IUCN recommendations regarding indicators for the Sustainable Development Goals
14 October 2015

A key transformative element of the proposed Sustainable Development Goals (SDGs) framework is the manner in which it integrates social, economic and environmental dimensions of sustainable development across the goals and targets, with many important interlinkages.

Monitoring progress towards the SDGs will be a determining aspect for success. Hence, the design of appropriate, science-based indicators is essential. Important discussions have started on the shape and details of the indicators framework. The home of the discussions is an Inter-Agency Expert Group on the Sustainable Development Goals (IAEG-SDGs).

In March 2015, IUCN released a position paper underlining key elements of the indicators framework. This present paper makes recommendations regarding specific indicators for the SDG targets based on these elements, as well as to datasets developed by partners which IUCN considers valuable for measuring progress towards the achievement of the SDGs. These recommendations are:

- IUCN maintains that social, economic, and environmental indicators should be incorporated throughout all 17 SDGs, reflecting the excellent integration achieved so far through the goals and targets.
- The disaggregation of multipurpose indicators is a powerful way to achieve this, allowing integration without proliferation of indicators.
- In all cases, indicators should wherever possible build from existing processes and institutions, such as the proposals of the Sustainable Development Solutions Network (SDSN). On the environmental side, the indicators mobilised by the Biodiversity Indicators Partnership (BIP) towards the 2020 Aichi Targets provide a very strong starting point.
- Wherever possible, IUCN recommends incorporating indicators of outcomes and impacts (state), not just of activities and processes (response), except for the “a-b-c indicators” for means of implementation.
- IUCN recommends two multipurpose indicators derived from knowledge products mobilised through its Members, Commissions, Secretariat, and partners, both of them also used by the BIP and the SDSN: the Red List Index as a primary indicator for SDG 15.5 (disaggregations also inform SDGs 2.4–5, 12.2, 12.4, 13.1, 14.1–4, 15.1–2, 15.4, and 15.7–8) and protected area coverage of biodiversity as a primary indicator for SDG 15.1 (disaggregations also inform SDGs 6.6, 14.2, 14.5, and 15.4).
- Beyond BIP indicators, IUCN also supports environmentally relevant indicators mobilised by partner institutions towards SDGs 1.4, 2.3, 5.a, 6.6, 11.4, and 11.7.
IUCN – Credible knowledge for the SDGs
IUCN’s work focuses on valuing and conserving nature, ensuring effective and equitable governance of its use, and deploying nature-based solutions to global challenges in climate, disaster risk reduction, food and development. IUCN supports scientific research, manages field projects all over the world in an partnership approach of the Secretariat, its Members (consisting of States and Civil Society), and its six science-to-policy expert Commissions (on education, economic and social policy, law, ecosystem management, species and protected areas). Jointly, the Union gathers and analyses environmental data and makes it available publically for non-commercial use. With this scientific capacity, IUCN contributed strongly to the UN Millennium Development Goals by mobilizing indicators based on The IUCN Red List of Threatened Species and, jointly with UNEP-WCMC, the Protected Planet indicators of protected area coverage of biodiversity.

IUCN believes that indicators towards the SDG targets need to be based on sound scientific data and ensure that the complexity of the targets and goals can be reported upon. In IUCN’s position paper of March 2015, IUCN outlines a set of key principles upon which the indicators framework should be built:

- **Indicators should be specific to the SDG targets**: indicators should refer to the elements laid out explicitly in the targets and be as specific as possible.
- **One target may require more than one indicator**: some targets are formulated in a manner that includes several aspects and elements for which indicators are needed.
- **Wherever possible, indicators should be multi-purpose, that is, measure progress towards multiple targets across different SDGs**: having the same indicator in several relevant targets would increase the level of integration of all dimensions, which is essential for the SDGs to have a truly sustainable impact.
- **The indicators framework should be built on existing indicators**: many indicators have been developed in other fora and by other organizations but are relevant to this framework. An example of this is the Biodiversity Indicators Partnership which mobilises indicators for measuring the achievement of the Aichi Biodiversity Targets. The Sustainable Development Solutions Network’s report on “Indicators and a Monitoring Framework for Sustainable Development Goals” is another example. Building on valuable existing work would ensure coherence in the monitoring exercise and general mutual supportiveness among frameworks aiming at the same objectives.
- **Indicators should rely on scientifically sound data**: it is important that the indicators framework is rigorous and that it provides with reliable information.
- **Wherever possible, SDG indicators should reflect outcomes and impacts (i.e., state), not just activities and processes (i.e., response), except for the “a-b-c indicators” for means of implementation.**
- **The indicators framework should include standardized processes for gathering and analysing data**: common methodologies to apply indicators at the national level allow for aggregation and comparing data at the global level.
- **Data deficiency and lack of technical capacity of national statistical institutions and other relevant stakeholders should be addressed**: capacity building for national statistical institutions should be designed and put at the service of increasing generation and application of data to respond to the policy demand.

In the present paper, the first section puts forward a list of indicators recommended by IUCN, matched to the relevant targets. These indicators include multipurpose indicators based on the Red List Index (a primary indicator towards SDG 15.5) and on protected area cover of biodiversity (a primary indicator towards SDG 15.1), which allow, depending on their disaggregation, tracking of progress towards multiple targets. The indicators proposed help to ensure that the environmental and related socio-economic dimensions of many of the targets are adequately covered and that the indicators framework corresponds to the above mentioned principles. The second section of the paper summarises information on other data sets developed by the IUCN Commissions, Members, Secretariat, and partners. Classifications proposed by UNSD (22 October 2015) are green (no need for discussion in Bangkok), yellow (to be discussed in Bangkok), and grey (to be discussed in dedicated subsequent follow up processes).
I. **IUCN recommendations for SDG indicators**

**Goal 1 End poverty in all its forms everywhere**

**Target 1.4**  “By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance”

✓ **Proposed indicator**: Share of women among agricultural land owners by age and location

✓ **IUCN proposal**: Proportion of adult population with tenure that is legally recognised or perceived as secure, by sex and age group

  This indicator should be based on the proposals made in “Land Rights Indicators in the Post-2015 SDGs”. This is a multi-purpose indicator also applicable to Targets 2.3 and 5.a.

**Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture**

**Target 2.3**  “By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishe rs, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment”

✓ **Proposed indicator**: Value of production per labour unit (measured in constant USD), by classes of farming/pastoral/forestry enterprise size

✓ **IUCN proposal**: Proportion of adult population with tenure that is legally recognised and documented of perceived as secure, by sex and age group

  This indicator helps to reflect the elements of “secure and equal access to land” of this target. It should be based on the indicators proposed in “Land Rights Indicators in the Post-2015 SDGs”.

  This is a multi-purpose indicator also applicable to Targets 1.4 and 5.a.

**Target 2.4**  “By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality”

✓ **Proposed indicator**: Percentage of agricultural area under sustainable agricultural practices

✓ **IUCN proposal**: Red List Index (species used for food and medicine)

  IUCN suggests complementing the proposed indicator with the “Red List Index (species used for food and medicine)”. This would help to reflect contributions towards the main element of the target which refers to resilience, maintenance of ecosystems, and adaptation to climate change. It is already used by the Biodiversity Indicators Partnership as an indicator for Aichi Biodiversity Target 14.

  Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.

  This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 2.4 without increasing the total number of indicators used.

  Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Target 2.5**  “By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and ensure access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed”
✓ **Proposed indicator:** Ex Situ Crop Collections Enrichment index

✓ **IUCN proposal:** Ex-situ crop collections indicator

This is also used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 13 on genetic diversity.

✓ **IUCN proposal:** Red List Index (local breeds and wild relatives)

IUCN suggests that the IUCN Red List Categories & Criteria could be applied to assess the extinction risk of local breeds and wild relatives; based on this, the Red List Index (local breeds and wild relatives) could be harnessed as an additional indicator for this target. A variant of this indicator is also used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 13.

Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.

This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 2.5 without increasing the total number of indicators used.

Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Goal 5 Achieve gender equality and empower all women and girls**

**Target 5.a** “Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws”

✓ **Proposed indicator:** Share of women among agricultural land owners by age and location

✓ **IUCN proposal:** Proportion of adult population with tenure that is legally recognised and documented of perceived as secure, by sex and age group

This indicator should be based on the indicators proposed in “Land Rights Indicators in the Post-2015 SDGs”. This is a multi-purpose indicator also applicable to Targets: 1.4 and 2.3.

**Goal 6 Ensure availability and sustainable management of water and sanitation for all**

**Target 6.6** “By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes”

✓ **Proposed indicator:** Percentage of change in wetlands extent over time

✓ **IUCN proposal:** Natural Water Capital Index (NWCI - the proportion of water resources still available for use after basic human and ecosystem needs have been met)

This indicator is highly relevant to Target 6.6 as it indicates whether the limits of sustainable use of water have been surpassed. It includes a crucial parameter on environmental water requirement (EWR), i.e. how much water-related ecosystems need to remain functional. This conveys the point that nature sits within the SDGs as part of the solution for sustainable development. IUCN supports the NWCI indicator provided that harmonized methodologies are adopted across countries to measure its parameters (and in particular the EWR component) in order to ensure comparability and scale-appropriate recordings that will enhance the ability of the indicator to be used for policy making at basin, national and transboundary levels. Data for this indicator are available globally (IWMI, FAO-Aquastat, CESR) and may be refined at national level.

✓ **IUCN proposal:** Change in wetlands extent over time

This indicator serves to record the loss of wetland resources, as defined by Ramsar under the broadest definition including rivers and lakes, over time. The indicator relies on data and methodologies developed through RAMSAR. IUCN supports this proxy indicator, with the recommendation that the indicator be further refined to include a parameter relating to the condition of wetlands. IUCN and partners have rescaled
and applied a Wetlands Disconnectivity indicator (based on similar rationale as the Wetlands disturbance index) through the Transboundary Rivers Assessment Programme (TWAP). This indicator highlights areas where change is currently happening and where urgent interventions may be required to mitigate further loss of wetland function, i.e., where action can still make a difference. Data are available globally through earth observation datasets.

**IUCN proposal:** Coverage by protected areas of freshwater sites of particular importance for biodiversity

It is important to ensure that an indicator to this target goes beyond focus on area per se, such as e.g., “changes in wetlands extent”, to provide information as to whether the most important places for aquatic biodiversity are protected. Thus IUCN suggests an indicator of “Coverage by protected areas of freshwater sites of particular importance for biodiversity”, using Key Biodiversity Areas to identify these. The indicator is used by the Biodiversity Indicators Partnership as an indicator towards [Aichi Biodiversity Target 11](#) on protected areas.

Responsible entities and national availability: IUCN & UNEP-WCMC, BirdLife International, Alliance for Zero Extinction. Available globally since 1950s, and can be disaggregated to national and regional levels. This is a multi-purpose indicator disaggregated from that proposed for Target 15.1 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 6.6 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable**

**Target 11.4** “Strengthen efforts to protect and safeguard the world’s cultural and natural heritage”

**Proposed indicator:** Share of national (or municipal) budget which is dedicated to preservation, protection and conservation of national cultural natural heritage including World Heritage sites

**IUCN proposal:** Change in aggregate status of World Heritage Sites

Current proposals for this target consider budget allocations to World Heritage Sites, as a process indicator. Another indicator could be derived of change in the aggregate status of World Heritage Sites, based on the [State of Conservation](#) reports. Data for this indicator are available globally, and can be disaggregated to national and regional levels, and between natural, cultural, and mixed World Heritage Sites.

Responsible entities: IUCN, ICOMOS, and UNESCO.

**Target 11.7** “By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities”

**Proposed indicator:** The average share of the built-up areas of cities in open space in public ownership and use

**IUCN proposal:** Area of public space as a proportion of total city space

This indicator can be derived by time-series overlay of the World Database on Protected Areas, mobilized through [Protected Planet](#), with equivalent time-series of urban coverage.

Responsible entities and national availability: IUCN & UNEP-WCMC. Available globally since 1950s or earlier, and can be disaggregated to national and regional levels.

**Goal 12 Ensure sustainable consumption and production patterns**

**Target 12.2** “By 2030, achieve the sustainable management and efficient use of natural resources”

**Proposed indicator:** Material footprint (MF) and MF/capita

**IUCN proposal:** Red List Index (impacts of utilisation)

The indicator under current consideration for Target 12.2 could usefully be supplemented by an indicator of sustainable use of species, such as the “Red List Index (impacts of utilisation)”. The indicator is used by the
Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 4. This currently indicates trends in extinction risk resulting from biological resource use, but could be expanded to also encompass trends resulting from agriculture and aquaculture, and from energy production and mining. Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.

This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 12.2 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Target 12.4** “By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment”

- **Proposed indicator:** Number of Parties to international multilateral environmental agreements on hazardous and other chemicals and waste that meet their commitments and obligations in transmitting information as required by each relevant agreement

- **IUCN proposal:** Red List Index (impacts of pollution)
  The indicator under current consideration for Target 12.4 could usefully be supplemented by an indicator of pollution impacts on nature, such as the “Red List Index (impacts of pollution)”. The Red List Index is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 12. Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.
  This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 12.4 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Goal 13 Take urgent action to combat climate change and its impacts**

**Target 13.1** “Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters countries”

- **Proposed indicator:** Number of deaths, missing people, injured, relocated or evacuated due to disasters per 100,000 people

- **IUCN proposal:** Red List Index (impacts of climate change)
  The indicator under current consideration for Target 13.1 could usefully be supplemented by an indicator of climate change vulnerability, such as the “Red List Index (impacts of climate change)”. The Red List Index is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 12. Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.
  This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 13.1 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

**Target 14.1** “By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution”
✓ **Proposed indicator:** Nitrogen use efficiency composite indicator

✓ **IUCN proposal:** Red List Index (impacts of pollution on marine species)
The indicator under current consideration for Target 14.1 could usefully be supplemented by an indicator of pollution impacts on nature, such as the “Red List Index (impacts of pollution on marine species)”. The Red List Index is used by the Biodiversity Indicators Partnership as an indicator towards [Aichi Biodiversity Target 12](https://www.cbd.int/abs/aichi-targets/12). Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels. This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 14.1 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Target 14.2** “By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans”

✓ **Proposed indicator:** % of coastal and marine development (to be defined) with formulated or implemented ICM/MSP plans (that are harmonized where applicable), based on an ecosystem approach, that builds resilient human communities and ecosystems and provides for equitable benefit sharing and decent work

✓ **IUCN proposal:** Red List Index (marine species)
The Red List Index is used by the Biodiversity Indicators Partnership as an indicator towards [Aichi Biodiversity Target 12](https://www.cbd.int/abs/aichi-targets/12). Positive changes in the indicator are driven by sustainable management, protection, and restoration. Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels. This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 14.2 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

✓ **IUCN proposal:** Coverage by protected areas of marine sites of particular importance for biodiversity
IUCN suggests “Coverage by protected areas of marine sites of particular importance for biodiversity” as an additional indicator for Target 14.2, using Key Biodiversity Areas to identify these. The indicator is used by the Biodiversity Indicators Partnership as an indicator towards [Aichi Biodiversity Target 11](https://www.cbd.int/abs/aichi-targets/11). Responsible entities: IUCN & UNEP-WCMC, BirdLife International, Alliance for Zero Extinction. Available globally since 1950s, and can be disaggregated to national and regional levels. This is a multi-purpose indicator disaggregated from that proposed for Target 15.1 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 14.2 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Target 14.3** “Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels”

✓ **Proposed indicator:** Average marine acidity (pH) measured at agreed suite of representative sampling stations

✓ **IUCN proposal:** Red List Index (reef-building coral species)
IUCN suggests strengthening indicators proposed for Target 14.3 with the “Red List Index (reef-building coral species)”. The Red List Index is used by the Biodiversity Indicators Partnership as an indicator towards...
Aichi Biodiversity Target 12. As and when comprehensive or sampled Red List assessments have been completed for coral reef fishes, molluscs, or other taxa, these could also be incorporated into this indicator. Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels. This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 14.3 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

Target 14.4 “By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics”

✓ Proposed indicator: Proportion of fish stocks within biologically sustainable level

✓ IUCN proposal: Red List Index (impacts of utilisation on marine species)
  This indicator is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 4.
  Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels. This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 14.4 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

✓ IUCN proposal: Proportion of fish stocks within biologically sustainable limits
  This indicator is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 6.

Target 14.5 “By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information”

✓ Proposed indicator: Coverage of protected areas

✓ IUCN proposal: Coverage by protected areas of marine sites of particular importance for biodiversity
  Proposals like “coverage of protected areas” focus solely on numeric coverage, but this is a poor measure of whether the most important places for biodiversity are protected. Therefore IUCN proposes a reworded version “Coverage by protected areas of marine sites of particular importance for biodiversity”, using Key Biodiversity Areas to identify these. The indicator is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 11.
  Responsible entities: IUCN & UNEP-WCMC, BirdLife International, Alliance for Zero Extinction. This is a multi-purpose indicator disaggregated from that proposed for Target 15.1 (and with other disaggregated versions also applicable for numerous other targets), and so would serve as an indicator towards Target 14.5 without increasing the total number of indicators used. Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Target 15.1 “By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements”
Proposed indicator: Forest area as a percentage of total land area

IUCN proposal: Coverage by protected areas of important sites for terrestrial and freshwater biodiversity
IUCN recommends supplementing the indicator currently proposed for Target 15.1 with “Coverage by protected areas of important sites for terrestrial and freshwater biodiversity” as these are the precise locations where effective conservation is needed to “halt the decline in biodiversity” (Butchart et al. 2012 PLoS ONE 7(3): e32529). The indicator is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 11.
This multi-purpose indicator can be disaggregated to provide indicators towards Targets 6.6, 14.2, 14.5, and 15.4.
Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

IUCN proposal: Forest area as a percentage of total land area
This indicator is maintained by FAO and used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 5.

IUCN proposal: Red List Index (terrestrial and freshwater species)
The Red List Index is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 12.
Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.
This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 15.2 without increasing the total number of indicators used.
Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

Target 15.2 “By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and increase afforestation and reforestation by [x] per cent globally”

Proposed indicator: Forest cover under sustainable forest management

IUCN proposal: Red List Index (forest-specialist species)
The Red List Index is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 12.
Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.
This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 15.2 without increasing the total number of indicators used.
Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

IUCN proposal: Forest cover under sustainable forest management
This indicators is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 5.

Target 15.3 “By 2020, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation-neutral world”

Proposed indicator: Trends in land degradation

IUCN proposal: Area of land/soils under sustainable management
This indicator is already used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 7.

**Target 15.4** “By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development”

- **Proposed indicator:** Coverage of protected areas

- **Proposed indicator:** Mountain Green Cover Index

- **IUCN proposal:** Coverage by protected areas of important sites for mountain biodiversity
  “Coverage of protected areas” focuses solely on numeric coverage, and so is a poor measure of whether the most important places for biodiversity are protected. IUCN therefore recommends the indicator to read “Coverage by protected areas of important sites for mountain biodiversity”, using Key Biodiversity Areas to identify the latter. The indicator is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 11.
  This is a multi-purpose indicator disaggregated from that proposed for Target 15.1 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 15.4 without increasing the total number of indicators used.
  Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

- **IUCN proposal:** Red List Index (mountain species)
  The Red List Index is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 12.
  Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.
  This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 15.4 without increasing the total number of indicators used.
  Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Target 15.5** “Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species”

- **Proposed indicator:** Red List Index

- **IUCN proposal:** Red List Index
  The indicator is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 12. National indicators based on disaggregation of the global Red List Index are easy to produce. (For information, note that the name “Red List Index” should not be taken to imply that the indicator is produced by aggregating a number of disparate metrics, in the same way that, e.g., the Multidimensional Poverty Index is compiled. Instead the RLI is an indicator of trends in species' extinction risk, as measured using the IUCN Red List Categories and Criteria, and is compiled from data on changes over time in the Red List Category for each species, excluding any changes driven by improved knowledge or revised taxonomy.)
  Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.
  This is a multi-purpose indicator that can be disaggregated to provide indicators towards Targets 2.4, 2.5, 3.9, 12.2, 12.4, 13.1, 14.1, 14.2, 14.3, 14.4, 15.7, and 15.8.
  Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

- **IUCN proposal:** Living Planet Index
This indicator is maintained by WWF and ZSL and used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 12.

**Target 15.6** “Ensure fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources”

- **Proposed indicator:** Number of countries that have adopted legislative, administrative and policy frameworks for the implementation of the Nagoya Protocol

- **IUCN proposal:** Number of permits or the equivalents made available to the access and benefit sharing clearing house established under the Nagoya protocol and number of standard material transfer agreements, as communicated to the governing body of the International Treaty

  This indicator is an expansion of that used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 16.

**Target 15.7** “Take urgent action to end poaching and tracking of protected species of flora and fauna and address both demand and supply of illegal wildlife products”

- **Proposed indicator:** Red List Index for species in trade

- **Proposed indicator:** Proportion of detected trade in wildlife and wildlife products that is illegal

- **IUCN proposal:** Red List Index (impacts of utilisation)

  The name of this indicator should be the “Red List Index (impacts of utilisation)”. The indicator is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 4.

  Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.

  This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 15.7 without increasing the total number of indicators used.

  Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.

**Target 15.8** “By 2020, introduce measures to prevent the introduction and significantly reduce the impact of invasive alien species on land and water ecosystems and control or eradicate the priority species”

- **Proposed indicator:** Adoption of national legislation relevant to the prevention or control of invasive alien species

- **IUCN proposal:** Adoption of national legislation relevant to the prevention or control of invasive alien species

  This indicator is maintained by the IUCN SSC Invasive Species Specialist Group used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 9.

- **IUCN proposal:** Red List Index (impacts of invasive alien species)

  The indicator is used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 9. This indicator can be applied to birds, mammals and amphibians. This indicator is one of the few global metrics illustrating the impact of invasive alien species on native biodiversity.

  Responsible entities: IUCN Red List Partnership. Available globally since 1980s, and can be disaggregated to national and regional levels.

  This is a multi-purpose indicator disaggregated from that proposed for Target 15.5 (and with other disaggregated versions also applicable for numerous other targets), and so would complement the proposed indicator towards Target 15.8 without increasing the total number of indicators used.

  Full metadata for this indicator were provided to the IAEG-SDGs electronic discussion forum on 30 July 2015, and are available on request.
Target 15.a “Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems”

✓ Proposed indicator: Official development assistance in support of the CBD

✓ IUCN proposal: Official Development Assistance

This indicator is also used by the Biodiversity Indicators Partnership as an indicator towards Aichi Biodiversity Target 20.
II. Further relevant IUCN knowledge

In addition to IUCN’s contributions documented above in generating indicators based on knowledge products mobilised against IUCN-approved standards (for The IUCN Red List of Threatened Species, Key Biodiversity Areas, and Protected Planet), IUCN also maintains a number of other knowledge products which are anticipated, over time, to further support indicators towards the SDGs:

- **Global Invasive Species Database (GISD)**
  The Invasive Species Specialist Group of IUCN’s Species Survival Commission (SSC) hosts the [Global Invasive Species Database](#) which is globally acknowledged as the most authoritative information source on invasive species. The GISD contains multiple data sets that can inform indicators measuring trends in number of invasive alien species, trends in their impact on extinction risk, trends in policy responses, legislation and management plans to control and prevent the spread of invasive alien species, trends in economic impacts of selected invasive alien species etc. The GISD can be disaggregated by country, species and biome. “The GISD focuses on invasive alien species that threaten native biodiversity and natural ecosystems and covers all taxonomic groups from micro-organisms to animals and plants in all ecosystems. Species information is either supplied by or reviewed by expert contributors from around the world.” The database is directly relevant to Target 15.8.

- **World Heritage Outlook**
  Data sources: [World Heritage Outlook](#). Responsible entities and national availability: IUCN. Available globally, and can be disaggregated to national and regional levels.

- **Red List of Ecosystems**
  The [Red List of Ecosystems](#) will be able to state whether an ecosystem is facing an imminent risk of collapse, or whether it is vulnerable, endangered or critically endangered. This will be measured by assessing losses in area, degradation or other major changes such as conversion. Once the baseline is established, the Red List of Ecosystems will be able to show global trends in the health of ecosystems. The IUCN Red List of Ecosystems is a system for which data generation is currently underway, which will result in the creation of a baseline by 2025. From then onwards progress will be able to be tracked. Although this system won’t be able to contribute towards measuring progress globally at this point, it provides a methodology and standards that allows governments to analyse the health of their national ecosystems and develop a functional database.

- **Gender and Environment Index (EGI)**
  The [Gender and Environment Index](#) is a composite index of 27 datasets. The data sets provide information about the inclusion of gender in national reports for the Rio Conventions and the inclusion of sustainable development topics in CEDAW national reports. The methodology as applied by IUCN is not exclusive to these four conventions, but can be applied systematically to all international treaties with a reporting mechanism. Systems are in place to carry out this work for such other agreements. The information contained is global.