

Measuring progress towards the CBD Strategic Plan for Biodiversity 2011-2020: the biodiversity indicator framework

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In 2010, the Convention on Biological Diversity (CBD) agreed on 20 global biodiversity targets (Aichi Targets) to guide conservation efforts on national level. In order to assess the progress CBD Member States have made in achieving these goals, a set of related indicators was developed. Some of these indicators are ready to use, others need further review, and for some of the Aichi Targets they are still lacking. At its nine-teenth meeting, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to the CBD requested the Executive Secretary to call for a peer review of the existing indicators and to provide a revised list for further discussion at SBSTTA-2, taking place April 25-29, 2016 in Montréal, Canada.

BACKGROUND

Indicators are tools to measure, indicate, point out, or point to something of particular interest – with more or less exactness (e.g. certain fish species indicate a good biological quality of a water body).

Often, they are used to assess progress towards a specific target or objective in a set time frame (e.g. by 2015 all water bodies in a selected region show good biological quality), by showing whether developments either move towards or away from this goal (e.g. starting with 20 % of water bodies showing good biological quality in 2010, already 50 % were recorded to be in such good state in 2013).

In this way, indicators help to break down complex issues into easy-to-understand pieces of information, often presented in self-explaining information graphs or images.

INDICATORS IN GLOBAL BIODIVERSITY GOVERNANCE

Indicators are a common tool in processes of global biodiversity governance. They are widely used to show whether targets set by the international community are going to be achieved in time, and related activities have been sufficient so far. However, they might also indicate that enhanced or additional activities are needed to meet the targets.

The Convention on Biological Diversity (CBD)

The 2010 Biodiversity Target

In 2002, the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) agreed on the ambitious 2010 Biodiversity Target *“to achieve, by 2010, a significant reduction of the current rate of biodiversity loss at the global, regional and national level”*¹.

In order to measure progress towards this target, the Convention developed a provisional framework which consisted of a set of specified goals, sub-targets – and indicators – organized under seven focal areas². The CBD member states were requested to use the proposed goals to develop national biodiversity targets and adjust related indicators and, subsequently, to report on their achievements in their national reports to the CBD.

On the basis of these national reports the Secretariat of the CBD (SCBD) compiled the third edition of the Global Biodiversity Outlook (GBO3), the flag ship publication of the Convention, which used countries' individual achievements to distil a global picture of progress towards the biodiversity targets.

¹ <https://www.cbd.int/2010-target/>

² Other CBD targets adopted and indicators developed include the Global Strategy for Plant Conservation, and the Program of Work on Protected Areas.

While countries' had performed quite well in certain areas, e.g. regarding increasing the awareness for biodiversity issues in the public, in the majority of areas progress had remained insufficient.

The overall result of the GBO3, thus, was straightforward: the 2010 Target to half the rate of biodiversity loss globally was not met. The dominant causes for this failure, as identified by the GBO3, were conflicting policies, a lack of resources, and perverse incentives such as subsidies harmful to biodiversity, amongst others.

The Strategic Plan for Biodiversity 2011-2020 and the Aichi Targets

In reaction to that, the Conference of the Parties (COP10), in 2010, agreed on the Strategic Plan for Biodiversity 2011-2020, comprising of 20 biodiversity targets (Aichi Targets, related to five strategic goals, see Annex). Within these targets the CBD put a strong emphasis to particularly addressing the underlying causes for the 2010-failure, for instance, target 3 makes direct reference to the perverse incentives which are to be eliminated, phased out or reformed by 2020.

To shed light on member states' advancements towards the Aichi Targets, indicators were developed by an Ad Hoc Technical Expert Group (ATHEG) constituted under the CBD. At the eleventh meeting of the Convention (CBD-COP 11), they presented a list of indicative indicators which served as the foundation for the preparation of the fourth edition of the GBO (GBO4)³, and the development of the Aichi Biodiversity Passport⁴ by the Biodiversity Indicators Partnership⁵.

³ A set of these indicators was also published in Science: Tittensor et al. 2014. A mid-term analysis of progress towards international biodiversity targets. Science 10 October 2014: 346 (6206), 241-244.

⁴ For more information on the Aichi Biodiversity Passport please visit:

<http://www.bipindicators.net/resource/aichipassport>

⁵ The Biodiversity Indicators Partnership is a global initiative to promote and coordinate development and delivery of biodiversity indicators in support of the CBD, Multilateral Environmental Agreements (MEA), IPBES,

The CBD distinguishes between Generic Indicators and Specific Operational Indicators for each of the Aichi Targets. While for all targets Generic Indicators exists, for particular elements of the targets Operational Indicators still lack. This is, for instance, the case with Target 5 on the rate of loss of natural habitats. Here, the Operational Indicator for 'Trends in fragmentation of forest and other natural habitats' is missing. The same holds true for Target 9 on invasive alien species, where even four Operational Indicators still lack.

To this effect, one opportunity lies in the adoption of indicators used in other processes such as the Sustainable Development Goals (SDGs; indicators for 169 SDGs to be adopted by the UN Statistical Commission in March 2016), the Convention to Combat Desertification (UNCCD; three land-based progress indicators, e.g. trends in land degradation or carbon stocks), and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES; indicators and metrics to be used in IPBES' products; subregional and regional assessments expected to have implications on the CBD indicators).

Making use of these existing indicators and processes not only contributes to the cost-effectiveness of the CBD indicator development, it could also support efforts to mainstream biodiversity across different domains.

Member States have been using these indicators for updating National Strategies and Action Plans (NBSAPs) and in their National Reporting. However, from their reports it was often unclear which data/information it is based on, how they collected it, as well as which kind of indicators (impact or process) they used.

national and regional governments and a range of other sectors.

Many countries also noted the need for capacity-building regarding indicator application and use on national level and called for enhancing knowledge transfer and sharing of experiences between member states.

Reviewed indicator list for discussion at SBSTTA-20

The reviewed list of indicators to be discussed at the 20th meeting of SBSTTA taking place April 25-29, 2016 in Montréal, Canada, is to be found in the annex to this fact sheet.

IMPRESSUM

The Network-Forum for Biodiversity Research Germany (NeFo) is a project funded by the German Federal Ministry of Education and Research (BMBF) and is mainly carried out by the Helmholtz Centre for Environmental Research – UFZ and the Museum für Naturkunde Berlin.



For more information about the NeFo-Project and the NeFo-Team visit www.biodiversity.de.

Annex⁶

GENERIC AND SPECIFIC INDICATORS FOR ASSESSING PROGRESS IN THE ATTAINMENT OF THE AICHI BIODIVERSITY TARGETS, INCLUDING AN ASSESSMENT OF THEIR MAIN CHARACTERISTICS

The table below identifies a set of indicators for assessing progress in the attainment of the Aichi Biodiversity Targets. Both generic and specific indicators have been identified. The generic indicators identify types of issues that could be monitored while the specific indicators are those operational indicators that can be used to monitor changing trends in these issues. Only indicators which are currently available or are under active development have been included in the table. Further for each specific indicator their alignment to a set of criteria has been indicated. The criteria considered were the availability of the indicator; its suitability for communication; possibility for aggregation or disaggregation of data used and its use in the third or fourth edition of the *Global Biodiversity Outlook*. The source of the indicator has also been indicated

Indicators being proposed by the United Nations system for the Sustainable Development Goals have been included in the table.⁷ Changes to the Sustainable Development Goals indicators may be required in the light of the outcomes of the forty-seventh session of the United Nations Statistical Commission.

In many cases the identified indicators are relevant to the several Aichi Biodiversity targets. However each indicator has only been included in the table once in order to limit the size of the table, with each indicator listed according to the Aichi Biodiversity Target to which it is most relevant. In some cases no specific indicator has been identified for the generic indicator. These represent gaps that need to be addressed.

⁶ The Annex originates from the official document of SBSTTA-20 (UNEP/CBD/SBSTTA/20135).

⁷ The current list of proposed indicators for the Sustainable Development Goals, which will be considered during the forty-seventh session of the United Nations Statistical Commission from 8 to 11 March 2016, can be accessed from <http://unstats.un.org/unsd/statcom/47th-session/documents/>.

Aichi Biodiversity Target	Generic Indicator	Specific Indicator	Available today (X) or under active development (Y)	Easy to communicate	Global indicator can be disaggregated to create national indicator or is aggregated from national data	National data are aggregated to form global indicator	Used in GBO3/ GBO4	Proposed SDG indicator	Source
Target 1 - By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably	Trends in awareness and attitudes to biodiversity	Biodiversity Barometer	X	X		X	X		UEBT
		Online interest in biodiversity (Google Trends)	X		X	X	X		Google trends
		WAZA global visitor survey	X						WAZA
	Trends in public engagement with biodiversity	<i>No specific indicators identified</i>							
Target 2 - By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and	Trends in incorporation of measures of stock and flow of natural capital into national accounting	Number of countries implementing natural resource accounts, excluding energy, within the System of Environmental-Economic Accounting (SEEA)	X	X		X	X		UNSTATS, World Bank
		Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020 (proposed indicator for SDG target 15.9)						X	
	Trends in	Number of countries that have integrated	X	X		X	X		Roe D.

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reporting systems.	integration of biodiversity and ecosystem service values into sectoral and development policies	biodiversity in National Development Plans, poverty reduction strategies or other key development plans							(2010)
Target 3 - By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent	Trends in the number and value of incentives, including subsidies, harmful to biodiversity, removed, reformed or phased out	Trends in potentially harmful elements of government support to agriculture (produced support estimates)	X	X	X	X			OECD
		Trends in potentially harmful elements of government support to fisheries	Y						OECD
		Producer Support Estimate (proposed indicator for SDG target 2.b)						X	
		Agricultural export subsidies (proposed indicator for SDG target 2.b)						X	
	Trends in development and application of incentives that promote biodiversity	Number of countries with national instruments on biodiversity-relevant taxes, charges and fees	Y						OECD
		Number of countries with national instruments on REDD plus schemes	X			X	X		UN-REDD programme
		Number of countries with national instruments on biodiversity relevant tradable permit schemes	Y						OECD

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and in harmony with the Convention and other relevant international obligations, taking into account national socioeconomic condition	conservation and sustainable use								
Target 4 - By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources	Trends in population and extinction risk of utilized species, including species in trade	Red List Index (impacts of utilization)	X	X	X		X		IUCN, BirdLife International and other Red List Partners
		Percentage of Category 1 nations in CITES	X			X	X		CITES
		Red List Index for species in trade	X	X	X				IUCN, BirdLife International and other Red List Partners
		Proportion of traded wildlife that was poached or						X	

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well within safe ecological limits.		illicitly trafficked (proposed indicator for SDG target 15.7)							
	Trends in use of natural resources and/or related concepts	Ecological footprint	X	X	X	X	X		Global Footprint Network
		Material footprint (MF) and MF per capita, per GDP (proposed indicator for SDG targets 8.4 and 12.2)						X	
		Domestic material consumption (DMC) and DMC per capita, per GDP (proposed indicator for SDG targets 8.4 and 12.2)						X	
		Number of countries with sustainable consumption and production (SCP) national action plans or SCP mainstreamed as a priority or target into national policies (proposed indicator for SDG target 12.1)						X	
	Ecological limits assessed in terms of sustainable production and	Human appropriation of net primary productivity	X		X	X	X		Krausmann etal (2013)
		Human appropriation of fresh water (water footprint)	X			X	X		Joint Research

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	consumption								Centre
		Change in water use efficiency over time (proposed indicator for SDG target 6.4)					X		
		Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (proposed indicator for SDG target 6.4)					X		
	Trends in biodiversity of cities	Number of cities applying and reporting on the Cities Biodiversity Index	Y						Secretariat of the Convention on Biological Diversity
		Ratio of land consumption rate to population growth rate (proposed indicator for SDG target 11.3)					X		
Trends in extent to which biodiversity and ecosystem service values are incorporated into organizational accounting and	<i>No specific indicators identified</i>								

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	reporting									
Target 5 - By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	Trends in extent of forest	Trends in forest extent (tree cover)	X	X	X				Hansen et al	
		Forest area as a percentage of total land area (proposed indicator for SDG target 15.1)	X	X	X	X		X	FAO	
		Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type (proposed indicator for SDG target 15.1)							X	
		Progress towards sustainable forest management (proposed indicator for SDG target 15.2)							X	
	Trends in extent of natural habitats other than forest	Change in the extent of water-related ecosystems over time (proposed indicator for SDG target 6.6)	X	X					X	UN Water
		Natural habitat extent (land area minus urban and agriculture)	X					X		Netherlands Environmental Assessment Agency (PBL)
Trends in fragmentation of forest and other		<i>No specific indicators identified</i>								

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	natural habitats								
	Trends in degradation of forest and other natural habitats	Biodiversity Habitat Index	Y						CSIRO
		Proportion of land that is degraded over total land area (proposed indicator for SDG target 15.3)	Y					X	UNCCD
	Trends in extinction risk and populations of habitat specialist species in each major habitat type	Red List index (forest specialists)	X	X	X				IUCN, BirdLife International and other Red List Partners
		Living Planet Index (forest specialists)	Y						WWF/ZSL
		Species Habitat Index	Y						GEOBON
Target 6 - By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based	Trends in certified sustainable fisheries	Trends in fisheries certified by the Marine Stewardship Council	X	X	X		X		Marine Stewardship Council
	Trends in proportion of depleted, target and bycatch species with recovery plans	<i>No specific indicators identified</i>							

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approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	Trends in population and extinction risk in target and bycatch species	Red List Index (harvested aquatic species)	Y						IUCN and other Red List Partners
		Red List Index (impacts of fisheries)	X	X	X		X		IUCN, BirdLife International and other Red List Partners
		Living Planet Index (trends in target and bycatch species)	Y						WWF/ZSL
	Trends in fishing practices	Global effort in bottom trawling	X	X			X		University of British Columbia Institute for the Oceans and Fisheries
Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing (proposed indicator for SDG							X		

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		target 14.6)							
	Trends in proportion of fish stocks outside safe biological limits	Proportion of fish stocks within biologically sustainable levels (proposed indicator for SDG target 14.4)	X	X	X	X	X	X	FAO
	Trends in catch per unit effort	Estimated fisheries catch and fishing effort	X		X				University of British Columbia Institute for the Oceans and Fisheries
		Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries (proposed indicator for SDG target 14.b)						X	
Target 7 - By 2020 areas under agriculture, aquaculture and	Trends in proportion of area of agriculture under sustainable	Areas of agricultural land under organic production	X	X	X		X		International Foundation for Organic Agriculture

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forestry are managed sustainably, ensuring conservation of biodiversity.	practices	Areas of agricultural land under conservation agriculture	X		X	X	X		FAO
		Proportion of agricultural area under productive and sustainable agriculture (proposed indicator for SDG target 2.4)	X					X	FAO
	Trends in extinction risk and populations of agro-ecosystem associated species	Wild Bird Index for farmland birds / Living Planet Index (farmland specialists)	X	X	X	X	X		BirdLife International / EBCCC
	Trends in proportion of production of aquaculture under sustainable practices	<i>No specific indicators identified</i>							
	Trends in proportion of area of forest production under sustainable practices	Proportion of area of forest production under FSC and PEFC certification	X	X	X	X	X		FSC/PEFC
		Progress towards sustainable forest management (proposed indicator for SDG target 15.2)	Y					X	FAO
		Wild Bird Index for specialist forest birds / Living Planet Index (forest specialists)	X	X	X	X	X		BirdLife International

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									I /EBCCC	
	Trends in extinction risk and populations of forest-specialist species in production forest	<i>No specific indicators identified</i>								
Target 8 - By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity	Trends in pollutants	Trends in emissions, NOX	X	X	X	X	X		International Nitrogen Initiative	
		Trends in emissions, SOX	X	X	X	X			International Nitrogen Initiative	
		Trends in emissions, POPs	X	X	X	X			Stockholm Convention	
		Trends in mercury emissions	X						UNEP	
		Trends in pesticide use	X	X	X	X	X		FAO	
		Index of Coastal Eutrophication (ICEP) and Floating Plastic debris Density (proposed indicator for SDG target 14.1)							X	
		Mortality rate attributed to household and ambient air pollution (proposed indicator for SDG							X	

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		target 3.9)							
		Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe WASH services) (proposed indicator for SDG target 3.9)						X	
		Mortality rate attributed to unintentional poisoning (proposed indicator for SDG target 3.9)						X	
	Trends in extinction risk and populations driven by pollution	Red List Index (impacts of pollution)	X	X	X		X		IUCN, BirdLife International and other Red List Partners
	Trends in ecosystems affected by pollution	Water Quality Index for Biodiversity	X				X		UNEP GEMS Water
	Trends in nutrient levels	Trends in nitrogen deposition	X	X	X				International Nitrogen Initiative
		Loss of reactive nitrogen to the environment	X	X	X	X	X		International

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									I Nitrogen Initiative
		Trends in global surplus of nitrogen	X	X	X		X		The Netherlands Environmental Assessment Agency (PBL)
		Proportion of bodies of water with good ambient water quality (proposed indicator for SDG target 6.3)						X	
		Percentage of wastewater safely treated (proposed indicator for SDG target 6.3)						X	
Target 9 - By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in	Trends in identification and prioritization of invasive alien species	<i>No specific indicators identified</i>							
	Trends in the distribution and populations of	<i>No specific indicators identified</i>							

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place to manage pathways to prevent their introduction and establishment.	invasive alien species								
	Trends in eradication of priority invasive alien species	Trends in invasive alien species vertebrate eradications	X						IUCN Invasive Species Specialist Group, Island Conservation
	Trends in extinction risk and populations driven by invasive alien species impacts	Red List Index (impacts of invasive alien species)	X	X	X		X		IUCN, BirdLife International and other Red List Partners
	Trends in impacts of invasive alien species on ecosystems	<i>No specific indicators identified</i>							
	Trends in the numbers of	Trends in the numbers of invasive alien species introduction events	X	X	X	X	X		ISSG

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	invasive alien species introduction and establishment events								
	Trends in implementation of policy responses preventing the introduction and establishment of invasive alien species	Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species (proposed indicator for SDG target 15.8)	X			X	X	X	IUCN SSC Invasive Species Specialist Group, Monash University, BirdLife International, Concordia University
Target 10 - By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable	Trends in extent and condition of coral reefs	Trends in proportion of live coral cover	X	X	X		X		Mumby et al
	Trends in extinction risk and populations of	Red List Index (reef-building coral species)	X	X	X		X		IUCN and other Red List Partners

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ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	coral and coral-reef dependent species								
	Trends in pressures on coral reefs	Average marine acidity (pH) measured at agreed suite of representative sampling stations (proposed indicator for SDG target 14.3)						X	
	Trends in responses to reduce pressures on coral reefs	<i>No specific indicators identified</i>							
	Trends in extent and condition of other vulnerable ecosystems impacted by climate change or ocean acidification	<i>No specific indicators identified</i>							
	Trends in species extinction risk and populations or condition of other vulnerable ecosystems	Climatic Impact Index for birds	X		X		X		BirdLife International /EBCC
	Red List Index (impacts of climate change)	Y						IUCN, BirdLife International and other	

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	impacted by climate change or ocean acidification								Red List Partners
	Trends in pressures on other vulnerable ecosystems impacted by climate change or ocean acidification	<i>No specific indicators identified</i>							
	Trends in responses to reduce pressures on other vulnerable ecosystems impacted by climate change or ocean acidification	<i>No specific indicators identified</i>							
Target 11 - By 2020, at least 17 per cent of terrestrial and inland water, and 10	Trends in area of terrestrial and inland water areas conserved	Percentage of terrestrial and inland water areas covered by protected areas	X	X	X	X	X		UNEP-WCMC and IUCN

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per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	Trends in area of coastal and marine areas conserved	Percentage of marine and coastal areas covered by protected areas	X	X	X	X	X		UNEP-WCMC and IUCN
		Coverage of protected areas in relation to marine areas (proposed indicator for SDG target 14.5)	X	X	X	X	X	X	UNEP-WCMC and IUCN
	Trends in areas of particular importance for biodiversity conserved	Protected area coverage of Key Biodiversity Areas (including Important Bird and Biodiversity Areas, Alliance for Zero Extinction sites)	X	X	X	X	X	X	BirdLife International / IUCN/AZE
		Protected Area Overlays with Biodiversity	X	X	X	X	X	X	WCMC/BirdLife International / IUCN/AZE
	Trends in areas of particular importance for ecosystem services conserved	<i>No specific indicators identified</i>							
	Trends in ecological representativeness of areas conserved	Protected area coverage of terrestrial, marine and freshwater ecoregions	X	X	X	X	X	X	WCMC
		Species Protection Index	Y						GEOBON
		Protected Area Representativeness Index	Y						GEOBON

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	Trends in effectiveness and/or equitability of management of conserved areas	Management effectiveness of protected areas	X		X	X	X		WCMC
		The Wildlife Picture Index (disaggregated by protected area)	X	X					Tropical Ecology Assessment and Monitoring (TEAM) Network
	Trends in connectivity and integration of conserved areas	Protected Area Connectedness Index	Y						UNEP
Target 12 - By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	Trends in number of extinctions	Number of species extinctions	X	X	X		X		IUCN, BirdLife International and other Red List Partners
	Trends in extinctions prevented	Number of extinctions prevented by conservation action	Y						IUCN, BirdLife International and other

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	Trends in extinction risk and populations of species								Red List Partners
		Red List Index (proposed indicator for SDG target 15.5)	X	X	X		X	X	IUCN, BirdLife International and other Red List Partners
		Living Planet Index	X	X	X		X		WWF/ZSL
		Species Protection Index for species in decline	Y						GEOBON
		Local biodiversity intactness index	Y						PREDICTS
		Wild Bird Index	X	X	X	X	X	X	BirdLife International /EBCC
		Wildlife Picture Index	X	X				X	Tropical Ecology Assessment and Monitoring (TEAM) Network
Target 13 - By 2020,	Trends in genetic	Number of plant and animal genetic resources					X	FAO	

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the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	diversity of cultivated plants	for food and agriculture secured in either medium- or long-term conservation facilities (proposed indicator for SDG target 2.5)								
	Trends in genetic diversity of farmed and domesticated animals	Proportion of local breeds, classified as being at risk, not-at-risk or unknown level of risk of extinction (proposed indicator for SDG target 2.5)	X	X	X	X	X	X	FAO	
	Trends in extinction risk and populations of wild relatives	Red List Index (wild relatives)		Y						IUCN, BirdLife International and other Red List Partners
		Species Habitat Index (wild relatives)		Y						GEOBON
	Trends in protected area coverage of wild relatives (to be resolved)	Species Protection Index (wild relatives)		Y						GEOBON
	Trends in genetic diversity of socio-economically as well as culturally	<i>No specific indicators identified</i>								

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	valuable species								
	Trends in development and implementation of strategies for minimizing genetic erosion and safeguarding genetic diversity	Level of implementation of global plan of actions on genetic resources for food and agriculture	Y						Commission on Genetic Resources for Food and Agriculture (FAO)
Target 14 - By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local	Trends in safeguarded ecosystems that provide essential services	Wetland extent	X	X	X		X		WCMC
	Trends in extinction risk and populations of species that provide essential services	Red List Index (species used for food and medicine; pollinating species)	X	X			X		IUCN/ BirdLife International
		Living Planet Index (utilized species)	X	X	X		X		WWF/ZSL
		Species Habitat Index (species that provide essential services)	Y						GEOBON
	Trends in benefits	Better Life Index	X						OECD

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communities, and the poor and vulnerable.	from ecosystem services	Mountain Green Cover Index (proposed indicator for SDG target 15.4)	Y					X	FAO	
		Coverage by protected areas of important sites for mountain biodiversity (proposed indicator for SDG target 15.4)						X		
	Trends in restoration of ecosystems that provide essential services	<i>No specific indicators identified</i>								
	Trends in the degree to which ecosystem services provides for the needs of women, indigenous and local communities, and the poor and vulnerable	Inadequate access to food – average dietary energy supply adequacy (measured by the Food Insecurity Experience Scale)	X							FAO
		Percentage of population using safely managed drinking water services (proposed indicator for SDG target 6.1)	X	X	X	X		X	WHO/ UNICEF	
Target 15 - By 2020, ecosystem resilience and the contribution	Trends in ecosystem resilience	<i>No specific indicators identified</i>								

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of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	Trends in carbon stocks within ecosystems	Trends in forest carbon stocks	Y						FAO/GFW
		Global ecosystem restoration index	Y						GEOBON/iDiv
Target 16 - By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their	Trends in the implementation of the Nagoya Protocol	Number of permits or their 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	X			X	X		Secretariat of the Convention on Biological Diversity and FAO

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Utilization is in force and operational, consistent with national legislation.		Number of countries that have adopted legislative, administrative and policy frameworks for the implementation of the Nagoya Protocol (proposed SDG indicator 15.6)						X	Secretariat of the Convention on Biological Diversity
Target 17 - By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan	Trends in adoption and implementation of national biodiversity strategies and action plans, as policy instruments including development, comprehensiveness, adoption and implementation	Number of countries with developed or revised NBSAPs	X	X		X	X		Secretariat of the Convention on Biological Diversity
		Number of countries with NBSAPs adopted as policy instruments	Y						Secretariat of the Convention on Biological Diversity
Target 18 - By 2020, the traditional knowledge,	Trends in land-use change and land tenure in the	(a) Percentage of people with ownership or secure rights over agricultural land (out of total agricultural population), by sex; and (b) Share of						X	

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<p>innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are</p>	<p>traditional territories of indigenous and local communities (decision X/43)</p>	<p>women among owners or rights-bearers of agricultural land, by type of tenure (proposed green indicator for SDG target 5.a)</p>							
	<p>Trends in the practice of traditional occupations (decision X/43)</p>	<p><i>No specific indicators identified</i></p>							

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respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels	Trends in which traditional knowledge and practices are respected through their full integration, safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan	Number of local community-based monitoring on traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity	X	X					Satoyama Initiative
	Trends of linguistic diversity and numbers of speakers of indigenous languages (decision VII/30)	Global Index of Linguistic Diversity and language threat level.	X		X	X	X		Teralingua

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	and VIII/15)								
Target 19 - By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	Number of maintained species inventories being used to implement the Convention	Species represented in the barcode of life data system	X				X		Barcode of Life Data Systems
		Growth in species occurrence records accessible through GBIF	X	X	X	X	X		GBIF
		Species Status Information Index	Y						GEOBON
		Proportion of known species assessed through the IUCN Red List	X		X				IUCN
Target 20 - By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-	Trends in the mobilization of financial resources	Information provided through the financial reporting framework, adopted by decision XII/3 (https://chm.cbd.int/search/financial-reporting)	X	X		X	X	Secretariat of the Convention on Biological Diversity	

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<p>2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.</p>									
		<p>Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems (proposed indicator for SDG target 15.a and 15.b)</p>						X	

