*August,2020*

IUCN presents below comments to the Note by the Executive Secretary “Information Document prepared for SBSTTA24 by UNEP-WCMC in collaboration with the Biodiversity Indicators Partnership”. These comments are made without prejudice to IUCN’s evolving and final position on the Post-2020 Global Biodiversity Framework.

IUCN emphasizes that extensive comments regarding indicators for the Post-2020 framework have been made while commenting, in a separate submission, on the Draft monitoring framework for the post-2020 global biodiversity framework, its components and monitoring elements. Some of those comments are reflected here but not all.

**Table 1. Indicators for monitoring elements of the draft goals**

| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Components of the draft Goals**  **(copy/paste text from** [**CBD/SBSTTA-24/post-2020-monitoring.en.pdf**](https://www.cbd.int/sbstta/sbstta-24/post2020-monitoring-en.pdf)**)** | **Goal Monitoring Elements**  **(copy/paste text from** [**CBD/SBSTTA-24/post-2020-monitoring.en.pdf**](https://www.cbd.int/sbstta/sbstta-24/post2020-monitoring-en.pdf)**)** | **Indicator name** | **Responsible Institution for the indicator** | **Available today (X) or under active development (Y)** | **Date of availability for indicator in development (Year)** | **Year of last update (e.g. 2019)** | **Time series and frequency of updates (e.g. 1985-2019, annually)** | **Methodology available for national use (Y/N)** | **Global indicator can be disaggregated for national use (Y/N)** | **National data aggregated to form global indicator (Y/N)** | **Used in GBO-4 (Y/N)** | **SDG indicator (Y/N)** | **Indicator used to measure other MEAs or processes (e.g. Ramsar Convention, IPBES, CMS)** | **Comments** |
| GA2. Ecosystem integrity and connectivity (terrestrial, freshwater and marine ecosystems) | Trends in fragmentation and quality of forest ecosystems | Red List Index (forest-dependent species) | IUCN and BirdLife International | X |  | 2020 | Annually | Y | Y |  |  |  |  | Add this indicator as suggested in BIP Inf.doc. Shows trends in aggregate extinction risk of forest-dependent species |
| GA3. Prevent  extinction and  improve the  conservation  status of  species | Trends in species extinctions | Changing status of Evolutionarily Distinct and Globally Endangered Species (EDGE Index) – subset by numbers of EDGE species that have gone extinct | IUCN SSC Phylogenetic Diversity Task Force / ZSL | Y | 2020 | 2020 | Annually | Y | Y | Y | N | N |  | This tracks the change in extinction risk of EDGE species through time. Reductions in extinction risk of EDGE species will represent the averted loss of phylogenetic diversity (linked PD indicator proposed in Goal B). |
| GA3. Prevent extinction and improve the conservation status of species | Trends in species extinctions | Percentage of  threatened  species that  are improving  in status according to the Red List | IUCN | X | 2024 |  | Annually |  |  |  |  |  |  | Add this indicator as suggested in BIP Inf.doc |
| GA3. Prevent extinction and improve the conservation status of species | Trends in species extinctions | Species protection index |  |  |  |  |  |  |  |  |  |  |  | This is a response measure (degree to which species ranges are covered by PAs), not a measure of the status of species let alone trends in extinctions. Remove from here. |
| GA3. Prevent extinction and improve the conservation status of species | Trends in species extinctions | Number of species extinctions  (birds and mammals). |  |  |  |  |  |  |  |  |  |  |  | Note that data are available from 1500, not 1990 |
| GA3. Prevent extinction and improve the conservation status of species | Trends in number of extinctions | Number of extinctions prevented by conservation action (IUCN Green Status of Species) | IUCN/ University of Oxford | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Extinctions prevented is a key output of the IUCN Green Status of Species.    Green Status measures species recovery and conservation impact, and has been undergoing rigorous scientific testing and development since 2012 and will be officially launched in 2021. |
| GA3. Prevent extinction and improve the conservation status of species | Trends in conservation status of species | Species Threat Abatement and Restoration Metric | Provided through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| GA3. Prevent extinction and improve the conservation status of species | Trends in conservation status of species | Green Status Index (species recovery status) | IUCN/ University of Oxford | Y | 2025 |  | 2025, annually | Y | Y | N | N | N | N | Goal is that a structured sample of species assessments will be completed by 2025 to enable a Green Status index analogous to RLI.  Assessments require baseline estimation at 1950, so with first publication of index will be able to see changes between 1950-present. |
| GA3. Prevent extinction and improve the conservation status of species | Trends in conservation status of species | Percentage of threatened species that are improving in status (as measured by IUCN Green Status of Species) | IUCN/ University of Oxford | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Monitoring element copied from original document, red text added, information in other columns added.  Assessments require baseline estimation at 1950, so as species are assessed will be able to see changes between 1950-present. |
| GA3. Prevent  extinction and  improve the  conservation  status of  species | Trends in conservation status of species | Changing status of Evolutionarily Distinct and Globally Endangered Species (EDGE Index) | IUCN SSC Phylogenetic Diversity Task Force / ZSL | Y | 2020 | 2020 | Annually | Y | Y | Y | N | N |  | This tracks the change in extinction risk of EDGE species through time. Reductions in extinction risk of EDGE species will represent the averted loss of phylogenetic diversity (linked PD indicator proposed in Goal B). |
| GA4. Increase the number and health of species | Trends in species abundance | Green ~~List~~ Status of Species | IUCN/ University of Oxford | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | This row is copied from the original document, red text added. Green List was the original name, but it has been changed in response to consultations.  Assessments require baseline estimation at 1950, so as species are assessed will be able to see changes between 1950-present. |
| GA4 Increase the population and health of species | Trends in species abundance | Wild Bird Index | RSPB/BirdLife International | X |  | 2018 | 1970 onwards. Annually | Y | Y | Y | Y | N |  | Add this indicator as suggested in BIP Inf.doc. Available for Europe, N America and some African countries |
| GA6 Protection of critical ecosystems | Trends in areas of particular importance for biodiversity conserved | Proportion of KBAs in favourable condition | KBA Secretariat | Y | 2025 |  | Annually | Y | Y | Y | N | N |  | Add this indicator as suggested in BIP Inf.doc. It is being developed by KBA Partnership based on KBA monitoring by NGOs and governments. |
| GA6. Protection of critical  ecosystems | Trends in areas of particular importance for biodiversity conserved | Average proportion of KBAs covered by protected areas.  This indicator is also calculated for terrestrial, marine, freshwater and mountain ecosystems separately | BirdLife International & KBA Partnership. Data from the World Database of KBAs | X |  | 2020 | 1900-2020 updated Annually | Y | Y | N | N | Y  SDG Indicators 14.5.1; 15.1.2 & 15.4.1 | N | This is an existing Aichi target 11 indicator and used to monitor four ecosystems under the SDGs 14 and 15 |
| GB1. Nature’s regulating contributions including climate regulation, disaster prevention and other | Trends in pollination | Red List Index (pollinating  species) | IUCN and BirdLife International |  |  |  |  |  |  |  |  |  |  | Note that correct baseline year is 1988 |
| GB1. Nature’s regulating contributions including climate regulation, disaster prevention and other | Trends in regulation of climate | Climatic Impact Index | RSPB/BirdLife International | Y |  |  | Annually | Y | Y | Y | Y |  |  | Shows trends in impact (positive and negative) of climate change on bird populations - a measure of the degree to which climate regulation is happening |
| GB2. Nature’s material contributions, including food, water and others | Trends in the provision of medical, biochemical, and genetic resources from biodiversity | Expected loss of Phylogenetic Diversity (IPBES PD Indicator) | IUCN SSC Phylogenetic Diversity Task Force / Australian Museum / IPBES | X |  | 2020 | Annually | Y | Y | Y | N | N | IPBES | The total Evolutionary Distinctiveness of threatened species from assessed taxonomic groups tracked to estimate the amount of PD expected to be lost over time (linked to EDGE Index proposed in Goal A). |
| GB3. Nature’s non-material contributions including cultural | Maintenance of options | Expected loss of Phylogenetic Diversity (IPBES PD Indicator) | IUCN SSC Phylogenetic Diversity Task Force / Australian Museum / IPBES | X |  | 2020 | Annually | Y | Y | Y | N | N | IPBES | The total Evolutionary Distinctiveness of threatened species from assessed taxonomic groups tracked to estimate the amount of PD expected to be lost over time (linked to EDGE Index proposed in Goal A). |

**Table 2. Indicators for monitoring elements of the draft targets (with example entries)**

| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Components of the draft Targets**  **(copy/paste text from** [**CBD/SBSTTA-24/post-2020-monitoring.en.pdf**](https://www.cbd.int/sbstta/sbstta-24/post2020-monitoring-en.pdf)**)** | **Target Monitoring Elements**  **(copy/paste text from** [**CBD/SBSTTA-24/post-2020-monitoring.en.pdf**](https://www.cbd.int/sbstta/sbstta-24/post2020-monitoring-en.pdf)**)** | **Indicator name** | **Responsible Institution for the indicator** | **Available today (X) or under active development (Y)** | **Date of availability for indicator in development (Year)** | **Year of last update (e.g. 2019)** | **Time series and frequency of updates (e.g. 1985-2019, annually)** | **Methodology available for national use (Y/N)** | **Global indicator can be disaggregated for national use (Y/N)** | **National data aggregated to form global indicator (Y/N)** | **Used in GBO-4 (Y/N)** | **SDG indicator (Y/N)** | **Indicator used to measure other MEAs or processes (e.g. Ramsar Convention, IPBES, CMS)** | **Comments** |
| T1.1. Increase in area of  terrestrial, freshwater and  marine ecosystems under  spatial planning | Trends in area under spatial land-use plans | Percentage of spatial plans utilising information on key biodiversity areas | KBA Secretariat | X |  | 2020 | 2019-2020 updated Annually | N | Y | Y | N | N | N | This indicator would provide a measure of the representativeness of spatial plans and is being tracked by the KBA Partnership for each country |
| T1.1. Increase in area of terrestrial, freshwater and marine ecosystems under spatial planning | Trends in area under spatial land-use plans | Percentage of spatial plans utilising KBA information | KBA Secretariat | Y | ? |  |  |  | Y | Y | N | N | N | Add this indicator as suggested in BIP Inf.doc; to be reported on by governments in National Reports as part of their overall reporting on spatial plans for Target 1. Indicator could be compiled from national reports by CBD Secretariat, or by KBA Partnership |
| T1.2. Prevention of reduction and fragmentation of natural habitats due to land/sea use change | Trends in extent and rate of change of forest ecosystems | Red List Index (forest-dependent species) | IUCN | X |  | 2020 | annually | Y | Y | N | N | N |  | Add this indicator as suggested in BIP Inf.doc |
| T1.2. Prevention of reduction and fragmentation of natural habitats due to land/sea use change | Trends in extent and rate of change of other marine and coastal ecosystems | Red List Index (marine species) | IUCN | X |  | 2020 | annually | Y | Y | N | N | N |  | Add this indicator as suggested in BIP Inf.doc |
| T1.2. Prevention of reduction and fragmentation of natural habitats due to land/sea use change | Change on the extent of water related ecosystems | Red List Index (wetland species) | IUCN | X |  | 2020 | annually | Y | Y | N | N | N | Y | Add this indicator as suggested in BIP Inf.doc |
| T1.4. Restoration of  degraded ecosystems | Trend in the area of degraded  ecosystems restored | Species Threat Abatement and Restoration Metric (restoration) | Provided through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| T2.1. Area of terrestrial, freshwater and marine ecosystem under protection and conservation | Trends in extent of protected areas | Coverage by protected areas of important sites for mountain biodiversity (SDG indicator 15.4.1) |  |  |  |  |  |  |  |  |  |  |  | Move to Element 2.2 (it’s the mountain equivalent of SDG indicator 15.1.2) |
| T2.2. Areas of particular importance for biodiversity are protected and conserved as priority | Trends in proportion of areas of particular importance for biodiversity protected and conserved | Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type |  |  |  |  |  |  |  |  |  |  |  | Duplicated in row 42 (which gives SDG indicator number) |
| T2.2. Areas of particular  importance for biodiversity  are protected and conserved  as priority | Trends in proportion of areas of particular  importance for biodiversity protected and conserved | Proportion of KBAs in favourable condition | BirdLife International & KBA Partnership. Data from the World Database of KBAs | Y | 1990 | 2020 | 1990-2020 updated every 5 years | N | Y | Y | N | N | N | This indicator is being developed by the KBA Partnership and will be able to be calculated retrospectively for many sites  This is an indicator on the outcome of PA coverage |
| T2.2. Areas of particular  importance for biodiversity  are protected and conserved  as priority | Trends in proportion of areas of particular  importance for biodiversity protected and conserved | Average proportion of KBAs covered by protected areas.  This indicator is also calculated for terrestrial, marine, freshwater and mountain ecosystems separately | BirdLife International & KBA Partnership. Data from the World Database of KBAs | X |  | 2020 | 1900-2020 updated Annually | Y | Y | N | N | Y  SDG Indicators 14.5.1; 15.1.2 & 15.4.1 | N | This is an existing Aichi target 11 indicator and used to monitor four ecosystems under the SDGs 14 and 15  This is an indicator of PA coverage of important sites (it does not reflect the outcomes of protection) |
| T2.4. Effective management and equitable governance of the system of protected areas and other effective areabased conservation measures |  |  |  |  |  |  |  |  |  |  |  |  |  | Overlaps/duplicates component T2.6 Increased protection and conservation effectiveness |
| T2.4. Effective management and equitable governance of the system of protected areas and other effective areabased conservation measures | Trends in management effectiveness | Proportion of KBAs in favourable condition | KBA Secretariat | Y | 2025 |  | Annually | Y | Y | Y | N | N |  | Add this indicator as suggested in BIP Inf.doc, being developed by KBA Partnership based on KBA monitoring by NGOs and governments. |
| T2.4. Effective management and equitable governance of the system of protected areas and other effective area based conservation measures | Trends in management effectiveness | Ramsar Management Effectiveness Tracking Tool (rMETT) | Ramsar | Y | ? | ? | ? | Y | N | ? | N | N |  | <https://www.ramsar.org/sites/default/files/documents/library/cop12_dr15_management_effectiveness_e.pdf> |
| T2.6. Increased protection and conservation effectiveness | Trend in conservation effectiveness of protected areas and other area-based conservation measures | Ramsar Management Effectiveness Tracking Tool (rMETT) | Ramsar | Y | ? | ? | ? | Y | N | ? | N | N |  | <https://www.ramsar.org/sites/default/files/documents/library/cop12_dr15_management_effectiveness_e.pdf> |
| T2.6. Increased protection and conservation effectiveness | Trend in conservation effectiveness of protected areas and other area-based conservation measures | Proportion of KBAs in favourable condition | KBA Secretariat | Y | 2025 |  | Annually | Y | Y | Y | N | N |  | Add this indicator as suggested in BIP Inf.doc, being developed by KBA Partnership based on KBA monitoring by NGOs and governments. |
| T3.1 Active recovery and conservation management actions | Trends in species recovery and reintroduction programmes | Species Threat Abatement and Restoration Metric | Pilot availability through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| T3.1 Active recovery and conservation management actions | Trends in species recovery and reintroduction programmes | Changing status of Evolutionarily Distinct and Globally Endangered Species (EDGE Index) - subset by percentage of EDGE species improving in status. | IUCN SSC Phylogenetic Diversity Task Force / ZSL | Y | 2020 | 2020 | Annually | Y | Y | Y | N | N |  | This tracks the change in extinction risk of EDGE species through time. Reductions in extinction risk of EDGE species will represent the averted loss of phylogenetic diversity (linked PD indicator proposed in Goal B). |
| T3.1. Active recovery and conservation management actions | Trends in species recovery programmes | Percentage of threatened species that are improving in status. |  |  |  |  |  |  |  |  |  |  |  | Note that name of indicator should be "Percentage of threatened species that have improved in status" Note that baseline year is 2020 not 1993. Improved is relative to 2020 baseline, and encompasses species whose declines have stabilised (and hence are better than in 2020, but are not yet improving). |
| T3.1. Active recovery and conservation management actions | Trends in species recovery programmes | Proportion of species requiring intensive recovery actions to avoid extinction that are under active recovery management | IUCN | Y | 2024 |  | annually |  |  |  |  |  |  | Add this indicator as suggested in BIP Inf.doc, being developed by IUCN. |
| T3.1. Active recovery and conservation management actions | Trends in species recovery and reintroduction programmes | Proportion of Conservation Dependent species (IUCN Green Status of Species Index) | IUCN/ University of Oxford | Y | 2025 |  | 2025, annually | Y | Y | N | N | N | N | Green Status measures species recovery and conservation impact, and has been undergoing rigorous scientific testing and development since 2012 and will be officially launched in 2021.  Goal is that a structured sample of species assessments will be completed by 2025 to enable a Green Status index analogous to RLI.  Assessments require baseline estimation at 1950, so with first publication of index will be able to see changes between 1950-present. |
| T3.1. Active recovery and conservation management actions | Trends in species recovery programmes | IUCN Green Status of Species | IUCN | Y | 2025 |  | Annually | Y | Y |  | N | N | Can be applied to SDGs? |  |
| T3.1. Active recovery and conservation management actions | Trends in species recovery and reintroduction programmes | Proportion of threatened species that are improving in recovery status. (IUCN Green Status of Species Index) | IUCN/ University of Oxford | Y | 2025 |  | 2025, annually | Y | Y | N | N | N | N | IUCN species status is listed under this monitoring element, but we assume this refers to threat status (Red List), not recovery status (Green Status) |
| T3.1 Active recovery and conservation management actions | Trends in species recovery and reintroduction programmes | Changing status of Evolutionarily Distinct and Globally Endangered Species (EDGE Index) - subset by percentage of EDGE species improving in status. | IUCN SSC Phylogenetic Diversity Task Force / ZSL | Y | 2020 | 2020 | Annually | Y | Y | Y | N | N |  | This tracks the change in extinction risk of EDGE species through time. Reductions in extinction risk of EDGE species will represent the averted loss of phylogenetic diversity (linked PD indicator proposed in Goal B). |
| T4.2. Trade is legal, sustainable and safe for human health and biodiversity | Trends in proportion of biological resources traded within the established limits/quotas | Red List Index (internationally traded species) | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Add this indicator as suggested in BIP Inf.doc |
| T4.3. Use is legal, sustainable and safe for human health and biodiversity | Trends in sustainability of use of species | Red List Index (impacts of utilisation) | IUCN | X |  | 2020 | annually | Y | Y | N | N | N |  | Need to reinstate monitoring elements and indicators on the impacts of the harvest, trade and use of biological resources on biodiversity. RLI (impacts of utilisation) shows trends in status of all species driven only by unsustainable use or successful effort to enhance the sustainability of use) |
| T4.3. Use is legal, sustainable and safe for human health and biodiversity | Trends in sustainability of use of species | Red List Index (impacts of fisheries) | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Need to reinstate monitoring elements and indicators on the impacts of the harvest, trade and use of biological resources on biodiversity. RLI (impacts of fisheries) shows trends in status of all species driven only by unsustainable fishing or successful efforts to enhance the sustainability of use. It represents a subset of the indicator above, but speaks to a key sector of use. |
| T4.3. Use is legal, sustainable and safe for human health and biodiversity | Trends in sustainability of use of species | Red List Index (internationally traded species). | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Need to reinstate monitoring elements and indicators on the impacts of the harvest, trade and use of biological resources on biodiversity. RLI (internationally traded species) shows trends (driven by all factors) on species in international trade |
| T4.3. Use is legal, sustainable and safe for human health and biodiversity | Trends in sustainability of use of species | Red List Index (species used for food and medicine) | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Need to reinstate monitoring elements and indicators on the impacts of the harvest, trade and use of biological resources on biodiversity. RLI (species used for food and medicine) shows trends (driven by all factors) on this set of utilised species |
| T4.3. Use is legal, sustainable and safe for human health and biodiversity | Trends in sustainability of use of species | Species Threat Abatement and Restoration Metric (biological resource use) | Pilot availability through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| T5.2. Effective detection,  identification, prioritisation  and monitoring of invasive  alien species | Trends monitoring of invasive alien species | Proportion of key biodiversity areas threatened by invasive alien species | BirdLife International & KBA Partnership. Data from the World Database of KBAs | Y | 1990 | 2020 | 1990-2020 updated every 5 years | N | Y | Y | N | N | N | This indicator is being developed by the KBA Partnership and will be able to be calculated retrospectively for many sites |
| T5.5. Eradication, control or management of IAS in priority sites | Trends in elimination of IAS and their impacts in protected areas and areas with other effective area-based conservation measures | Proportion of Key Biodiversity Areas threatened by IAS | KBA Secretariat | Y | 2025 |  | Annual | Y | Y | Y | N | N |  | Add this indicator as suggested in BIP Inf.doc, being developed by KBA Partnership based on KBA monitoring by NGOs and governments. |
| T5.5. Eradication, control or management of IAS in priority sites | Trends in elimination of IAS and their impacts in protected areas and areas with other effective area-based conservation measures | Species Threat Abatement and Restoration Metric (invasive species) | Pilot availability through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| T6.4. Reduction of pollution from other sources | Change in the impact of pollution on biodiversity | Red List Index (impacts of pollution) | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Reinstate the element for biodiversity impacts (Change in the impact of pollution on biodiversity).  Reinstate "RLI (impacts of pollution)", which shows trends in status of all species driven only by pollution or successful efforts to control/prevent/mitigate pollution. |
| T6.4. Reduction of pollution from other sources | Change in the impact of pollution on biodiversity | Species Threat Abatement and Restoration Metric (pollution) | Pilot availability through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| T7.2. Minimised negative  impacts on biodiversity from  any mitigation, adaptation  and disaster risk reduction  measures | Trends in integration of biodiversity  consideration in design of mitigation, adaptation  and disaster risk reduction projects | Species Threat Abatement and Restoration Metric (climate change) | Pilot availability through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| T8.1. Sustainable management of aquatic wild species of fauna and flora, including fisheries | Trends in sustainable fisheries management | Red List Index (impacts of fisheries) | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Reinstate RLI (impacts of fisheries) which shows trends in status of all species driven only by unsustainable fisheries impacts or successful efforts to manage fisheries more sustainably. |
| T8.1. Sustainable management of aquatic wild species of fauna and flora, including fisheries | Trends in sustainable fisheries management | Species Threat Abatement and Restoration Metric (fishing) | Pilot availability through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| T8.2. Sustainable management of terrestrial wild species of fauna and flora | Trends in terrestrial wild species of fauna used for food and medicine | Red List Index (species used for food or medicine) | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Reinstate RLI (species used for food or medicine) which shows trends in status of those species used for food or medicine |
| T8.2. Sustainable management of terrestrial wild species of fauna and flora | Trends in terrestrial wild species of fauna used for food and medicine | Species Threat Abatement and Restoration Metric (biological resource use) | Pilot availability through IBAT (which is maintained by BirdLife, CI, IUCN, UNEP-WCMC) | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Species Threat Abatement and Restoration Metric is available to support establishment of science-based targets towards post-2020 goals. Repeat application of the metric will allow derivation of an indicator from 2021 onwards. |
| T9.1. Sustainable management of agricultural biodiversity, including soil biodiversity, cultivated plants and farmed and domesticated animals and of wild relatives | Trends in genetic diversity of domesticated animals and of wild relatives | Red List Index (wild relatives) | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Reinstate RLI (wild relatives) which shows trends in status of wild relatives of farmed and domesticated birds and mammals |
| T9.1. Sustainable management of agricultural biodiversity, including soil biodiversity, cultivated plants and farmed and domesticated animals and of wild relatives | Trends in area of agriculture under sustainable practices | Wild Bird Index (farmland specialists) | RSPB/BirdLife/PECBMS/USGS | X |  | 2018 | Annually | Y | Y | Y | Y |  |  | Reinstate this indicator as a measure of the sustainability of agriculture |
| T9.2. Sustainable management of aquaculture | Trends in production of aquaculture under sustainable practices |  |  |  |  |  |  |  |  |  |  |  |  | Need to add indicators for inland water aquaculture; some measure of proportion of aquacultured species within biologically sustainable levels. |
| T10.3. Regulation of freshwater quantity, quality, location and timing | Trends in natural freshwater ecosystems proving good ambient water | Freshwater Provisioning Index for Humans | City University New York | Y | 2021? | 2016 | Baseline exists; could be updated annually? | Y | ? | ? | N | N | Could be applied to SDG 6 | Green, P.A., Vörösmarty, C.J., Harrison, I., Farrell, T. Saenz, L. & Fekete, B.M. (2015). Freshwater ecosystem services supporting humans: pivoting from water crisis to water solutions. Global Environmental Change 34, 108–118 |
| T11.2. Contributions of biodiversity to human health and well-being | Trends in species that provide essential services | Red List Index (pollinating species) | IUCN | X |  | 2020 | Annually | Y | Y | N | N | N |  | Reinstate this indicator, as suggested in BIP Inf.doc |
| T13.1. Biodiversity reflected  in policies and planning at all  levels | Trends in integration of biodiversity and  ecosystem service values into planning  processes | The proportion of national biodiversity policies and plans that incorporate national spatial assessments of KBAs and other areas of importance for biodiversity | KBA Secretariat | X |  | 2020 | 2019-2020 updated Annually | N | Y | Y | N | N | N | This indicator would provide a measure of the use of national KBA assessments in government policies and plans and is being tracked by the KBA Partnership for each country |
| T17.2. Elimination, phasing out or reform of incentives and subsidies the most harmful to biodiversity | Trends in the number and value of subsidies, harmful to biodiversity |  |  |  |  |  |  |  |  |  |  |  |  | This monitoring element should also include indicators for (i) ‘Trends in potentially environmentally harmful elements of government support to water management’ (eg. subsidies for pumping aquifers for irrigation; poorly planned water-related infrastructure); Trends in potentially environmentally harmful elements of government support to marine and inland fisheries’ (e.g. fuel for fisheries, subsidies for poor fish and aquaculture practices; see SDG 14.6 which addresses the need to prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing ) |
| T19.1. Availability of reliable and up-to-date biodiversity related information | Trends in the availability of biodiversity related information | IUCN Green Status of Species | IUCN | Y | 2021 |  | Annually | Y | Y |  | N | N | Can be applied to SDGs? |  |
| T19.1. Availability of  reliable and up-to-date  biodiversity related  information | Trends in the availability of biodiversity related  information | Number of countries in which comprehensive national key biodiversity area assessments have been updated using the KBA Global Standard | KBA Secretariat | Y |  | 2020 | 2019-2020 updated Annually | N | Y | Y | N | N | N | This indicator would provide a measure of the use of biodiversity-related information by individual countries and will be tracked by the KBA Partnership for each country |
| T19.1. Availability of  reliable and up-to-date  biodiversity related  information | Trends in the availability of biodiversity related  information | Percentage of taxonomic classes and ecosystem types for which comprehensive national key biodiversity area assessments have been made | KBA Secretariat | Y |  | 2020 | 2019-2020 updated Annually | N | Y | Y | N | N | N | This indicator would provide a measure of the representativeness of biodiversity information used by individual countries and will be tracked by the KBA Partnership for each country |
| T19.1. Availability of reliable and up-to-date biodiversity related information and/or T19.4. Availability of research and knowledge, | Trends in the availability of biodiversity related information and/or Trends in the development of biodiversity related knowledge | The number of countries in which comprehensive national KBA Assessments have been updated using the KBA Global Standard | KBA Secretariat | Y | 2022 |  | Annually |  |  | Y | N | N |  | Add this indicator as suggested in BIP Inf.doc |
| T19.1. Availability of reliable and up-to-date biodiversity related information and/or T19.4. Availability of research and knowledge, | Trends in the availability of biodiversity related information and/or Trends in the development of biodiversity related knowledge | The percentage of taxonomic classes and ecosystem types for which comprehensive national KBA assessments have been made | KBA Secretariat | Y | 2022 |  | Annually |  |  |  | N | N |  | Add this indicator as suggested in BIP Inf.doc |
| T19.1. Availability of reliable and up-to-date biodiversity related information | Trends in the available of biodiversity related information | Growth in number of species with Green Status assessments | IUCN/ University of Oxford | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Green Status measures species recovery and conservation impact, and has been undergoing rigorous scientific testing and development since 2012 and will be officially launched in 2021. |
| T19.4. Availability of research and knowledge, including traditional knowledge, innovations and practices of indigenous peoples and local communities with their free, prior and informed consent | Trends in the development of biodiversity related knowledge | Number of IUCN Green Status of Species assessments | IUCN/ University of Oxford | Y | 2021 |  | 2021, annually | Y | Y | N | N | N | N | Green Status measures species recovery and conservation impact, and has been undergoing rigorous scientific testing and development since 2012 and will be officially launched in 2021. |
| T19.4. Availability of research and knowledge, including traditional knowledge, innovations and practices of indigenous peoples and local communities with their free, prior and informed consent | Trends in the development of biodiversity related knowledge | IUCN Green Status of Species | IUCN | Y | 2021 |  | Annually | Y | Y |  | N | N | Can be applied to SDGs? |  |

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| **General Comments** | |
| **Page** | **Comment** |
| 3-4 | The criteria for indicator selection and development outlined on pages 3-4 of the Information Document on Indicators for the Post-2020 Global Biodiversity Framework are sound. However, we are concerned that the first and most important criterion, (“Alignment with the goal or target, with a clear understanding of how change in the indicator indicates change in the issue of concern”) does not appear to have been assessed. This assessment would provide the key linkage with the Draft monitoring framework for the post-2020 global biodiversity framework. As a result, the list of indicators appears unstructured, with unclear relationships between indicators and goal/target components.  Moreover, two other important criteria also appear to have not been assessed:   * Easily understandable: a) conceptually, how the indicator relates to the goal or target, b) in its presentation, and c) in the interpretation of the data. * Scientific robustness: the methodology for the indicator and the underlying data is published in a peer reviewed location that can be accessed, and the methodology can be repeated by other scientists or agencies and the same overall result obtained.   Indeed the latter is not the case for several of the proposed indicators, to the best of our knowledge.  We therefore recommend insertion of three additional columns into this document, to reflect these three crucial criteria. |
| 15-on | An improved careful structuring of the list of indicators could aid in reducing duplication and complexity. This is critical for uptake.  For example, for Goal A, the table should begin with indicators that are relevant across all ecosystem types (e.g., Ecosystem Area Index, Red List Index of Ecosystems and Living Planet Index), before moving to those relevant across a given realm (e.g. all terrestrial ecosystem e.g. Human Footprint Index, or wetlands e.g. Wetland Extent Trends Index). Ecosystem-specific indices (e.g. Live Coral Cover or Forest Cover) should be nested under the appropriate realm (e.g. marine and terrestrial respectively), and not duplicated under ‘all ecosystem type’ trends. Similarly, generic terrestrial indices should not be repeated for multiple ecosystem types (e.g. grasslands), unless a strong justification can be provided for how the generic indicator can be recalculated to provide information specific to the ecosystem type with which it is aligned. The duplication of indicators throughout the framework makes the table unnecessarily long, confusing and inconsistent. |
|  | There is a lack of definition and consistency of key terms. For example, the goal components ‘integrity and connectivity’ are changed to ‘fragmentation and quality’ as monitoring elements, which are quite different. This means that listed indicators may be poorly placed to represent the goal component. In particular, terms such as ‘ecosystem integrity’ should be well-defined (i.e. comprising composition, structure and function of an ecosystem); this would also allow terms such as connectivity and fragmentation, which form an aspect of ecosystem integrity, to be removed from goal wording and incorporated into the definition of integrity as examples of what that umbrella term encompasses. |
|  | The currently proposed indicator set lacks specificity to goal/target components, because their relevance to particular components are not defined or justified, and because of repeated use of indicators.  Many indicators are repeated across multiple goal components, and again in targets. We recommend separating indicators of state or trend of biodiversity, and those for threatening processes and for action (e.g. restoration and protection). For example, indicators suggested for restoration (T1.4) relate to degradation rather than restoration effort or outcome. |
|  | The same metrics should not serve multiple goal components with strong alignment. The specificity of indicators and complementarity of information would be greatly strengthened by using indicators only where they are strongly aligned with the goal/target component. Currently, indicators are listed even when their alignment to the goal is tenuous. This will result in an unnecessarily large and non-specific indicator set, so that progress is confounded between different goals and difficult to differentiate. Stronger alignment and specificity will result in a clearer and more compelling narrative of evidence to identify whether particular goals and targets are on track.  For cases where some indicators may not be available for some goal/target components, a rank-order based on alignment could be suggested (using more aligned indicators where possible, and less aligned indicators if data are lacking). |
|  | There is a lack of a reference list, and references for methods, which undermines scientific credibility of the report. Each indicator should have specified references that underpin it.  Some indicators appear to have unclear or misleading information in the table. The Information Document implies that the criteria are intended to address the capacity of nations to calculate the indicators with their own data. Yet some indicators proposed rely on unpublished databases or methods to be disaggregated to a national level eg in Table 1, columns 9, 10 and 11 are ticked Y but should not be for the “Species Habitat Index”). Others do not, to our knowledge, have their method published in the peer-reviewed literature (e.g. Species Habitat Index, Biodiversity Habitat Index). Criteria around scientific robustness need to be systematically and consistently addressed across all indicators. |
| 17 | The new ‘Sustainable inland fisheries index’ listed for T8.1 is recommended because the indicator currently recommended for this monitoring element, SDG Indicator 14.4.1, has only been applied to marine capture fisheries (and there are insufficient existing data to allow this indicator to be applied to inland waters fisheries). We recommend the specific development of a sustainable inland fisheries indicator that is based on a nationally applied method for assessing the adoption of ecosystem-based management approaches for inland fisheries. The method could be applied nationally, or by river catchments, depending on spatial origin of fisheries data. The indicator would also be relevant to the following elements: trends in the provision of food and feed from biodiversity; trends in areas of particular importance for ecosystem services conserved). The resulting indicator could be applied to SDG 14 to address assessment of inland water fisheries and would also have direct relevance for other MEA processes (eg Ramsar, IPBES), and could be adapted for other MEAs (eg. CMS) to address specific fish species for which fisheries data are available. The new ‘Sustainable inland fisheries index’ is noted as ‘in development’ in the sense that there is agreement between FAO (the institution responsible for the indicator), and several other partner organizations to work on developing this index to have a first version ready by 2021. |