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EXPERT WORKSHOP ON THE MONITORING
FRAMEWORK FOR THE POST-2020 GLOBAL
BIODIVERSITY FRAMEWORK

Bonn, 29 June – 1 July 2022

REPORT OF THE EXPERT WORKSHOP ON THE MONITORING FRAMEWORK FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

INTRODUCTION

1. In recommendation [24/2](#), the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) requested the Executive Secretary under the guidance of the SBSTTA Bureau to facilitate a scientific and technical review, ensuring consultation with Parties, including, through the organization of an expert workshop (inviting experts nominated by Parties with regional representation and gender balance), of the proposed indicators of the monitoring framework for the post-2020 global biodiversity framework, building on the work done at part II of the twenty-fourth meeting of the Subsidiary Body as contained in Appendices 1 and 2 to this recommendation. This includes a comprehensive analysis of indicators that have a methodology in place and the feasibility for Parties to use them as headline indicators, taking into account the work of the Open-Ended Working Group on the Post-2020 Global Biodiversity Framework. The Subsidiary Body on Scientific, Technical and Technological Advice requested that the outcome be made available for the Conference of the Parties at its fifteenth meeting.
2. Through [notification 2022-019](#), Parties, other Governments and relevant organizations were invited to submit the name of one or more expert/s who may be considered to participate in the meeting. On the basis of these nominations the participants were selected in consultation with the SBSTTA Bureau taking into account regional and gender balance, and a balance across disciplines to reflect the scope of the post-2020 global biodiversity framework. The list of participants is contained in annex I.
3. In response to the above-noted SBSTTA recommendation, the expert workshop on the monitoring framework for the post-2020 global biodiversity framework was held from 29 June to 1 July 2022 in Bonn. The workshop was organized by the Secretariat of the Convention on Biological Diversity, under the guidance of the Bureau of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), with technical support from the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). Financial support was provided by the European Union, in-kind support from the Government of Germany and the Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). The workshop was conducted in English.
4. This workshop report includes a scientific and technical review of the headline indicators of the monitoring framework, based on the work done at part II of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice as contained in Appendices 1 and 2 and the comments received from Parties on the Appendices as requested in [notification 2022-034](#).

ITEM 1. OPENING OF THE WORKSHOP

5. The workshop was opened at 9 a.m. on Wednesday, 29 June 2022, by Mr. Hesiquio Benitez, the Chair of the Subsidiary Body on Scientific, Technical and Technological Advice. He provided a background on the development of the monitoring framework, noting that the monitoring framework had been developed through various iterations over the last few years, with the most recent work as contained in SBSTTA recommendation 24/2. He highlighted the need for a coherent expert input from participants on which of the proposed indicators would be best suited to be headline indicators, using the criteria for assessing headline indicators contained in SBSTTA recommendation 24/2. He also noted that the headline indicators should not be seen as those to comprehensively measure all aspects of the proposed goals and targets, but as a set that could be used for communication, providing an overview of progress in implementation and being relevant across countries. He also noted the need to consider possible gaps in the monitoring framework and any capacity needs. He informed participants that the results of this workshop would be used to directly develop an annex to the decision by the Conference of the Parties on the monitoring framework which is referenced in SBSTTA recommendation 24/2. Additionally, he highlighted that the workshop results would provide useful basis for part II of the fifteenth meeting of the Conference of the Parties in its consideration of the monitoring framework, including the role of the proposed Ad Hoc Technical Expert Group on indicators, for the post-2020 global biodiversity framework.

6. The representative of the Secretariat, Ms. Jillian Campbell (Head of the Monitoring, Review and Reporting Unit), also welcomed the participants, highlighting that this was a critical time in terms of finalizing the monitoring framework for the post-2020 global biodiversity framework prior to the second part of the fifteenth meeting of the Conference of the Parties to be held in December that year. She noted that at meetings of the Subsidiary Body on Scientific, Technical and Technological Advice, the Subsidiary Body on Implementation and the Open-ended Working Group, Parties had consistently recognized the importance of the monitoring framework in the context of ensuring the implementation of the post-2020 global biodiversity framework, including for an enhanced review mechanism. She also noted that the monitoring framework would be relevant to how progress in implementation would be tracked in a transparent and coherent manner, addressing implementation gaps.

ITEM 2. ELECTION OF THE WORKSHOP CO-CHAIRS, ADOPTION OF THE AGENDA, AND ORGANIZATION OF WORK

7. Under this agenda item, the Chair of SBSTTA recommended that Mr. Andrew Stott of the United Kingdom of Great Britain and Northern Ireland and Mr. Alfred Oteng-Yeboah of Ghana to serve as co-chairs for the workshop. The workshop participants supported this recommendation, and the co-chairs of the workshop were elected.

8. The workshop also adopted its agenda and agreed its organization of work. Participants were also briefed on logistical arrangements.

ITEM 3. WORKSHOP BACKGROUND, SCOPE AND EXPECTED OUTPUTS

9. For this item, the Secretariat representative provided background information on the evolution of the monitoring framework up to and after the second part of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice. She noted that during the twenty-fourth meeting of the Subsidiary Body, Parties adopted recommendation 24/2 on the monitoring framework, which included an analysis of the proposed headline indicators (Appendix 1) as well additional proposed indicators (Appendix 2). She also noted that the Subsidiary Body on Scientific, Technical and Technological Advice, in the same recommendation, requested the Executive Secretary to compile comments from Parties on Appendix I and II and to facilitate a scientific and technical review, including through an expert workshop, of the proposed indicators. In concluding she advised participants that the discussion during the workshop should refer to the latest version of the post-2020 global biodiversity framework resulting from the discussions during the fourth meeting of the Open-ended Working Group on the Post-2020 Global Biodiversity Framework, held in June, in Nairobi, and proposed that participants should aim to address the following key questions:

- (a) Which indicators should be recommended for use as headline indicators?
- (b) Which indicators could be potentially be considered as headline indicators, but maybe not as strong, either as they are less relevant for all Parties or are less feasible to implement?
- (c) Which indicators could be considered as a different type of indicator within the monitoring framework, e.g., as component or complementary indicators?
- (d) Are there other gaps in the monitoring framework regarding the main topics of the post-2020 GBF?
- (e) What are the capacity development needs to operationalize the framework?

10. Following the presentation from the Secretariat, an expert from UNEP-WCMC, Natasha Ali, presented the background materials provided for this meeting, including a scientific and technical analysis that was completed on the additional and alternative indicators contained in Appendix II to CBD/SBSTTA/24/2, which was undertaken by experts from UNEP-WCMC, with guidance from the Secretariat, and described the compilation of headline indicators provided in document CBD/ID/OM/2022/1/INF/3. Specifically, UNEP-WCMC presented an initial technical assessment of the indicators as follows: whether the indicators suggested are existing indicators that are available for use or are known to be in active development; whether full metadata for the suggested indicators are available; whether there are identified legal entities responsible for developing and providing the indicators. The indicators were coded in document CBD/ID/OM/2022/1/INF/3 as: Green, if the indicator meets these technical assessment criteria; Amber, if the indicator partially meets the assessment criteria; and Red, if no data or information can be found for the suggested indicator. UNEP-WCMC also described the compilation of comments on the headline indicators received in response to the notification [2022-034](#).¹

ITEM 4. TECHNICAL REVIEW OF THE PROPOSED INDICATORS IN TERMS OF RELEVANCE, FEASIBILITY AND COHERENCE

11. Under this agenda item, the participants agreed on how to conduct their technical review of the proposed indicators. Participants held detailed discussions in breakout groups on this review followed by plenary discussions. The groups were formed as follows: Group 1: Goal A and Targets 1-8; Group 2: Goal B-C and Targets 9-13; Group 3: Goal D and Targets 13-12 (see annex II for the composition of each group).

12. The group used the proposed criteria in SBSTTA-24/2 recommendation 3 as the starting point for their review. The criteria in the recommendation are:

- (a) The data and metadata related to the indicator are publicly available;*
- (b) The methodology underpinning the indicator is either published in a peer reviewed academic journal or has gone through a scientific peer review process and has been validated for national use;*
- (c) The data sources and indicators should be compiled and regularly updated with a time lag of less than five years between updates, if possible;*
- (d) There is an existing mechanism for maintaining the indicator methodology and/or data generation, including, for example, by a member of the Biodiversity Indicators Partnership, an intergovernmental organization or a well-established scientific or research institution, including providing nationally applicable guidance on the use of the indicator;*
- (d) alt. Indicators should be able to detect trends relevant to the components of the goals and targets of the post-2020 global biodiversity framework;*
- (e) When possible, indicators are aligned with existing intergovernmental processes under the United Nations Statistical Commission, such as the Sustainable Development Goals, the*

¹ The compilation of comments is available from <https://www.cbd.int/nbsap/monitoring/views.shtml>

Framework for the Development of Environment Statistics or the System of Environmental-Economic Accounting. Additionally, an effort was made to utilize the existing work on essential biodiversity variables under the Group on Earth Observations Biodiversity Observation Network.

13. The group also noted the proposed definition of indicators included in SBSTTA recommendation 24/3 on the monitoring framework:

(a) *Headline indicators (contained in Appendix 1): a minimum set of high-level indicators, which capture the overall scope of the goals and targets of the post-2020 global biodiversity framework to be used for planning and tracking progress as set out in decision 15/--.² They are nationally, regionally and globally relevant indicators [validated by Parties]. These indicators can also be used for communication purposes;*

(b) *Component indicators (contained in Appendix 2): A list of optional[, multidimensional] indicators that together with the headline indicators would cover all components of the goals and targets of the post-2020 global biodiversity framework at the global, regional, national and [subnational] levels;*

(c) *Complementary indicators (contained in Appendix 2): a list of optional [, multidimensional] indicators for thematic or in-depth analysis of each goal and target which may be applicable at global, regional, national, and [subnational] levels;*

14. The group agreed to undertake a technical assessment of the indicators using a scoring system. The participants discussed the scoring system noting that there were two different considerations: the relevance of the target to the main components of the draft goals and targets; and the state of development of the indicators with regard to their use at the national level. The participants agreed to a scoring system incorporating these two considerations:

1	Broad support for inclusion as a headline indicator and meets the assessment criteria (methods, data available, etc).
2	Support for inclusion as a headline indicator, but does not currently meet all the assessment criteria and further development necessary (i.e., less relevant when nationally disaggregated, lack of agreement on the methodology, lack of national capacity to monitor the indicator, lack of data in some countries, etc.)
3	Fills a key gap in the headline indicators but needs development. Priority for development. (e.g., Goal C)
4	May be useful as a component or complementary indicator but lacks support for inclusion as a headline indicator.
5	Measures the existence of legislation, administrative or policy frameworks which are important to assess the implementation of targets and could be included national reports; however, does not meet the criteria for headline indicators at the national level.
N/A	Duplicate, disaggregation/not recommended for inclusion as headline, component or complementary indicator

15. In breakout groups which regularly reported back to plenary, participants discussed each indicator vis-à-vis the new formulation of the goals and targets from the fourth meeting of the Working Group on the Post-2020 Global Biodiversity Framework and scored the indicators. The group used the list of proposed headline indicators compiled at part II of the twenty-fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice, in Appendix II to document CBD/SBSTTA/24/2, to build the list of indicators. The indicators scored as 1, 2, and 3 are all recommended for consideration by the Conference of the Parties at its fifteenth meeting as either headline indicators available for use now, or those that could be prioritized for development. For the indicators 2, the indicators will require some further development; however, without these indicators, participants noted that the headline indicators will miss some of the key

² Final wording subject to discussions under SBI-3 item 9.

aspects of the post-2020 global biodiversity framework. For indicators that scored 33 highlight critical gaps in the monitoring framework that will require priority development in order to monitor progress across the goals and targets of the global biodiversity framework. A full list of the scoring and comments from the breakout groups is available in annex III to the present report.

16. During the scoring process, participants noted the importance of having the component and complementary indicators to address gaps in terms of being able to assess specific aspects of each goal and target. In the context of scoring the indicators, the breakout groups discussed the utility of other indicators as component indicators and the need to improve the list of component indicators; however, as the focus of the workshop was on the headline indicators and not all breakout groups had time for a detailed discussion on component indicators, a suggested list of component indicators is not captured in this report.

17. After assessing if an indicator should be included in the list of headline indicators for consideration by the Conference of the Parties, the participants discussed the capacity-building implications and implementation needs of each indicator. The indicators were scored as having low, medium or high capacity/implementation requirements at the national level with more detailed information on what would be required to operationalize each indicator. The result of this assessment is contained in annex III of this report. Due to time constraints, the assessment of capacity needs was done in a limited manner. Linkages between the proposed headline indicators and the other draft goals, targets and sections in the post-2020 global biodiversity framework can be found in the metadata for some headline indicators, where applicable.³

18. Under this agenda item, the workshop produced two key outputs:

(a) List of potential headline indicators (indicators scored 1 to 3) for the Conference of the Parties to consider for adoption at its fifteenth meeting, with the indicator assessment scoring and the scoring for capacity-building requirement included (see Table 1); and

(b) List of information of processes which could be included in national reports, but are not national level indicators from tracking progress, as these indicators are binary (yes/no) which could contribute to global scale indicators (e.g. number of countries with legislation, administrative or policy frameworks) (indicators scored 5) (see Table 2).

Table 1. Potential list of headline indicators, scored according to their level of development and the capacity-building requirements⁴

Goal/Target ⁵	Proposed headline indicator	Assessment	Capacity needs	Linkages with other Goals/Targets/Sections
A	Extent of natural ecosystems by type	1 ⁶	Low	Goal B, targets 1, 2, 3
	Red List of Ecosystems (Index)	2	Medium	Targets 1, 2, 3, 17
	Red List Index	1	Low (from global database)/medium (for national monitoring)	Targets 4,5,6,7, 9, 10

³ CBD/SBSTTA/24/INF/38

⁴ Note that the indicators in this table have not been numbered (and the previous numbers have been removed) as the number would change based on this new list.

⁵ See relevant page for draft text options for goals or targets in [CBD/WG2020/4/L.2-Annex](#)

⁶ This was given a 1 due to the existence of ecosystem extent data products; however, a specific product for this indicator was not suggested.

Goal/ Target ⁵	Proposed headline indicator	Assessment	Capacity needs	Linkages with other Goals/ Targets/ Sections
	Living Planet Index	2	Low (from global database)/High (for national monitoring)	Targets 4, 5
	The proportion of populations within species with an effective population size > 500	2	Low (for national monitoring)/High (for global aggregation)	Target 4
B	National environmental economic accounts of ecosystem services Proposed rewording: Functions and services provided by ecosystems, by service type	2	High	Targets 9, 10, 11
	Ecological footprint	2	Low (if based on global data)	Targets 8,15, 16, Goal B, D, Section C
C	Indicator on monetary benefits received tbc	3	No existing methodology	Target 13, Nagoya Protocol
	Indicator on non-monetary benefits tbc	3	No existing methodology	Target 13, Nagoya Protocol
D	Official development assistance for biodiversity (SDG 15.a.1)	1	Low	Same indicator proposed for target 19
	Public [funding] [expenditure] and private [funding] [expenditure] on conservation and sustainable use of biodiversity and ecosystems [as well as development and access to innovation, technology transfer and research on innovation]	3	Medium/high	Same indicator proposed for target 19 Target 14, 21
1	Indicator of the percentage of land and seas covered by [landscape-level] spatial [plans that integrate] [integral] biodiversity [plans] tbc* Proposed rewording: % land and seas covered by biodiversity-inclusive spatial plans	3	No existing methodology	Target 21
2	"[Percentage][Area] of degraded [and] [or] converted ecosystems that are under [ecological] restoration' Proposed wording: Area under restoration	3	No methodology ready	Target 21
3	Coverage of protected areas and OECMS, by effectiveness, KBAs & ecosystems	1	Low	Target 21
4	Green Status of Species Index	2	Low/medium	Goal A
5	Proportion of fish stocks within biologically sustainable levels	1	Low	Targets 9, 21
6	Number of invasive alien species introduction events	1	Low (global)/High (national)	
7	Index of coastal eutrophication potential (SDG 14.1.1a)	1	SDG/Unclear	

Goal/ Target ⁵	Proposed headline indicator	Assessment	Capacity needs	Linkages with other Goals/ Targets/ Sections
	Pesticide [use] [load] Proposed wording to include pesticide risk	3	Low/Medium	
8	Bioclimatic Ecosystem Resilience Index (BERI)	2	High (for national monitoring). Low (from global database)/	Targets 11 and 21
9	National environmental-economic accounts of benefits from the use of wild species Proposed wording: Benefits from the use of wild species	3	See goal B	Target 5, Goal B
	Percentage of the population in traditional occupations	3	Medium	
10	Proportion of agricultural area under productive and sustainable agriculture (SDG 2.4.1)	1	Low	Goal B
	Progress towards sustainable forest management (4. Proportion of forest area under a long-term forest management plan and 5. Forest area under an independently verified forest management certification scheme) (SDG 15.2.1(4,5))	1	Low	Goal B
11	National environmental-economic accounts of regulation of air quality, quality and quantity of water, and protection from hazards and extreme events for all people, [from ecosystems] [to maintain or increase relevant ecosystem services] Proposed rewording: Regulatory functions and services provided by ecosystems, by service type	2	See goal B	Goal B
12	Average share of the built-up area of cities that is green/blue space for public use for all (SDG 11.7.1)	2	Low	Target 1, 14
13	[Percentage of countries that have] [Indicator[s] of] operational legislative, administrative or policy frameworks which [facilitate access to and] ensure fair and equitable sharing of benefits [, including those based on PIC and MAT] [shared in the ABS Clearing-House] tbc Requires rewording	3	No existing methodology	Goal C, Nagoya Protocol

Goal/ Target ⁵	Proposed headline indicator	Assessment	Capacity needs	Linkages with other Goals/ Targets/ Sections
14	Extent to which national targets [have been adopted] for integrating biodiversity values [as cornerstones for implementation] into policies, regulations, planning, development processes, poverty reduction strategies [and accounts] [are established] at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts Requires rewording	3	Low	Targets 1,8,9,10,18, Gender plan of action, Sections I, K
15	[Number of companies assessing and reporting on their] [Quantified volumes of] Dependencies [and] impacts [, risks and opportunities] of businesses on biodiversity [and related human rights] Proposed rewording to include proportion and disclosures	2	Low/Medium (once methodology agreed)	Targets 1,2,3,7,8,14 Goal D, Section b bis
16	Ecological footprint or Global environmental impacts of consumption	2	Low	Targets 8,15 Goals B, D Section C
17	Indicator of [capacity and] measures in place to [prevent] manage [or] [and control] potential [adverse] impacts of [LMOs and other products from the sustainable use of biodiversity] [LMOS resulting from modern] biotechnology on biodiversity taking into account [conservation] [cultural and social economic considerations and] human health [and environment safety] tbc Requires rewording		No existing methodology	Goal D, Cartagena Protocol
18	[Percentage reduction in] [Value of] subsidies and other incentives harmful to biodiversity, that are [redirected, repurposed or] [consistent with WTO rules] [or] eliminated [as a proportion of total subsidies] Requires rewording	3	Medium	Targets 14, 15 Goals D, A Section B bis
	Positive incentives in place to promote biodiversity conservation and sustainable use	2	Low	Targets 1,2,3,4,5,7,8, 9, 10,11,14,19 Goals A, B, C
19	Official development assistance for biodiversity (SDG 15.a.1)	1	Low	Goal B, All
	Public [funding] [expenditure] and private [funding] [expenditure] on conservation and sustainable use of biodiversity and ecosystems [as well as development and access to innovation, technology transfer and research on innovation]	3	Medium/high	Goal B, All

Goal/ Target ⁵	Proposed headline indicator	Assessment	Capacity needs	Linkages with other Goals/ Targets/ Sections
	Indicator on non-financial measures linked with 19.2 ⁷	3	No existing methodology	All
20	Indicator on biodiversity information and monitoring, including traditional knowledge [with FPIC] [and scientific knowledge], for management tbc Proposed rewording: Biodiversity information and monitoring systems monitoring, including traditional knowledge [with FPIC][and scientific knowledge], for management tbc	3	High	All
21	[Mechanisms for the full, equitable participation of] [Indicator on [the degree to which]] indigenous peoples and local communities [respecting all their rights in particular of land, waters and resources], women and girls [in all their diversity] as well as youth [and human rights defenders] participate[ion] in decision-making related to biodiversity tbc Requires rewording	3	High	All
21 and 22	Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure (SDG Indicator 1.4.2)	1 or 2	Low	All

Table 2. List of recommended global scale indicators collated from binary (yes/no) reporting from countries through national reporting

Goal/ Target	Monitoring of processes (to be aggregated to number of countries at the global level)
B	Number of countries with national constitution or legislation recognizing and implementing and monitoring a right to a healthy environment.
6	Number of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species
8	Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications that reflect biodiversity
13	Number of countries that have operational legislative, administrative or policy frameworks which related to target 13
14	Number of countries with national targets for integrating biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts
15	Number of countries taking legal, administrative or policy measures to ensure target 15 is achieved

⁷ The experts did not identify appropriate measures for targets 19.2 and 22 through the recommendations made in the Appendices to CBD/SBSTTA/24/2. These targets were added by Parties at WG2020-4 (June 2022), and therefore were not discussed at SBSTTA-24 (March 2022). Further consideration of the indicators for these targets may be required.

16	Number of countries developing, adopting or implementing policy instruments aimed at supporting the shift to SCP (SDG Indicator 12.1.1)
17	Number of countries with capacity and measures in place related to target 17
22	Number of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control (SDG indicator 5.a.2)

ITEM 5. IDENTIFICATION OF KNOWLEDGE GAPS AND FUTURE NEEDS FOR INDICATOR DEVELOPMENT

19. Under this agenda item, participants, based on the review undertaken under agenda Item 4, also discussed possible gaps in the monitoring framework. It was noted that there were multiple types of gaps. For example, it was observed that no single indicator fully captured the scope of each goal or target and their components; some goals and targets did not have readily available indicators which could be used for tracking progress; and the selection of all indicators was dependent on the final agreed wording of the corresponding goal or target, at the fifteenth meeting of the Conference of the Parties.

20. Participants noted that there were also multiple approaches to filling these gaps. There were different components that could not be monitored by all Parties using currently available headline indicators. This could be addressed by the flexible use of component, complementary or other national indicators at the national levels according to national circumstances. The lists of component and complementary indicators could be developed with further guidance on their use. As indicators were further developed and used, the list of headline indicators could be refined at a later date (e.g., following mid-term and end-term reviews of implementation). For some goals and targets, a headline indicator may not be appropriate as national processes were very different and thus the global indicators on the number of countries with a process in place may be used (Table 2). A summary of the number of indicators by type, score and goal and target (from Table 1 and 2) is summarized in Table 3. The identified gaps have been compiled in annex III. They are also summarized below (Table 4). Due to time constraints, a full assessment of the gaps in the monitoring framework in relation to all components in each of the draft goals and targets was not completed.

Table 3. Summary of indicator type and score and the associated goal or target

Goal/ Target	Number of proposed headline indicators			Binary indicators	TOTAL
	Scored as 1	Scored as 2	Scored as 3		
A	2	3			5
B		2		2	4
C			2		2
D	1		1		2
1			1		1
2			1		1
3	1				1
4		1			1
5	1				1
6	1			1	2
7	1		1		2
8		1		1	2
9			2		2
10	2				2
11		1			1
12		1			1
13			1	1	
14			1	1	2
15			1	1	2
16		1		1	2
17			1	1	2

Goal/ Target	Number of proposed headline indicators			Binary indicators	TOTAL
	Scored as 1	Scored as 2	Scored as 3		
18		1	1		2
19	1		2		3
20			1		1
21		1	1		2
22		1		1	2
TOTAL	10	13	17	10	50

Table 4. Indication of gaps noted by workshop participants (noting that these were specific gaps identified during the workshop and additional may gaps may also exist)

Goal/ Target	Availability of recommended headline indicators	Gaps noted	Proposed approach, if applicable
Goal A	Two recommended headline indicators available for use now. Three recommended headline indicators require further development	Indicators for resilience (challenging to measure directly, can be inferred from the combination of other indicators); headline level measures for connectivity; Trends in species abundance is required; and headline level measure for integrity	Resilience may be inferred from a combination of other indicators in the monitoring framework, Connectivity could be measured with a component indicator, for example: “Conservation status of migratory species as a proxy indicator of connectivity’ (Component Indicator A.2.1)” Component indicators proposed for abundance. Component indicators proposed for integrity
Goal B	Both recommended headline indicators require further development	The entire range of Nature’s Contribution to People (NCP) should be considered. Currently, not all NCP are reflected. The concept of planetary boundaries is currently in bracketed in Goal B. There may no operational indicator for biodiversity under this concept. This may also apply to goal A. Human rights-based approach and/or number of countries with national constitution or legislation recognizing a right to a healthy environment as	Participants considered the notion of an overall apex indicator in relation to planetary boundaries Component indicator could be added on human right based approaches and/or number of countries with national constitutions or legislation recognising rights to a healthy environment
Goal C	No headline indicators available now	There is currently no indicator available for measuring progress towards goal C. This may be a priority area for further consideration.	The following may be important considerations for addressing gaps for Goal C: - particular attention may be required on traditional knowledge associated with genetic resources and/or digital sequence information (DSI), and to actors who would be participating in the

			<p>fair and equitable sharing of benefits, such as IPLCs</p> <p>- Indicators related to PIC Links with EEAs could be evaluated.</p>
Goal D	<p>One headline indicator available now</p> <p>Two recommended headline indicators require further development</p>	<p>Measures for elements of 19.1 (financial measures for supporting conservation and sustainable use of biodiversity and ecosystems [as well as development and access to innovation, technology transfer and research on innovation]) and 19.2 (non-financial measures), as well as measures for technology transfer are not currently available</p>	<p>Possible priority area for development. Some data already gathered that could be used to form an indicator.</p>
Target 1	<p>No headline indicators available now</p>	<p>No existing headline indicator proposed for target 1; indicators in development are recommended.</p> <p>Current proposed headline indicator does not provide metrics for ecosystem functions and services and integrity.</p> <p>Depending on the agreed target wording, measures for connectivity may also be required</p> <p>Indicator that captures the rights of IPLCs may also be required for target 1</p>	<p>Indicators for ecosystem and function and services can be developed</p> <p>Indicators for connectivity are available and could be used as a component or complementary indicators</p>
Target 2	<p>No headline indicators available now</p>	<p>There is currently no database on areas under restoration.</p> <p>Target language is focused on restoration from converted to natural. Need definition of what is counted as restoration. If disaggregated by ecosystem type this need defining.</p> <p>Measure longer-term outcome through tracking area successfully restored.</p> <p>Need indicator of biocultural aspects of restoration.</p> <p>How to measure the stages of restoration – initial, medium, high?</p>	<p>UN Decade on Restoration may recommend indicators. This would relate to restoration in other conventions/MEAs.</p>
Target 3	<p>One headline indicator available now.</p>	<p>Governance and equity are important to capture, and relationship between OECM and IPLC territories needs to be addressed.</p> <p>Connectivity within the system of Pas and OECMs and in wider land/seascapes.</p> <p>Guidance to be developed for reporting.</p>	<p>Governance and equity elements of area-based measures may be captured the proposed component indicators and by disaggregating the proposed headline indicator for target 3 by governance type.</p> <p>The number of protected areas that have completed a site-level assessment of governance and equity (SAGE) may also be used as a component indicator to address</p>

			governance. It is related to into effectiveness measures alongside PAME methods. There are several possible component indicators available for connectivity, ⁸ including – PARC, PROTCNN.
Target 4	One headline indicator requires further development	Data on human -wildlife conflict required. Indicator on the proportion of species requiring intensive recovery actions to avoid extinction that are under active recovery management required.	Indicator in on human wildlife conflict development. Indicator on proportion of species requiring intensive recovery actions to avoid extinction that are under active recovery management is in development.
Target 5	One recommended headline indicator available now.	Proposed indicators are a proxy for the target at present, only referring to one component for the draft target. Indicators of bycatch impacts are needed (although to some extent this is captured for relevant species in disaggregation of the Red List Index). Indicators for species related to human health and access for IPLCs. Indicators proposed do not measure customary use by IPLCs or biopiracy.	Indicators for customary use by IPLCs may be covered by indicator for target 9. Biopiracy measures may be addressed by indicators developed for target 13
Target 6	One headline indicator available now.	No indicator of pathway or of implementation of invasive alien species management available.	
Target 7	One headline indicator available now. One recommended headline indicator require further development	There are no recommended headline indicators on nitrogen/phosphorus surplus in terrestrial and freshwater ecosystems. There are no headline indicator for major pollution class previously unassessed (e.g., light, noise). Assessment of impacts of pollution to biodiversity is lacking.	Could fill this gap with indicators to complement “Index of coastal eutrophication potential in other ecosystems”. There is a global dataset on light pollution and noise pollution, and other chemicals, (e.g., mercury). These could be included as complementary indicators. There may be a need for an overall generic headline indicator for pollution, with component indicators by type of pollution.
Target 8	One recommended headline indicator that requires further development	No available headline indicator. Indicators of implementation of actions, and impacts of climate change on species & ecosystems. Measures of biodiversity positive nature-based solutions or other ecosystem-based approaches for	Indicator on national [net] greenhouse[emissions] [gas inventories] from land use and land use change [by land use and land use change category, subcategory, [and] natural/modified] could be used as a complementary indicator for mitigation and adaptation/resilience through biodiversity. It may be useful

⁸ Report from the expert workshop on connectivity, expected in October 2022, will highlight key connectivity indicators.

		<p>climate mitigation (carbon storage) is not available.</p> <p>Indicator on nature-based solutions and EBA – given the huge amount of effort on introduction them, are there comparable indicators that could be identified, to develop a headline indicator?</p>	<p>to identify a subset/disaggregation of this indicator for biodiversity reporting. Alternatively, the indicator could be developed for avoided emissions (although this may be difficult).</p>
Target 9	No headline indicators available now	<p>Current indicators do not address wildlife that is harvested but not traded, NCP are not fully considered in these indicators, and the proposed indicators do not measure benefits from sustainable use for people, especially for the most vulnerable and IPLCs.</p>	<p>Knowledge gaps to be addressed with component/complementary indicators.</p>
Target 10	Two recommended headline indicators available for use now.	<p>Land conversion indicators.</p> <p>Aquaculture is not reflected in any indicator at any level, although explicitly mentioned in the target.</p> <p>Food security, provisioning services and cultural aspects, and social and cultural aspects (non-material NCP) are not reflected in the proposed headline indicators.</p> <p>Proposed indicators could be improved by disaggregation aspects related to biodiversity.</p>	<p>Land conversion may be addressed by indicators for other goals or targets.</p> <p>The possibility of developing an indicator based on certification schemes for aquaculture could be explored.</p>
Target 11	One recommended headline indicator that requires further development	<p>No headline indicators currently available</p> <p>Social and cultural aspects (non-material NCP) are not reflected in the proposed headline indicators.</p> <p>Participants recommended that Parties find indicators that address other types of NCP not reflected.</p> <p>The identification of ways/methods for cities to report to national governments and for governments to consolidate this information is also recommended.</p> <p>No reference to NBS and EbA are included in the proposed indicators.</p>	
Target 12	One recommended headline indicator that requires further development	<p>Various dimensions of the target are not reflected in the headline indicator, such as access to green and blue spaces, benefits to people in terms of well-being, etc.</p> <p>Additional disaggregation of the indicator is needed. Green spaces can be overirrigated, could include only</p>	<p>Given the inclusion of urban planning in the target, SDG 11.3.2 could be considered under this target.</p> <p>It would be useful to add per capita information to indicators for target 12.</p>

		exotic species, etc. Does not indicate use of fertilizers and pesticides.	City Biodiversity Index (Singapore index) index could be a methodology to be eventually considered.
Target 13	No headline indicators available now	No headline indicators available for target 13	Priority area for development
Target 14	One recommended headline indicator that requires further development		
Target 15	One recommended headline indicator that requires further development	Measures for the human rights elements for draft target	
Target 16	Two recommended headline indicators that require further development	Further work needed on indicators for relevance target 16	Indicators are in development
Target 17	No headline indicators available now	Indicator for draft target not yet available	
Target 18	One headline indicator available now. One recommended headline indicator requires further development	Data not currently available for an indicator for all components of the draft target. Data availability and reporting varies between countries (data on all subsidies is generally available but need agreement on portion considered harmful).	
Target 19	One headline indicator available now.	Measures for elements of 19.1 (financial measure for supporting conservation and sustainable use of biodiversity and ecosystems [as well as development and access to innovation, technology transfer and research on innovation]) and 19.2 (non-financial measures) are required	Possible priority area for development. Some data already gathered that could be used to form an indicator (see notes in annex III)
Target 20	No headline indicators available now	Indicator for draft target not currently available.	Possible priority area for development. Proposed headline indicator could be further developed to integrate indicator on the “Degree to which traditional knowledge of IPLCs is promoted and widely applied in policy making, planning and decision making/implementation for

			biodiversity”, which is another proposed indicator for Target 21
Target 21	No headline indicators available now	Indicators for draft target not currently available, including the disaggregation for the different components of the proposed targets	Indicators are in development
Target 22	One headline indicator available which may require further development.		

ITEM 6. SUMMARY AND NEXT STEPS

21. The co-chairs of the workshop presented the summary of the discussions, in particular those under agenda item 4, and the scoring process that was being used during the workshop. The co-chairs provided an overview on the expected results from the workshop and the indicators being proposed for inclusion as headline indicators in the post-2020 global biodiversity framework monitoring framework.

22. Participants suggested that a list of proposed headline indicators could include some indicators which could be used immediately and some indicators which may be prioritized for further development by the Conference of the Parties at its sixteenth meeting (subject to guidance from Parties and further work by the proposed AHTEG on the monitoring framework, as described in SBSTTA recommendation 24/2). Participants also noted that the AHTEG may need to work with additional specialized groups of experts on specific topics (e.g. ABS experts).

23. It was also noted that the monitoring framework could also include a list of targets/topics for which information could be collected from Parties on processes via questionnaires in the national report which could be aggregated into global indicators on the number of countries with a specific process (e.g. if legislation, administrative or policy frameworks are in place or if a process was inclusive) in order to assess targets where headline indicators were not appropriate and/or available.

24. Participants noted that the successful implementation of the post-2020 global biodiversity framework required being able to track progress and therefore indicators were central for this purpose. Thus, continuing work to fill key data gaps, including through capacity-building, was vital.

25. Participants also noted the importance of updating and improving the list of component and complementary indicators in order to further develop a monitoring framework that could capture additional components of each goal and target.

26. In summary, the co-chairs concluded the followings based on the results of the workshop:

(a) Appendix 1 of SBSTTA recommendation 24/2 could be completed based on Table 1 of this report;

(b) Some reference to how binary (yes/no) indicators could be included as part of the monitoring framework and could be captured in national reports should be considered in order to have global information on the number of countries with certain processes in place. This would have implications for SBSTTA recommendation 24/2 and SBI recommendation 3/11;

(c) The list of component and complementary indicators could be further developed as a key part of the monitoring framework; and

(d) The headline indicators which may need further development, and which have the capacity gaps identified in this report may inform the terms of reference of the ATHEG called for in annex II of SBSTTA recommendation 24/2.

ITEM 7. OTHER MATTERS

27. No other matters were discussed.

ITEM 8. ADOPTION OF THE REPORT

28. In accordance with established practice, the workshop co-chairs were asked to finalize the report of the workshop, with the assistance of the Secretariat, and to make the final report available for forthcoming processes, including for consideration at part II of the fifteenth meeting of the Conference of the Parties.

ITEM 9. CLOSURE OF THE WORKSHOP

29. The Chair of SBSTTA followed by the co-chairs of the workshop thanked the participants and organizers for contributing to the fruitful conclusion of the workshop and expressed the hope that the workshop results could inform forthcoming processes of the post-2020 global biodiversity framework, including part II of the fifteenth meeting of the Conference of the Parties.

30. The meeting closed at 4 p.m. on Friday, 1 July 2022.

Annex I

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Annex III

ASSESSMENT OF HEADLINE, NEW, ADDITIONAL OR ALTERNATIVE INDICATORS, THEIR LINKAGES TO THE GOALS AND TARGETS OF THE CURRENT DRAFT OF THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK, ASSOCIATED CAPACITY NEEDS AND OTHER COMMENTS

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
A	Extent of [selected] natural and [seminatural and] modified [sustainable[y]] [managed] ecosystems [in all biomes of the IUCN ecosystem typology] by type [(e.g., forest, [desert,] savannahs and grasslands, wetlands, [lakes, rivers,] [alpine vegetation,] mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)] (metadata)	1	Goal B, targets 1, 2, 3	LOW	Indicator can be disaggregated by ecosystem type (typology needs defining). This indicator corresponds to: “ ecosystems are maintained, restored or enhanced, increasing ” part of the goal. Methodology not clear. ¹¹ Metadata for the indicator to be updated to define the methodology and to show contribution to other targets.
	Red list index (SDG 15.5.1) (metadata)	1	Targets 4, 5, 6, 7, 9, 10	National application can be based on disaggregation of global index or assessment of extinction risk at national scale. LOW (if based on national disaggregation) MEDIUM (if based on national extinction risk assessment).	Very high level of acceptance. Wide use across for measuring progress towards multiple MEAs Can be disaggregated for migratory species as a measure of connectivity, as well as other disaggregation General - use of RLI (as well as RLE) disaggregated as appropriate to each target to assess impact of target implementation
	Red List of Ecosystems (Index)	2	Targets 1, 2, 3, 17	MEDIUM	Based on existing data.

⁹ [CBD/SBSTTA/24/3Add.1](#) Post-2020 global biodiversity framework: scientific and technical information to support the review of the updated goals and targets, and related indicators and baselines. Proposed indicators and monitoring approach for the post-2020 global biodiversity framework

¹⁰ Proposed at SBSTTA-24, indicators that score green or amber in annexes I and II to this document

¹¹ The indicator metadata was added to this document after the completion of this table during the workshop. The metadata is publicly available from: <https://www.post-2020indicators.org/pdfs/82?type=headline>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
					<p>Includes disaggregation relevant to several other targets (see metadata).</p> <p>Assessments for the Red List of Ecosystems need to be completed for all/ representative set of ecosystems.</p>
	<p>The proportion of populations within [umbrella] species with a [genetically] effective population size > 500 (metadata)</p>	2	Target 4	<p>Can be estimated from a population survey where data are available in existing global databases (LOW) or from national monitoring networks. (HIGH). Can be aggregated to national and global averages. Need to ensure unbiased set of species.</p>	<p>More pragmatic as a proxy than measuring genetic diversity directly. Pilot currently underway in several countries. Need to determine if method can be applied to a representative or unbiased set of species, and if/how national metrics can be aggregated to global index, or if global metric needs to be generated independently.</p> <p>Recommend deleting “umbrella” from the wording of the indicator, and clarification of the word “genetically”? “Umbrella” refers to species that can protect other species if chose for conservation. However, the effective population size of a potential umbrella species does not ensure that other species have effective populations.</p> <p>Genetic term is not necessary for the indicator name “effective population” is sufficient.</p> <p>Need to address issue of “non-genuine” change over time (e.g. from improved knowledge). Repeat surveys needed for populations. The metadata sheets suggest sensitivity analysis to account for uncertainty.</p> <p>What is the minimum data required for this indicator, and how feasible is this across enough countries?</p>
	Living Planet Index (metadata)	2	Targets 4, 5	<p>HIGH (to implement national scale population monitoring), LOW (if using data already in the Living Planet dataset)</p>	<p>Important to have a measure of trends in population abundance - no other global indicator meets this need.</p> <p>Can be disaggregated for migratory species as a measure of connectivity.</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
					<p>Based on a database providing time series of abundance. Taxonomic/ geographic representation requires development.</p> <p>Countries may not have enough data in the Living Planet Database. Data collection and monitoring required at national level in some countries.</p>
	Species Habitat Index (metadata)	4	Target 4	LOW (if using global data already in SHI), HIGH (to implement using national information)	<p>Mixed support for this indicator. Some participants felt it is not sufficiently relevant to Goal. Participants agreed indicator better suited as a component indicator.</p> <p>Provides complementary information on species distributions and how they are changing worldwide. A global database provides data over time.</p> <p>It addresses one aspect of integrity by providing a score for habitat fragmentation (the distance of any pixel to the edge of the habitat).</p> <p>The index is recently updated for vertebrates globally and nationally.¹²</p> <p>Based on modelling, where no country-level data on distributions of species. If national data are available these can be incorporated. Not an effective measure of ecosystem integrity because it only captures the contribution of habitat availability to species' status - e.g. a species may have suitable habitat remaining but be extirpated owing to overhunting. Models for each species are not validated.</p>
	NEW: Changing status of evolutionary distinct and globally endangered species (EDGE Index)	4			Keep as complementary indicator for measuring progress towards Goal A

¹² <https://mol.org/indicators/habitat/regions>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	NEW: Comprehensiveness of conservation of socioeconomically as well as culturally valuable species	4	Targets 5, 9, 10 Goal B		May be more relevant for goal B, and targets 5, 9, and 10. Relevance also depends on whether cultivated species are included in goal A.
	NEW: Ecosystem Intactness Index	4			To be discussed in the context of the headlines indicator for draft target 1
	NEW: Ecosystem Integrity Index	4			Not currently available
	NEW: Proportion of populations maintained within species	4			Seems challenging to measure. Not currently available
	NEW: Change in the extent of water-related ecosystems over time (SDG indicator 6.6.1)	n/a			Disaggregation of proposed headline indicator: “Extent of [selected] natural and [seminatural and] modified [sustainable[y]] [managed] ecosystems [in all biomes of the IUCN ecosystem typology] by type [(e.g., forest, [desert,] savannahs and grasslands, wetlands, [lakes, rivers,] [alpine vegetation,] mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)]”
	NEW: Forest area as a proportion of total land area (SDG indicator 15.1.1)	n/a			Disaggregation of proposed headline indicator: “Extent of [selected] natural and [seminatural and] modified [sustainable[y]] [managed] ecosystems [in all biomes of the IUCN ecosystem typology] by type [(e.g., forest, [desert,] savannahs and grasslands, wetlands, [lakes, rivers,] [alpine vegetation,] mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)]”
	NEW: Live coral cover	n/a			Disaggregation of proposed headline indicator: “Extent of [selected] natural and [seminatural and] modified [sustainable[y]] [managed] ecosystems [in all biomes of the IUCN ecosystem typology] by type [(e.g., forest, [desert,] savannahs and grasslands, wetlands, [lakes, rivers,] [alpine vegetation,] mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats)]”

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
B	<p>National environmental economic accounts of ecosystem services (metadata)</p> <p>Proposed rewording: Functions and services provided by ecosystems, by service type</p>	2	Targets 9, 10 and 11	HIGH (see comments)	<p>Use as indicator dependent on the inclusion of “ecosystem services” in goal B.</p> <p>National SEEA is a methodology/tool to provide useful information and can be a valuable source of indicators.</p> <p>Complementary indicators could include for example the proportion of GDP that biodiversity loss represents.</p> <p>Implementation in process in some countries and endorsed in several processes. Accounting levels not high in all countries. Capacity-building is required.</p> <p>According to UNSD capacity needs assessment can be used to assess some services and functions with use of land cover maps, but not all.</p> <p>EEAs are required.</p> <p>In some regions – SEEA stakeholders different from CBD stakeholders. Establishment of inter/transdisciplinary groups required.</p> <p>IT infrastructure, institutionalization of the processes required.</p>
	NEW: Ecological footprint	2	16	LOW	<p>Indicator scores 2, subject to final wording of the goal (whether “ecological footprint” is included in the text).</p> <p>The indicator would benefit from further development to include land degradation, biodiversity loss and other variables in relation to human footprint.</p> <p>It would be useful to have elements of telecoupling introduced to qualify and disaggregate consumption/production – as complementary indicators.</p> <p>Interest in per capita footprint indicator.</p> <p>Global indicator to be validated by Parties</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	NEW: Change in the extent of water-related ecosystems over time (SDG indicator 6.6.1)	4	Goal A		Could be used as a complementary indicator for goal A.
	NEW: Expected loss of Phylogenetic Diversity (Complementary indicator b.1)	4	Goal A		Could be considered under goal A.
	NEW: Progress towards sustainable forest management (Proportion of forest area under a long-term forest management plan) (Headline indicator 10.0.2, SDG indicator 15.2.1) (metadata)	4	Target 10		This was considered in the discussion of the headline indicators for target 10.
	NEW: Proportion of agricultural area under productive and sustainable agriculture (SDG indicator 2.4.1) (metadata)	4	Target 10		Could be considered under target 10.
	Number of countries with national constitution or legislation recognising a right to a healthy environment.	5	Goals A and D, several targets and Section <i>b.bis</i>		
	Processes and tools to monitor the implementation of a right to a healthy environment (e.g. Included in NBSAPs and reported in national reports.	5	Goals A, D, several targets and Section <i>b.bis</i>		
C	Indicator on monetary benefits received (place holder name) (metadata)	3	Target 13 notes	High	<p>Recommended conducting more work to develop indicators through utilizing experts on the subject. Target 13 and goal C indicators should be considered together. Additional notes are included under target 13 of this document.</p> <p>It is recommended to pay particular attention to traditional knowledge associated with genetic resources and/or DSI, and to actors who would be participating in the fair and equitable sharing of benefits, such as IPLC.</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	Indicator on non-monetary benefits (placeholder name) (metadata)	3	notes under target 13	High	<p>Indicator related to PIC is needed.</p> <p>Links with EEAs could be evaluated.</p> <p>Experts recommended further work is needed to address the monitoring gaps for goal C, utilizing experts on the subject. Target 13 and goal C indicators should be considered together. Additional notes are included under target 13 of this document.</p> <p>It is recommended to pay particular attention to traditional knowledge associated with genetic resources and/or DSI, and to actors who would be participating in the fair and equitable sharing of benefits, such as IPLC.</p> <p>Indicator related to PIC.</p> <p>Links with EEAs could be evaluated.</p>
D	Indicators on funding for implementation of the global biodiversity framework [available and ready to use] tbc (aligned with Target 19) * (metadata)	1 -3	Indicators for target 21 maybe relevant Target 14	LOW - HIGH	<p>Use indicators for target 19:</p> <p>“Official development assistance for biodiversity” (existing) and “Public [funding] [expenditure] and private [funding] [expenditure] on conservation and sustainable use of biodiversity and ecosystems [as well as development and access to innovation, technology transfer and research on innovation]”</p> <p>Indicator for target 19.2. requires development)</p> <p>Wording of the indicator need to capture funding for “means of” implementation</p>
1	% land and seas covered by biodiversity-inclusive spatial plans (metadata)	3	Target 21	LOW	<p>The proposed headline indicator captures focus of target, but it doesn’t exist currently and would need further development. Would need to define what sorts of plans count, and what “biodiversity-inclusive” means.</p> <p>Would be useful to add the notion of change (increase) in land covered by the plans.</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
					<p>Depending on target wording, measures for connectivity of natural ecosystems in land/seascapes may be required.</p> <p>The data for this proposed indicator can be derived from disaggregation of the proposed headline indicator for goal A for critical/ vulnerable/intact ecosystems.</p> <p>Consider development to address implementation too.</p> <p>Definition of “biodiversity-inclusive” is required.</p> <p>This could also be a candidate for a level 5 indicator (global indicators developed from national reports).</p>
	<p>NEW: Extent of selected natural and modified ecosystems by type (i.e. forest, savannahs and grasslands, wetlands, mangroves, saltmarshes, coral reef, seagrass, macroalgae and intertidal habitats) (metadata)</p>	4			<p>Disaggregation of the proposed headline indicator for goal A, focusing on subset of ecosystems (e.g. intact or connected- depends on final wording of target, or the interest of the different parties). Measures outcome.</p> <p>Discussion on this indicator is based on disaggregation of integrity/ connectivity indicators from goal A, to address language in the target on critical or vulnerable ecosystems, etc.</p>
2	<p>[Percentage][Area] of degraded [and] [or] converted ecosystems that are under [ecological] restoration (metadata)</p>	3	Target 21	MEDIUM-HIGH	<p>Proposed headline indicator title captures essence of draft target 2, but data needed.</p> <p>Indicator could be reworded as “area under restoration” to avoid having to define ‘degraded’ (Since there is no consensus on the term “degraded” at present)</p> <p>Need to define what counts as “under restoration” (active vs. passive).</p> <p>Need to consider how to include successfully restored areas (according to a reference state) that are no longer under active restoration.</p> <p>Indicator to be disaggregated by ecosystem type.</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
					<p>Need to consider what restoration is taking place, including what is being restored and the end state of restoration efforts. There are differences between terrestrial, freshwater, marine restoration activities. Monitoring of restoration shows both the progress and end state.</p> <p>There is a need to have a database on restoration projects (something like the World Database of Protected Areas) for areas under restoration.</p>
	NEW: Global Ecosystem Restoration Index (Complementary indicator T1.13.)	4			GERI no longer under development.
3	Coverage of protected areas and OECMS, by effectiveness, KBAs & ecosystems (Metadata)	1 – 2	Target 21	LOW (for area coverage and coverage of KBAs), LOW-MEDIUM (for effectiveness).	<p>Proposed headline indicator may be seen as three distinct indicators: coverage (area); effectiveness, and coverage of important sites (KBAs and other areas of importance for biodiversity).</p> <p>Scores 1 – 2 (Area = 1, Coverage of sites 1, Effectiveness – 2)</p> <p>Work is underway to define effectiveness aspect.</p> <p>Important to ensure that these different components for draft target 3 are measured for OECMs separately.</p> <p>Connectivity within the system of PAs and OECMs and in wider land/seascapes also needs to be measured. There are several indicators for connectivity available, including PARC, PROTCONN.</p> <p>Monitoring of coverage well established via WDPA & WDKBA. Several methodologies available to assess effectiveness - point towards ongoing work to bring these all together under one hood, guidance to be developed for reporting.</p> <p>Parties may like to use measures for coverage of other areas of importance for biodiversity, where appropriate.</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	NEW: Connectivity within the system of protected areas and other effective area-based conservation measures (Component indicator 3.1.4)	4			<p>Gaps - relate to acceptance and validation across countries of the global dataset for the proposed component indicator, covers terrestrial and freshwater, but not marine.</p> <p>Several other metrics available, including - ProtConn and PARC (terrestrial only)</p> <p>PARC combines connectivity with representativity for terrestrial protected areas (can be expanded into marine and freshwater¹³):</p> <p>The complete time-series of existing PARC results, extending all the way from 1970 through to 2020, is now publicly accessible through the CSIRO Data Access Portal, and will soon also be accessible via the UN Biodiversity Lab. These data are provided at 30-arcsecond (<1km) grid resolution across the entire land surface of the planet. Country-level results for this same time period are also currently downloadable from the Environmental Performance Index website.</p> <p>ProtConn has a well-established methodology, used for measuring progress towards Aichi Biodiversity Target 11. Methodology available¹⁴</p> <p>Also see results of expert workshop on connectivity to be provided as an information document to COP-15.</p>
	NEW: IUCN Green List of Protected and Conserved Areas (Complementary indicator t3.5.)	4			Growth in number of sites on Green List will reflect measure of effort to assess sites, and may contribute as a measure of effectiveness.
	NEW: Number of protected areas that have completed a site-level	4	21		An indicator of governance equity that may contribute to the effectiveness aspect of the target. It may partly be encompassed

¹³ <https://www.cbd.int/doc/c/815b/9afa/941a22fc6c8760acbf3ab6a3/geobon-headline-indicators-en.pdf>

¹⁴ <https://dopa.jrc.ec.europa.eu/var/www/app/app/static/dopa/files/factsheets/en/DOPA%20Factsheet%20C1%20EN%20Connectivity.pdf>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	assessment of governance and equity (SAGE)				<p>by the proposed headline indicator “Coverage of protected areas and OECMS, by effectiveness, KBAs & ecosystems”.</p> <p>Recommend develop as component indicator. Measures for PA governance need to be broader than SAGE.</p>
	NEW: Species Protection Index (Component indicator 3.4.1)	4			<p>The Species Protection Index (SPI) measures how much suitable habitat for single species is under protection and estimates the regional or global biodiversity representativeness of terrestrial protected areas.</p> <p>The SPI is an EBV-(Essential Biodiversity Variable)-based indicator produced by GEO BON¹⁵ that is part of the Biodiversity Indicator Partnership (BIP) and was used as Core Indicator in the IPBES assessments. Data and interactive SPI map are hosted on Map of Life.¹⁶</p>
	NEW: Coverage of Protected areas and OECMS and traditional territories (by governance type	4	Target 21		<p>Relevant if target wording refers to traditional territories.</p> <p>Could be a derived as a disaggregation of headline indicator “Coverage of protected areas and OECMS, by effectiveness, KBAs & ecosystems”.</p> <p>Traditional territories relevant if demonstrated to achieve biodiversity outcomes and electing to not be designated as OECMs.</p>
	NEW: Diversity of governance types and effectiveness in biodiversity conservation	4			Indicator not defined. Could be a derived as a disaggregation of headline indicator “Coverage of protected areas and OECMS, by effectiveness, KBAs & ecosystems.
	NEW: Number of countries implementing national legislation, policies or other measures	4			Needs to be related specifically to PAs and OECMs. Global metric only.

¹⁵ <https://geobon.org/ebvs/indicators/species-protection-index/>

¹⁶ <https://mol.org/indicators/>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	regarding FPIC related to conservation				
	NEW: Protected area and OECM management effectiveness	n/a			Indicator is proposed in the “Technical submission from the United Kingdom of Great Britain and Northern Ireland (UK) on the monitoring framework for the post-2020 global biodiversity framework” ¹⁷
	NEW: Protected area coverage of key biodiversity areas (Component indicator 3.2.1. SDG 14.5.1 and 15.1.2)	n/a			Disaggregation of the proposed headline indicator “Coverage of protected areas and OECMS, by effectiveness, KBAs & ecosystems”
	NEW: Protected Area Management Effectiveness (PAME) (Protected Planet) (Component indicator 3.3.1)	n/a			Disaggregation of the proposed headline indicator “Coverage of protected areas and OECMS, by effectiveness, KBAs & ecosystems” Complementary indicator recommended: Number of PAs with PAME assessments
	NEW: Coverage of Protected areas and OECMS (by effectiveness) (Metadata)	n/a			Duplicates the proposed headline indicator “Coverage of protected areas and OECMS, by effectiveness, KBAs & ecosystems”
4	NEW: Red List Index (Headline indicator. SDG Indicator 15.5.1) (metadata)	goal A	Goal A and targets 5, 6, 7, 9, 10		Depends on whether milestone components end up in goal A or target 4. Also relevant as outcome metric.
	Green Status of Species Index	2	Goal A	LOW-MEDIUM.	Proportion of species requiring intensive recovery actions to avoid extinction that are under active recovery management. Can be readily developed from existing Red List data. Outcome can be measured through the Red List Index ¹⁸ and RLI & Genetic diversity indicators.

¹⁷ See page 25

¹⁸ <https://www.post-2020indicators.org/pdfs/84?type=headline>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
					<p>Green Status Assessments need implementing for representative samples of species.</p> <p>Method developed but requires application to more species to produce index trends over time. Will be a useful metric of species recovery when ready. Important to develop.</p>
	NEW: The proportion of populations within species with a genetically effective population size > 500 (metadata)	Component			Depends on whether milestone components end up in goal A or target 4. Also relevant as an outcome metric.
	Proportion of species populations that are affected by human wildlife conflict [requiring intensive recovery due to human wildlife conflict] (metadata)	Component		MEDIUM-HIGH	<p>Development underway - methods need defining, data collecting. Important gap to fill</p> <p>Revised title: “Trends in effective and sustainable management of HWC and coexistence”</p>
	Number of plant [and animal] genetic resources [for food and agriculture] secured in medium or long-term conservation facilities (SDG 2.5.1) (metadata)	4			Depends on whether final target text includes domesticated/ cultivated species. Restricted to plants.
	NEW: Number of plant and animal genetic resources for food and agriculture secured in medium- or long-term conservation facilities (Complementary indicator t9.4. SDG indicator 2.5.1)	n/a			Disaggregation of SDG indicator 2.5.1 “Number of plant [and animal] genetic resources [for food and agriculture] secured in medium or long-term conservation facilities”
5	Proportion of fish stocks within biologically sustainable levels (metadata)	1	Targets 9, 21	LOW	<p>Outcome can be partly measured through disaggregation of the Red List Index (RLI).</p> <p>Relevant to only a subset of the target. Best indicator out there at the moment for this target.</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
					This is an example use that is the focus of this target. A similar indicator for other taxa used is required.
	NEW: Red list index (Headline indicator A.0.3. SDG Indicator 15.5.1) (metadata)	Goal A	Goal A, targets 4, 6, 7, 9, 10		
	NEW: Living Planet Index	Goal A			Relevant here if restricted to utilised/traded species/population
	NEW: Red List Index (for internationally traded species and for migratory species) (A.0.3 Red list index. SDG Indicator 15.5.1) (metadata)	Component	Goal A, targets 4,6,7, 9, 10		Appendix 2 lists RLI (impact of use) and RLI (impacts of fisheries) – for information about sustainability of use. Available globally and regionally but not yet nationally. Would be useful when available for each country. Latter indicator includes bycatch - not covered elsewhere in indicators.
	Proportion of [wildlife] [wild species] [wood and plant] that is harvested and traded legally and sustainably	Component		HIGH	Under development. but important to use when available Needs to be focused on the set of species that are harvested/ traded/ used, and the proportion of these for which this is sustainable/safe etc. Proportion of utilised species that is harvested/ traded legally and sustainably (3). Methods need developing (incl. consideration of customary sustainable use), data collecting.
	NEW: Degree of implementation of international instruments aiming to combat illegal, unreported, and unregulated fishing	4			SDG indicator
5	NEW: Proportion of local breeds classified as being at risk, extinction (Complementary indicator a.53. SDG indicator 2.5.2)	4			Does not reflect sustainability of use, rather the homogenization of farmed breeds.
	NEW: Trends of trade and commercialization in	4	Target 9	Not identified	More relevant to target 9

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	biodiversity-based products that is sustainable and legal (in line with BioTrade Principles and/or CITES requirements)				
	NEW: Zoonotic disease in wildlife (Complementary indicator Goal b.6)	4		Not identified	Not just related to sustainability of use
	NEW: Proportion of traded wildlife that was poached or illicitly trafficked Component indicator 4.2.1. (SDG indicators 15.7.1 and 15.c.1 ¹⁹)	n/a			Duplicates indicator on “Proportion of [wildlife] [wild species] [wood and plant] that is harvested and traded legally and sustainably”
6	Number of invasive alien species introduction events	1		LOW (for global) HIGH (for national application).	<p>Rate of invasive alien species spread²⁰ (2) Methods under development. Data needs to be collected.</p> <p>The impact could also be measured through disaggregation of Red List Index & the Red List of Ecosystems</p> <p>Assessment of wider impacts of invasive species</p> <p>Definitions critical. Priority areas undefined.</p> <p>Need to consider how to distinguish genuine change from improved knowledge & search effort - need to report effort too (to avoid perverse slowdown in reporting), and back cast introductions where information available on date of introduction (consider relevant baseline).</p> <p>How to address/distinguish climate migration, assisted /beneficial migration and potentially introductions?</p>
	NEW: Red List Index (impacts of invasive alien species)	Component	Goal A, targets 4, 5, 7, 9, 10		Available regionally but not yet nationally. Would be useful when available for each country.

¹⁹ <https://unstats.un.org/sdgs/metadata/files/Metadata-15-07-01.pdf>

²⁰ [Metadata](#)

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	(Component Indicator 6.3.3, SDG Indicator 15.5.1) (metadata)				
	NEW: Rate of invasive alien species impact (Component indicator 6.3.1)	4			<p>Indicator not available.</p> <p>Indicator needs to be reworded “rate of impact” doesn’t make sense. Could be named “Trends in impact”</p> <p>The indicator represents growth in number of invasive impactful species in country.</p> <p>Need to consider how address genuine change vs improved knowledge.</p>
	NEW: Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas (in relation to the main vectors and pathways of spreading of such species)	4			Distribution element covered by ones above. Abundance only available for a limited number of species. Regional only.
	NEW: Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species (Complementary indicator t5.2. SDG indicator 15.8.1)	5			Useful at global scale. Could be further developed to score the degree of adoption and implementation of legislation and policies, which could then be reported by Parties
7	Index of coastal eutrophication potential (metadata)	1		Unclear	<p>Indicator is available, and coastal ecosystems show an end-point of pollution in terrestrial and freshwater ecosystems as well.</p> <p>Significant gap includes no direct indicators on terrestrial and freshwater ecosystems and nitrogen/phosphorus surplus in those. Could fill this gap with complementary indicators matching 7.0.1 in other ecosystems.</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	[Most hazardous] Pesticide [use] [load] [per area of cropland] (metadata)	2			<p>SDG 14.1.1a indicator.</p> <p>Pesticide use is the FAO indicator, but SBSTTA-24 discussion noted that risk is most important.</p> <p>Two indicators that are risk-based under development (see target 7 science brief)- potential as Headline indicators. These are TAT (Total Applied Toxicity) indicator.²¹ Applied pesticide toxicity shifts towards plants and invertebrates, even in GM crops.²² and Risk Score(RS) and Pesticide Health Risk Index by Country (PHRIC) indicators.²³ The pesticide health risk index- An application to the world's countries.²⁴</p> <p>Indicators should also relate to aquatic ecosystems.</p> <p>An indicator which measures at the source of pollution could fill a gap.</p> <p>Because of variation of pesticides used, focus will vary among countries, but some categories e.g. POPs are global.</p> <p>Consolidation of indicators for target 7 needed</p>
	NEW: Red List Index (impacts of pollution) (Headline indicator A.0.3. SDG Indicator 15.5.1) (metadata)	Component	Goal A, targets 4, 5, 6, 9, 10		Disaggregation of headline indicator Red List Index in Goal A. Available Globally and regionally but not yet nationally
	Pesticide risk	Component		LOW/MEDIUM	Two candidate indicators are TAT (Total Applied Toxicity) indicator & Risk Score (RS) and Pesticide Health Risk Index by Country (PHRIC)

²¹ Schulz R, Bub S, Petschick LL, Stehle S, Wolfram J. 2021.

²² Science 372:81-84. DOI: DOI: 10.1126/science.abe1148.

²³ Maggi, F., Tang, F. H., Black, A. J., Marks, G. B., & McBratney, A. (2021).

²⁴ Science of the Total Environment, 801, 149731.

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	NEW: Red List of Ecosystems (Complementary indicator a.8.)	Component	Goal A, targets 1, 2, 3, 17		Disaggregation of RLE indicator in goal A. Rephrase as “Red List Index of ecosystems (impacts of pollution)”
	Floating plastic debris density [by micro and macro plastics] (SDG 14.1.1b) (metadata)	4			Indicator only relevant if target 7 covers plastics (excluded from draft text during the fourth meeting of the Working Group, but included in text options during part II of its third meeting). The indicator is very ocean focused, excludes other environments. Unclear on the coverage of monitored globally. Could qualify as a complementary indicator.
	NEW: Amount of pesticide use per hectare	N/A			Not suitable as an indicator. Included under indicator in development for target 7: “[Most hazardous] Pesticide [use] [load] [per area of cropland]”
	Name, amount/ volume/ concentration of highly hazardous pesticides by type (per land/marine area)	4			Could be used as supporting indicator for risk calculation. The headline indicator on pesticides still needs to be developed. Alternative proposed: Amount of pesticide use per hectare.
	Use and risk of pesticide indicator (by risk category for biodiversity)	4			Could be used as supporting indicator for risk calculation. Alternative proposed: Amount of pesticide use per hectare.
	NEW: Trends in the amount of litter in the water column including microplastics and on the seafloor Index of coastal eutrophication; (b) plastic debris density	N/A			Covered indicators proposed for target 7: “Index of coastal eutrophication potential” (available) and “Floating plastic debris density [by micro and macro plastics]” (SDG 14.1.1b) (available)
	NEW: Trends in Nitrogen Deposition	N/A			Covered indicators proposed for target 7: “Index of coastal eutrophication potential”
8	Bioclimatic Ecosystem Resilience Index	2	Targets 11 and 21	LOW – global scale	Global terrestrial layer, quantifying ease of response of species by movement/distribution shift through landscape.

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
				National implementation would require relevant national datasets and recalculation. HIGH	<p>Describes the capacity of natural ecosystems to retain species diversity in the face of climate change, as a function of ecosystem area, connectivity and integrity. Global dataset available, updated and curated over time.</p> <p>May need validation with Parties, and how they can replicate/use it with their national data, though now widely available.</p> <p>During the sessions at part II of SBSTTA-24 in Geneva, concern was expressed by several Parties that the sole headline indicator currently listed for target 8 will not track progress against biodiversity outcomes. BERI directly addresses the extent to which actions will “minimize the impact of climate change on biodiversity” by assessing the capacity of natural ecosystems to retain species diversity in the face of climate change, as a function of ecosystem area, connectivity and integrity.</p> <p>Methodology available.²⁵</p>
	National [net] greenhouse[emissions] [gas inventories] from land use and land use change [by land use and land use change category, subcategory, [and] natural/modified] (metadata)	4	Target 21		<p>Existing reporting to climate change convention. May be duplicative to report to CBD.</p> <p>Analysis of the survey on proposed headline indicators,²⁶ participants listed the indicator as red (does not meet the selection criteria for headline indicators), and not clear on biodiversity relevance/impacts.</p> <p>May need to consider how to use this LULUCF indicator for biodiversity monitoring.</p>

²⁵ Ferrier et al (2020). <https://www.sciencedirect.com/science/article/abs/pii/S1470160X2030491X>

²⁶ [Notification 2022-034](#)

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
					Recommended as a complementary indicator
	NEW: Species Threat Abatement and Restoration Metric (climate change)	4	Targets 2, 4		STAR ²⁷ is a measure of potential contribution of conservation/restoration actions in particular locations to reduce global extinction risk. Limited use in relation to target 8. It is possible to develop an index that extracts a climate change component, but this has not been done yet.
	NEW: Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications that reflect biodiversity (based on information from UNFCCC and SDG 13.2.1) (Component indicator 8.1.1)	5	Synergies with UNFCCC monitoring and reporting		Recommended as a component indicator. Need to identify each (climate) instrument more specifically and how they might be scored for biodiversity relevance. May be good to incorporate a measurement of the inclusion of EBA or NBS into the national adaptation plans by the different parties or consider: “Number of ecosystem-based adaptation (EBA) initiatives in NBSAPs” indicator
9	National environmental-economic accounts of benefits from the use of wild species (metadata) Proposed wording: Benefits from the use of wild species	3	Target 5, Goal B	The capacity needs are noted in goal B as this indicator is based on the same methodological approach as B.0.1	The national environmental-economic accounts could be a relevant methodology and source of indicators at the level of species if adjusted. The indicator needs to be formulated as such, with clear elements to be assessed. Social and cultural dimensions are currently not reflected. SEEA updated regularly in consistence with systems of national accounting.
	NEW: Percentage of the population in traditional employment (Component indicator d9.1.2)	3		LOW	The indicator is not specific to biodiversity. There are issues with the measure (percentage) and terminology (employment).

²⁷ <https://www.iucnredlist.org/assessment/star>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
					<p>It is already implemented under an organization, with limited options to change.</p> <p>It would be recommended to use original wording (traditional occupation instead of employment).</p> <p>And incorporate IPBES methodology.</p> <p>Indicator relates to measures related to implementation of the global plan of action of indigenous languages.</p>
	NEW: Degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing (Complementary indicator t5.5. SDG indicator 14.6.1).	4	To be considered under target 5		
	NEW: Proportion of fish stocks within biologically sustainable levels (Headline indicator 5.0.2. SDG indicator 14.4.1) (metadata)	4	To be considered under target 5		
	NEW: Proportion of wildlife that is harvested and traded legally and sustainably (Headline indicator 5.0.1) (metadata)	4	To be considered under target 5		
	NEW: Red List Index (Headline indicator A.0.3. SDG 15.5.1) (metadata)	4	Goal A, targets 4, 5, 6, 7, 9, 10		Considering the sustainability limits of customary use.
10	Proportion of agricultural area under productive and sustainable agriculture (SDG 2.4.1) (metadata)	1	Goal B	LOW	Perhaps only a subset of the aspects of 2.4.1 are relevant to the target.
	Progress towards sustainable forest management (4. Proportion of forest area under a long-term forest management plan and 5.	1	Goal B	LOW	

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	Forest area under an independently verified forest management certification scheme (SDG 15.2.1(4,5)) (metadata)				
	NEW: Agrobiodiversity Index	4			Relevant, to maybe consider as complementary indicator.
	NEW: Average income of small-scale food producers, by sex and indigenous status (Component indicator 10.1.1. SDG indicator 2.3.2	4			Relevant, to be considered as complementary indicator. The indicator would be more relevant if it was more specific to biodiversity – e.g. focusing on small-scale food producers that sustainably use biodiversity.
	NEW: Number of certified forest areas under sustainable management with verified impacts on biodiversity conservation (Complementary indicator t3.12.)	4	Goal B and target 22		Covered to large extent under SDG 15.2.1 The indicators related to target 22 (SDG 5.a.1) in relation to tenure rights, is also linked to target 10.
	NEW: Proportion of land that is degraded over total land area (SDG indicator 15.3.1)	4	Target 2 (possibly others)		Recommend considering under these other targets to avoid duplication. Land is converted under production as opposed to natural ecosystems (could be a disaggregation).
11	National environmental-economic accounts of regulation of air quality, quality and quantity of water, and protection from hazards and extreme events for all people, [from ecosystems] [to maintain or increase relevant ecosystem services] (metadata)	2	Goal B	The capacity needs are described under goal B as this indicator is based on the same methodological approach.	Recommend using national environmental-economic accounts as methodology and source of indicators, as appropriate. Parties to decide on the ecosystem services to be included. Proposed rewording: Regulatory functions and services provided by ecosystems, by service type.
	NEW: Change in the extent of water-related ecosystems over time (Complementary indicator t.11. SDG indicator 6.6.1)	4			Addressed in other targets/ goals/ indicators

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
12	Average share of the built-up area of cities that is green/blue space for public use for all (SDG 11.7.1) (metadata)	2	Targets 1 and 14	LOW	<p>Would be useful to add per capita information in this indicator.</p> <p>Links to target 14 – policies.</p> <p>Links to target 1 – spatial planning and biodiversity inclusiveness.</p>
13	[Percentage of countries that have] [Indicator[s] of] operational legislative, administrative or policy frameworks which [facilitate access to and] ensure fair and equitable sharing of benefits [, including those based on PIC and MAT] [shared in the ABS Clearing-House] (metadata)	3 a 5	Goal C	HIGH	<p>Operationalization of legislative, administrative or policy frameworks which [facilitate access to and] ensure fair and equitable sharing of benefits [, including those based on PIC and MAT] [shared in the ABS Clearing-House]</p> <p>Recommended conducting more work to develop indicators through utilizing experts on the subject.</p>
14	Extent to which national targets [have been adopted] for integrating biodiversity values [as cornerstones for implementation] into policies, regulations, planning, development processes, poverty reduction strategies [and accounts] [are established] at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts (metadata)	2	<p>Long-term action plan for mainstreaming</p> <p>Targets 1,8,9,10,18</p> <p>Gender plan of action</p> <p>Sections I, K</p>	LOW	<p>Templates for national reporting needed.</p> <p>Clear guidance needed on reporting for this indicator.</p> <p>Easy to implement as indicator. Existing use of this indicator in NRs.</p> <p>SCBD is the current custodian for this indicator.</p> <p>General consensus that the data should be collected.</p> <p>Text of indicator, if adopted, would need to reflect the final wording of target 14</p>
	Value of subsidies and other incentives harmful to biodiversity, that are redirected, repurposed or eliminated (Headline indicator 18.0.1)	4	Target 18		<p>Use for target 18 (1)</p> <p>In theory may be better suited for target 18, but may also be relevant to target 14, data is available on positive incentives.</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
15	[Number of companies assessing and reporting on their][Quantified volumes of] Dependencies [and] impacts[, risks and opportunities] of businesses on biodiversity [and related human rights] (metadata)	2	Targets 1,2,3,7,8,14 Goal D, b bis para. 8		<p>Development of a methodology is in progress and will be available by 2023. Companies requested disclosure within 5 years, on a voluntary basis.</p> <p>More challenging for small and medium size business, capacity-building (heavy).</p> <p>Number of countries taking legal, administrative or policy measures to ensure target 15 is achieved” (low capacity needs).</p> <p>Compliance measures</p> <p>Noting that the revised wording of target 15 asks for disclosure rather than reporting.</p> <p>Instead of numbers of companies should be reworded to proportion or percentage of companies.</p> <p>Suggest potential new indicator ranked 5 – “Number of countries taking legal, administrative or policy measures to ensure target 15 is achieved” (low capacity needs)</p>
16	Ecological footprint (Component indicator 15.4.1) or NEW: Global environmental impacts of consumption	2 or 4	Targets 8,15 Goals B and D Section C of the framework	LOW	<p>Component indicator</p> <p>Carbon elements not relevant for monitoring target 16</p> <p>Further work needed on indicators to be more relevant to target 16</p> <p>Comparative assessment of two alternative indicators (Ecological footprint, global environmental impacts of consumption)</p>
	Global environmental impacts of consumption	2/4	Alternative to ecological footprint		
17	Indicator of [capacity and] measures in place to [prevent] manage [or] [and control]	3	Goal D		Number of proposals made at SBSTTA-24 that suggest potential areas for an indicator to be developed

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	potential [adverse] impacts of [LMOs and other products from the sustainable use of biodiversity] [LMOS resulting from modern] biotechnology on biodiversity taking into account [conservation] [cultural and social economic considerations and] human health [and environment safety] tbc*		Implementation to Cartagena Protocol		<p>Depends on the measures identified</p> <p>Could be ranked as 5- In national reporting</p> <p>Same as in the survey – does not meet the criteria</p> <p>Repetition of the draft target (indicator wording needs further work)</p>
18	Value of subsidies and other incentives harmful to biodiversity, that are redirected, repurposed or eliminated (Headline indicator 18.0.1	1			Data is available on positive incentives
	NEW: Positive incentives in place to promote biodiversity conservation and sustainable use	2	Targets 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 14 and 19 Goals A, B, C	LOW	<p>OECD indicator on positive incentives as measure for part of target 18, could be proposed as a headline indicator or component indicator.</p> <p>Capacity-building requirements are considered low for this indicator since 120 countries are already reporting data</p>
	[Percentage reduction in] [Value of] subsidies and other incentives harmful to biodiversity, that are [redirected, repurposed or] [consistent with WTO rules] [or] eliminated [as a proportion of total subsidies]	3	Targets 14 and 15 Goals D, A Section B bis	MEDIUM	<p>SDG 12.c.1. on fossil subsidies available</p> <p>Need agreement on which portions of subsidies and other incentives are considered harmful to biodiversity</p> <p>Terms defined in the glossary to the post-2020 global biodiversity framework</p> <p>data availability and reporting vary between countries (data on all subsidies is generally available but need agreement on portion considered harmful)</p>

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
19.1	Official development assistance for biodiversity (SDG 15.a.1) (metadata)	1	All ²⁸ Resource mobilization strategy Capacity-building strategy	LOW to MEDIUM MDBs and non DAC members	Useful for addressing part of this target 19.1 Elements of draft target 19 may not need to be measured by headline indicators.
	Public [funding] [expenditure] and private [funding] [expenditure] on conservation and sustainable use of biodiversity and ecosystems [as well as development and access to innovation, technology transfer and research on innovation]	3	All ²⁹ Resource mobilization strategy Capacity-building strategy Interlinkages with national reporting. Potential link with the financial reporting framework		Proposed measure is a relevant indicator for target 19.1. Possible to generate this indicator, for example, through COFOG, data is gathered on public expenditure (not private funding). May also be a useful scale indicator for addressing the finance gap for implementation of the post-2020 framework GAP: private funding. Needs further development. Data sources and scope need to be explored.
19.2	Indicator to measure target 19.2	3	All ³⁰	TBC – cannot assess capacity-building needs at this stage	

²⁸ All draft goals, targets and relevant sections of the post-2020 global biodiversity framework

²⁹ All draft goals, targets, and relevant sections of the post-2020 global biodiversity framework

³⁰ All draft goals, targets, and relevant sections of the post-2020 global biodiversity framework

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
			Capacity-building strategy Technical and scientific cooperation platform		
20	Indicator on biodiversity information and monitoring, including traditional knowledge [with FPIC][and scientific knowledge], for management (metadata)	3	All ³¹ Linkages to strategies to enhance biodiversity Knowledge management (SBI Item 7)	TBC – may be HIGH	<p>GAP: Needs to be further developed, to be addressed during intersessional period for discussion at the sixteenth meeting of the Conference of the Parties</p> <p>Indicator on “extent to which NBSPAs NDCs, and national development plans reflect traditional knowledge, innovation and practices with appropriate safeguards – currently collated by the Secretariat to the Convention on Biological Diversity, could be used for this target,</p> <p>Indicator could be reworded to include biodiversity information “system”</p> <p>Recognize as important element of the monitoring framework and a headline indicator needs to be developed.</p> <p>Indicator 20.1. to be further developed to integrate indicator on the “Degree to which traditional knowledge of IPLCs is promoted and widely applied in policy making, planning and decision making/implementation for biodiversity”</p>
21	[Mechanisms for the full, equitable participation of] [Indicator on [the degree to which]] indigenous peoples and local communities [respecting all	3	All ³²	TBC – may be HIGH	<p>Potential as cross-cutting indicator</p> <p>Could be used a measure for target 22 (could also relate to target 13).</p>

³¹ All draft goals, targets and relevant sections of the post-2020 global biodiversity framework

³² All draft goals, targets and relevant sections of the post-2020 global biodiversity framework

G/T	Headline indicator ⁹ and new additional or alternative indicators ^{10,3}	Assessment	Linkages	Capacity needs	Comments
	their rights of land, waters, and resources], women and girls [in all their diversity] as well as youth [and human rights defenders] participate[ion] in decision-making related to biodiversity tbc				Needs data disaggregation for different groups listed
22	NEW: Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure (SDG Indicator 1.4.2)	1 or 2	All ³³	Low to medium	Existing Tier 2 SDG indicator with current World Bank and UN Habitat are custodian Cross-cutting indicator: Can also be used to measure targets 3 and 8, and targets that call for participation of IPLCs

³³ All draft goals, targets and relevant sections of the post-2020 global biodiversity framework.