index and the Indigenous Navigator National Index are tools that serve to rank countries' performance with regard to recognizing and implementing Indigenous Peoples' rights. This means: are laws, policies and government programmes in line with the UNDRIP[72]? What is the situation on the ground – are Indigenous Peoples' rights respected and realized in practice?[73]

- The Index Tool assigns a numerical value to the responses of the questions chosen from the two questionnaires respectively. If a question can be assigned a comparative numerical value, it is included in an index calculation.

For the questions included in the index, all response options have been given a numeric value depending on how they are presented in the questionnaire. A "better" response option means that

[72] Structural and process indicators.
[73] Outcome indicators

there is a higher level of human rights compliance or enjoyment of the right than a "worse" response option – which then has a lower level of compliance or enjoyment of the right. The higher the level of human rights compliance, the higher the score of the response option in the index.

To make the response options of the different questions comparable, the scores have been "normalized", meaning that the value ranges from 0-100, depending on the level of recognition and implementation of Indigenous Peoples' rights (also referred to as feature scaling). A high level of recognition / realization of Indigenous Peoples' rights is assigned a high score – and a low level of recognition / realization is assigned a low score.

$$z_i = \frac{x_i - (x)}{(x) - (x)}$$

z_i = Normalized score for question i

x_i = Observed score for question i

x = Response options within each question

-

- Questions on an ordinal scale are treated as an interval scale, where it is assumed, that the distance between the different response options is proportionally the same.

The area score is calculated as the average score (simple mean) of the questions included in the given area for both the national and the community questions. The same goes for the domains, where the index value of a domain is given by the average score (simple mean) of the included categories. Within the established methodology of the Indigenous Navigator, the overall index score is a simple mean of all 12 domains.

Finally, the domain score at respectively community and national level is aggregated into the index score by taking the average of the domain scores. The index value, domain score and area score for both the national and the community level all runs from 0 to 100, depending on the level of recognition and implementation of the right to participation.

The right to participation is cross-cutting throughout the Indigenous Navigator's domains and areas, it currently factors into the scoring of the 12 domains of the Indigenous Navigator. In this regard, this methodology can be adapted to calculate against this proposed indicator. To do so, as suggested above, the indicator would be treated as a domain calculation in the Indigenous Navigator's framework.

Comparing Scores of areas, domains and index

When a Community Index and a National Index have both been generated for the same country, a comparison of the two will show whether communities' experiences of actual respect for their rights reflect the level of recognition of their rights in national legislation, policies and programmes.

Likewise, Index Values can be compared across communities, across countries or over time if the data gathering is repeated. Moreover, the same can be done for both the domain and area scores.

- **5c. Data collection method**

Description of all methods used for data collection. This description should include, when applicable, the questions used to collect the data, the type of interview, the dates/duration of fieldwork, the sample size and the response rate. Hyperlinks to methodologies are acceptable.

The proposed data collection methodology relies on complementarity and synergy between the Indigenous Navigator and the Target 22 binary indicator methodology. The data collection method described here, focuses on the use of the established and implemented Indigenous Navigator methodology as a CBMIS tool that gathers data on structural, process and outcome indicators, using a combination of national level and community questionnaires. As the Target 22 binary indicator

methodology is developed in its own metadata sheet, the Indigenous Navigator methodology is covered below.

What are the Indigenous Navigator tools:

The Indigenous Navigator is a set of tools for and by Indigenous Peoples to systematically gather their own data and use it for multiple purposes. It is a community-based framework for monitoring and guiding Indigenous Peoples' rights and development.

Two comprehensive questionnaires (at National and at Community level) translate the indicators into simple questions that indigenous communities and organisations can use to collect qualitative and quantitative data on their human rights situation.

Indigenous Navigator Index: The Indigenous Navigator Community Index and the Indigenous Navigator National Index are tools that serve to compute countries' performance with regard to recognizing and implementing Indigenous Peoples' rights. This means: are laws, policies and government programmes in line with the UNDRIP?

Indicators framework: The indicators serve to detect gaps in implementation, hold duty-bearers accountable, and devise implementation strategies. The indicators can also be used to measure essential aspects of the Sustainable Development Goals (SDGs) as well as the commitments made by States at the 2014 World Conference on Indigenous Peoples (WCIP).

The Indigenous Navigator methodology[74]:

The community level questionnaires (denoted below as LCS) are designed to be a collective process for data-gathering at the community level. They provide a series of key questions which primarily monitor outcome indicators, and responses should be drawn from the collective memory, experience and knowledge of the involved community members. Hence, the data collection does not require costly or time-consuming household surveys or individual interviews.

Some rights may be enjoyed differently by men and women, girls and boys. For example, more men than women may have seats in parliament or local government, or more women than men may maintain their traditional occupations. Gender-specific data is collected to assess whether men and women are able to enjoy their human rights on an equal footing.

People of different ages, gender and social positions are expressly included. It is therefore of crucial importance that both young and old, men and women participate in the data collection process.

A mixture of the methodologies below can be used, in communities where, for example, women do not speak in front of men, or young people are shy to contribute in the presence of elders, separate groups are formed (FGD) to ensure that all parties have the opportunity to contribute from their different perspectives.

Methodologies used for data collection at sub-national level (community):

- Household survey: where you have asked (some of) the questions to individual households. A household is the people or family living together in a house or dwelling.
- Individual survey: where you have asked (some of) the questions to individual persons.
- Communal assembly: where you have asked (some of) the questions to the assembly of community members.
- A focus group: where you have asked (some of) the questions to a select group of people from the community, including both men and women, young and elderly etc.

[74] A short overview of the methodology used to develop the Indigenous Navigator is available at: Methodology of IN Short.docx ; Further information is publicly available at navigator.humanrights.dk, as well as https://indigenousnavigator.org/node/271/tutorials

- Consultation with community authorities: where you have asked (some of) the questions to a select group of community authorities.

At National level:

The National Questionnaire is mainly based on structural and process indicators; hence it assesses the legal and policy framework of a given country, and measures States' ongoing efforts to implement human rights commitments through programs, budget allocations, etc. The National Questionnaire is thereby complementary to the Community Questionnaire, which mainly measures the realisation of rights as perceived by indigenous communities.

By looking at legislation, policies and programs, the National Questionnaire gives a comprehensive overview of the situation of Indigenous Peoples in a particular country, across the range of thematic areas of the UNDRIP.

Factual information regarding ratification of international human rights instruments; adoption of national laws and policies; government-driven implementation of specific measures or programmes targeting Indigenous Peoples; statistics on Indigenous Peoples in the country, if available.

Because of the focus on legislation, policies and programs, the National Questionnaire is methodologically designed for desk research by indigenous experts and organizations, or human rights experts. All questions relate to existing legal and statistical information and data, and the questionnaire helps compile and organize this information to gain an overview of Indigenous Peoples' human rights situation.

Content analysis: Systematic analysis of the content of texts (such as laws, policies, speeches, media reports, or social media posts).

Policy Analysis: Examine national policies related to biodiversity to understand the policy landscape affecting these communities.

Additional sources of data include:

- Government websites presenting laws, development planning, budget allocations, etc.
- National Statistical Office data, such as the latest census figures, geographic distribution of different
  population groups, national poverty line, etc.
- OHCHR and ILO databases on status of ratification of international human rights and labour law
  instruments
- Websites of regional human rights institutions and mechanisms
- Recommendations from treaty bodies and the Universal Periodic Review, available in OHCHR
  database
- Reports of the UN Special Rapporteur on the Rights of Indigenous Peoples

The Indigenous Navigator collects data on the cross-cutting issue of participation through a number of indicators and established questions.

Questions and indicators in the Indigenous Navigator

This section covers the methodology and questions which are currently in use and gathering data. It is important to recognize that this dataset represents a foundational layer of our ongoing effort to monitor and evaluate the participation and impact of Indigenous Peoples in biodiversity governance.

Responding to the adoption of the KMGBF, the Indigenous Navigator is also in the process of developing an additional, specific, biodiversity module in the upcoming months, we anticipate the integration of additional questions and indicators specifically tailored to capture the nuances of the KMGBF and biodiversity conservation. This iterative process is crucial for ensuring that our

methodologies remain responsive to the evolving landscape of biodiversity governance and adequately reflect the priorities and realities of IP and LC.

Domains, categories, and indicators present in the Indigenous Navigator[75]:

In this section examples of the framework being implemented by the Indigenous Navigator to directly monitor the right to participation are presented. They are presented in an ordered format which is aligned to the structure of the Indigenous Navigator's 12 domains. As a result, each section starts with an introduction to the relevant domain, with descriptive text to highlight what that domain is understood as. Then, each relevant area/category[76] under that domain is described, and the indicators and questions are presented in a tabular format.[77]

1. Within the domain of Self-determination, defined as: "Respect for Indigenous Peoples Indigenous Peoples' rights to self-determination, self-government, and non-discrimination. Customary law, consultation, and free, prior and informed consent."

Under the Area of Autonomous Institutions defined as, "Recognition of distinct political, legal, economic, social, and cultural institutions. Self-determination with regards to membership and responsibilities of members of indigenous communities. Self-government in internal and local affairs.":

Indicator	Type	QuestionID	Question
Recognition of Indigenous Peoples' right to self-government in national legislation	Structural indicator. National assessment.	Q27 (LNS)	Does national legislation recognise Indigenous Peoples' right to self-government in internal and local affairs?
Recognition of Indigenous Peoples' self-governing institutions and territories in the political-administrative structure of the State	Structural indicator. National and community assessment.	Q28 (LNS)	Are Indigenous Peoples' self-governing institutions and territories recognised in the political administrative structure of the State?
		Q19 (LCS)	Are your indigenous institutions/authorities officially recognised by the State?
		Q20 (LCS)	If yes, describe how your authorities/institutions are reflected in the political/administrative structure of the State (e.g. how do they relate to local and central government institutions)?
Existence of Indigenous Peoples' self-governing institutions	Outcome indicator. Community assessment.	Q17 (LCS)	Does your people/community have its own institutions and authorities (such as councils, headmen, chiefs, community organisations, village committees etc)?

[75] The full framework of indicators that measure the right to participation can be found in this Excel sheet. Participation Indicator - Full matrix IN.xlsx

[76] Area and Category are used interchangeably within the framework.

[77] Please refer to the full framework to have a visual representation of this table in ordered format.

State special measures to strengthen capacity of Indigenous Peoples' representative institutions	Process indicator. National assessment.	Q29 (LNS)	Has the State adopted special measures to strengthen the capacity of Indigenous Peoples' representative institutions?
Allocation of public funds (from central/local government) to Indigenous Peoples' self-government institutions	Process indicator. Community assessment.	Q22 (LCS)	Do your indigenous institutions/authorities receive public funds in support of their own development plans?
Planning of local development is handled by Indigenous Peoples' autonomous institutions	Outcome indicator. Community assessment.	Q21 (LCS)	Do your indigenous institutions/authorities make their own plans for development (for example for water and sanitation, road infrastructure, electrification)?
Education programs are handled by Indigenous Peoples' autonomous institutions	Outcome indicator. National assessment.	Q84 (LNS)	Do Indigenous Peoples manage their own educational institutions at the following levels:
Issues concerning land and resource use are handled by Indigenous Peoples' autonomous institutions	Outcome indicator. Community assessment.	Q23 (LCS)	Do your indigenous institutions/authorities manage issues relating to lands, territories, and resources?

Under the Area of Non-Discrimination, defined as "Equal and full enjoyment of all rights by male and female indigenous individuals, as a collective or as individuals. Indigenous peoples are equal to all other peoples and individuals in the exercise of their rights.":

Indicator	*Type*	*QuestionID*	*Question*
National action plans developed by States, in consultation and cooperation with Indigenous Peoples, to achieve the ends of the UNDRIP	Process indicator. National assessment. WCIP commitment	Q17 (LNS)	Has the State developed a national action plan, strategies or other measures in consultation and cooperation with Indigenous Peoples, to achieve the ends of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP)?

Under the Area of Consultation and Free, Prior and Informed Consent, defined as: "State consultation in good faith through, Indigenous Peoples' representative institutions, in order to obtain their free, prior and informed consent before implementing legislative or administrative measures that may affect them or their lands."

Indicator	Type	QuestionID	Question
Recognition of the state duty to consult with Indigenous Peoples before adopting or implementing legislative or administrative measures that may affect them and prior to approval of any project that affects their lands, territories, and resources in national legislation	Structural indicator. National assessment.	Q32 (LNS)	Does national legislation recognise the state's duty to consult with Indigenous Peoples in order to obtain their free, prior and informed consent before adopting or implementing national legislative or administrative measures that may affect them?
		Q33 (LNS)	Does national legislation recognise the state's duty to consult with Indigenous Peoples in order to obtain their free, prior and informed consent prior to approval of any project that may affect their lands, territories or resources?
Social, spiritual, cultural, and environmental impact assessments are undertaken prior to approval of projects that may affect Indigenous Peoples' lands, territories or resources, with the participation of Indigenous Peoples' representative institutions	Process indicator; National assessment	Q48 (LNS)	Does the State ensure that social, spiritual, cultural and environmental impact assessments are undertaken prior to approval of projects that may affect Indigenous Peoples' lands, territories or resources, with the participation of indigenous peoples' representative institutions?
Procedures or mechanisms for State consultation with Indigenous Peoples at national, sub-national and local levels	Process indicator. National assessment.	Q34 (LNS)	Has the State developed operational procedures or mechanisms for consultation with Indigenous Peoples at the following levels?
Consultations with Indigenous Peoples' autonomous institutions before approval of measures and projects that may affect you	Outcome indicator. Community assessment.	Q29 (LCS)	Do local or central government institutions ensure that adequate consultations are undertaken with your community/ties before approval of projects or other measures that may affect you?
Free, prior and informed consent of Indigenous Peoples' autonomous institutions before approval of measures that may affect them	Outcome indicator. Community assessment.	Q30 (LCS)	Do local or central government institutions obtain the free, prior and informed consent of your community/ties before they approve projects or other measures that affect you?

Impact assessments are undertaken prior to approval of projects that may affect Indigenous Peoples' lands, territories or resources, with the participation of Indigenous Peoples' representative institutions	Outcome indicator. Community assessment.	Q31 (LCS)	Do local or central government institutions ensure that your institutions/authorities participate in impact assessments of projects that may affect your lands, territories or resources?

2. Under the Domain of Lands, Territories and Resources defined as "Recognition, protection and adjudication of the inherent rights to lands, territories and natural resources. Monitoring of displacement or forced relocation, and compensation for dispossession, unlawful use or exploitation of lands" and within the Area of Recognition, Protection and Adjudication of inherent rights to lands, territories and natural resources, defined as, "Effective control over lands, territories and resources. State legal recognition and protection of Indigenous Peoples' lands. State implementation of a fair process, with participation of Indigenous Peoples, to recognize their rights to lands."

Indicator	Type	QuestionID	Question
Clear procedures adopted by the State for identification, demarcation, mapping and registration of Indigenous Peoples' lands or territories lands in consultation with and in accordance with indigenous norms, values and customs	Process indicator. National assessment.	Q42 (LNS)	Has the State adopted clear procedures for identification, demarcation, mapping and registration of Indigenous Peoples' lands or territories lands in consultation with and in accordance with indigenous norms, values and customs?

In regard to violation of these rights, the Indigenous Navigator measures the Area of Dispossession, Removal and Relocation, defined as, "No displacement or relocation without free, prior and informed consent."

Incidents of displacement or relocation without free, prior and informed consent	Outcome indicator. National and community assessment.	Q46 (LNS)	Have there, since 2008, been incidents of displacement or relocation of Indigenous Peoples without free, prior and informed consent?
		Q48 (LCS)	Have your people or community/ies, since 2008, experienced incidents of displacement or relocation without your free, prior and informed consent?

Under the Area of Environment, defined as, "Absence of storage or disposal of hazardous materials on Indigenous Peoples' lands and territories without free, prior and informed consent. Conservation

and protection of environment and productive capacity of lands." The Indigenous Navigator measures violations of rights to participation in relation to:

Indicator	Type	QuestionID	Question
Establishment and extension of State-designated protected areas on Indigenous Peoples' territories without free, prior and informed consent	Process indicator. National and community assessment.	Q47 (LNS)	Has the State, since 2008, established or extended protected areas on Indigenous Peoples' territories without their free, prior and informed consent?
		Q55 (LCS)	Has the State declared any part of the territory of your community/people as a park or protected area, without your free, prior and informed consent?
		Q56 (LCS)	If yes, what is the extent (in hectares) of that area?

3. Under the Domain of Participation in Public Life, defined as, "Citizenship and participation in public affairs."

Within the Area of Participation in Public Affairs, the following indicators are used as a proxy indicator for participation in public affairs.

Indicator	Type	QuestionID	Question
Proportion of seats held by [indigenous] women in(a) national parliaments and (b) local governments	Outcome indicator. National and community assessment. Amended SDG indicator 5.5.1. (as per IAEG-SDG report adopted March 2017)	Q58 (LNS)	What is the proportion of seats held by indigenous men and women in national parliament?
		Q71 (LCS)	Are there any men or women from your people/community who have seats in national parliament and/or elected local government bodies?
Proportion of adult indigenous individuals who have the possibility to vote in elections for national and local government	Outcome indicator. Community assessment.	Q70 (LCS)	Approximately, how many adult men and women of your people/community have the possibility to vote in elections for national and local government?
Recognition of the right of Indigenous Peoples to participate in decisions that may affect them, through their representative	Structural indicator. National assessment.	Q59 (LNS)	Does national legislation recognise the right of Indigenous Peoples to participate in decisions that may affect them, through their representative institutions?

institutions, in national legislation				
Provisions for direct participation of Indigenous Peoples' elected representatives in legislative and appointed bodies	Structural indicator. National assessment.	Q60 (LNS)	Are there special provisions for direct participation of Indigenous Peoples' elected representatives in State legislative and appointed bodies?	

4. Under the Domain of General economic and social development, defined as, "The rights to food, to development, to social protection and to housing, water and sanitation."

Within the Area of The Right to Development, defined as, "Just and fair redress for deprivation of means of subsistence and development. Security in the enjoyment of means of subsistence and development, and freedom to engage in traditional and other economic activities."

Indicator	Type	QuestionID	Question
Participation of Indigenous Peoples in the process to define the national poverty reduction strategy	Process indicator. National assessment.	Q76 (LNS)	Have Indigenous Peoples participated in the definition of the national poverty reduction strategy?

Within the Area of Housing, water and sanitation, defined as, "Equal access to services and security of tenure."

Indicator	Type	QuestionID	Question
Proportion of local administrative units with established and operational policies and procedures for participation of local [indigenous] communities in water and sanitation management	Process indicator. Community assessment. SDG indicator 6.b.1. (as per the IAEG-SDGs report adopted March 2017)	Q98 (LCS)	Has the local government established policies and procedures to ensure that your community/ies can participate in water and sanitation management?

- **5d. Accessibility of methodology**

Note whether the methodology for the indicator and the underlying data are published in a peer reviewed location that can be accessed, and the methodology can be repeated by other scientists or agencies with the same overall result obtained. For "global indicators" please note whether a methodology is available for use at national or regional scales

The methodology of the Indigenous Navigator is publicly available, as is detailed guidance containing definitions and descriptions of the monitoring framework being implemented. Further full

detail of the index calculations are also available. It can be accessed at www.indigenousnavigator.org. Further, the tools and surveys are open and as such the methodology can be repeated by other scientists or agencies with the same overall results obtained.[78]

- **5e. Data sources**

Description of all actual and recommended sources of data.

The underlying methodology that would be applied for this indicator is currently available through civil society initiatives, such as the Indigenous Navigator. The data collected with the Indigenous Navigator tools are available on the Indigenous Navigator's data portal[79], where users can explore, collect and report on their situation. The data portal also provides guidance and resources for applying the tools and using the data.

The data sources for this indicator should include official sources that can provide information on the level and quality of participation of Indigenous Peoples and local communities, women, youth, and other relevant stakeholders in biodiversity-related decision-making processes at different scales such as national reports to the Convention on Biological Diversity.

However, official data sources need to be supplemented and aligned with the existing methodologies and indicators developed by civil society initiatives and/or complementary surveys of Parties, as well as other relevant sources, such as databases on Environmental Human Rights Defenders (UNEP, OHCHR, civil society organisations and Indigenous Peoples Organisations).

- **5f. Availability and release calendar**

Please note whether the indicator is available now or in development. If in development, please state the year it will be available. Additionally, state how often the indicator will be updated with additional data. (e.g. annually, every five years etc). For existing indicators, please note whether data/indicator are freely available/available on request. Please provide a link for the relevant website where the indicator is accessible.

The data collected with the Indigenous Navigator tools are available on the Indigenous Navigator's data portal[80], however, please note that the Indigenous navigator respects the rights of Indigenous Peoples and their data sovereignty and governance. As a result, some subnational level data is not publicly accessible and must be requested.

- **5g. Time series**

Date range for which indicator is available, e.g. 1993 – 2021 and date of next update.

The data is collected every three years. There are data points for 2018, 2021 and 2023. Next update of data is expected in 2025. This and future updates is dependent on funding and resources. The collection of data points through time will allow countries to update the index value and see trends over time.

- **5h. Data providers**

Identification of data provider(s), where relevant noting any national data providers. Specify the organisation(s) responsible for producing the data. For BIP partners only: if needed, please provide updated partner logos

The Indigenous Navigator consortium. Led by a steering committee of Asia Indigenous Peoples Pact, Danish Institute for Human Rights, Forest People Programme, International Work Group for Indigenous Affairs and Tebtebba foundation.

[78] For full detail on the methodology please refer to https://indigenousnavigator.org/node/271/tutorials

[79] Indigenous Navigator Survey, Data and Index modules | Indigenous Navigator https://indigenousnavigator.org/indigenous-data/indigenous-navigator-survey-data-and-index-modules

[80] Indigenous Navigator Survey, Data and Index modules | Indigenous Navigator https://indigenousnavigator.org/indigenous-data/indigenous-navigator-survey-data-and-index-modules

At national level, the data is provided by national implementing partners in 30 countries: Argentina, Bangladesh, Bolivia, Brazil, Cambodia, Cameroon, Chile, Colombia, Ecuador, Finland, Guyana, Greenland, Honduras, India, Japan, Kenya, Malaysia, Mexico, Myanmar, Nepal, Norway, Paraguay, Peru, Philippines, South Africa, Suriname, Sweden, Tanzania, Thailand, and Uganda.

- **5i. Data compilers**

Organisation(s) responsible for compilation of this indicator. For BIP partners only: if needed, please provide updated partner logos

The data is compiled and available in the Indigenous Navigator. Parties will be able to access and use this data to report against the indicator on participation in their national reports. .

- **5j. Gaps in data coverage**

Please note any gaps in the data coverage for this indicator (e.g. taxonomic, thematic, or geographic data gaps)

There are data gaps in the implementation of the Indigenous Navigator concerning geographic and representative coverage. Further, the Indigenous Navigator is a tool focused on Indigenous Peoples, as a result the current methodology is not adapted to cover local communities. As a result, the publishing of the methodology will provide opportunity for local communities to adjust it as needed and to implement it within a local communities platform. Efforts will be made to identify relevant platforms that could apply the methodology and cover local communities.

The methodology for the biodiversity module – which is under development within the Indigenous Navigator, to be operational within one year of COP 16 and further specifies the linkages between the participation indicator and the K-MGBF, also considers to include further disaggregation by a) Children and Youth; b) Persons with disabilities.

The expanding use and implementation of the Indigenous Navigator framework and tools, and the implementation of the biodiversity module within one year of COP 16, will help to address missing data and expand geographic coverage.

- **5k. Treatment of missing values**

Description of the methodology employed for producing estimates for the indicator when country data are not available, including any mathematical formulas and description of additional variables used as input into the estimation process.

Global/International context only: Description of how missing values for individual countries or areas are imputed or otherwise estimated by international agencies to derive regional or global aggregates of the indicator

N/A. missing values will not be computed.

6. Scale

- **6a. Scale of use**

Indicate if indicator data is applicable at the global, national, regional scale. Specify whether global or regional scale indicators can be disaggregated for national use, and/or whether national data can be collated to form global indicator. Additionally, please mention any plans to nationalise the indicator.

The Indigenous Navigator indicators are designed to collect data in a standardized manner at National and sub-national level. The data from national level surveys can be aggregated to inform against a global indicator.

The Indigenous Navigator is currently in use in 30 countries and 300+ communities. With the further development of a Biodiversity Module associated with the Indigenous Navigator, and subject to the

availability of financial resources, its use can be scaled across many more countries and communities on a voluntary basis.

- **6b. National/regional indicator production**

For global indicators, please note whether a national/regional methodology available for use and provide links to any online documentation. Please also specify if underlying data can be accessed and used by countries to produce national indicators.

- **6c. Sources of differences between global and national figures**

Explanation on the differences between country produced and internationally estimated data on the indicator, highlighting and summarising the main sources of differences.

- **6d. Regional and global estimates & data collection for global monitoring**

6d.1 Description of the methodology

Include any mathematical formulas, used for the calculation of the regional/global aggregates from the country values. Description of the weighting structure used for aggregating country indicator values to regional and global levels.

6d.2 Additional methodological details

Description of how the data from countries or areas is assembled by custodian international agencies to provide regional and global aggregates. This is distinct from the method of computation section), which looks at how the indicator is compiled at a national level.

6d.3 Description of the mechanism for collecting data from countries

Include: (i) the official counterpart at the country level; (ii) description of any validation and consultation process; (iii) description of any adjustments with respect to use of standard classifications and harmonization of breakdowns for age group and other dimensions, or adjustments made for compliance with specific international or national definitions.

7. Other MEAs, processes and organisations

- **7a. Other MEA and processes**

Please note where the indicator is already in use (e.g. by the CBD, other MEAs (such as CITES, CMS, Ramsar, UNCCD), SDGs, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services – IPBES, and the name of the IPBES assessment it is included in).

Indicators on participation are currently in practice within the SDGs.

- **7b. Biodiversity Indicator Partnership**

- **Is the indicator included in those approved and promoted by the Biodiversity Indicators Partnership?**

- **Yes: ☐ No: ☒**

8. Disaggregation

Specification of the dimensions and levels used for disaggregation of the indicator (e.g., species, taxa, ecosystem, geographic location, income, sex, age group, disability status, etc.)

Current disaggregation in the Indigenous Navigator

Decision-Making bodies with diverse representation

- that include representatives from Indigenous Peoples, Indigenous women and men.

Policies/Programs developed with Indigenous Peoples participation

- number of countries where policies or programmes were developed with the active participation of Indigenous Peoples.

Participation rates and inclusivity at different regional or subnational levels, highlighting areas with significant gaps.

- Measured in proportion of representation of Indigenous Peoples in public office at local and national level.

Potential for future disaggregation with implementation of the biodiversity module of the Indigenous Navigator:

Gender-responsive biodiversity initiatives at national and sub-national level

- proportion of biodiversity initiatives that specifically include gender-responsive approaches, focusing on the empowerment and involvement of women and girls.

Disaggregation by youth and by persons with disabilities

9. Related goals, targets and indicators

Description of linkages to other indicators proposed in the monitoring framework for the Kunming – Montreal Global Biodiversity Framework

See linkages under point 3, 3a. and 3b.

10. Data reporter

- 10a. Organization

Organization of the contact person(s) for the data or metadata

Indigenous Navigator Data Portal

Indigenous Work Group on Indigenous Affairs

- 10b. Contact person(s)

Person(s) and email addresses to be contacted with any questions regarding the data or metadata.

Berger, David, Advisor. International Work Group for Indigenous Affairs. db@iwgia.org

11. References

Links to other literature helpful in understanding, interpreting and using the indicator. A maximum of ten.

OHCHR. "Human Rights Indicators: A Guide for Measurement and Implementation," n.d. https://www.ohchr.org/en/publications/policy-and-methodological-publications/human-rights-indicators-guide-measurement-and.

"Indigenous Navigator Framework and Tools," Indigenous Navigator, n.d., https://indigenousnavigator.org/node/271/tutorials.

The full framework of indicators and questions/methodology used to measure the right to participation can be found in this Excel sheet. Participation Indicator - Full matrix IN.xlsx

A short overview of the methodology used to develop the Indigenous Navigator is available at: Methodology of IN Short.docx

12. Graphs and diagrams

Provide updated images of any graphs and diagrams, with captions