The Global Partnership for Plant Conservation

A draft proposed Plant Conservation Strategy for the period post-2020,

including international plant conservation goals and targets, and links with the (zero draft of the) post-2020 Global Biodiversity Framework.

Prepared by the Global Partnership for Plant Conservation (GPPC)

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Introduction

1 This document by the Global Partnership for Plant Conservation (GPPC) is a response to the ZERO DRAFT OF THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK (Document CBD/WG2020/2/3) prepared by the Co-Chairs of the OPEN-ENDED WORKING GROUP ON THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK for its second meeting, Rome, Italy, 24-29 February 2020.

It includes the following:

a) A draft Post-2020 Plant Conservation Strategy, with suggested Plant Conservation Objectives for 2050, and Plant Conservation Targets for 2030.
b) An Appendix, based on that included in CBD/WG2020/2/3/Add.1, takes into account the plant conservation elements and indicators that are included in the draft post-2020 Plant Conservation Strategy.

2 The Global Biodiversity Framework (Zero Draft) provides a series of five goals to be achieved by 2050 for the conservation and sustainable use of the world's biodiversity. These Global Biodiversity Framework (GBF) goals also provide the framework for the conservation and sustainable use of plant diversity too, and are accepted and included in the draft Plant Conservation Strategy. Plant Conservation targets for the period (2020-2030 (-2050) are also related to draft GBF targets too.

3 While the draft Plant Conservation Strategy welcomes and utilizes the framework of 2050 Goals and 2030 Action Targets included in the Zero Draft of the Global Biodiversity Framework, it highlights (in red) elements where plant conservation brings 'added value' to the achievement of the global biodiversity

framework, or identifies where specific plant conservation actions are required. Suggested indicators related to the measurement of these plant conservation elements are also provided. The Appendix provides an overview on how the draft Plant Conservation Strategy is nested within and contributes towards the achievement of the Global Biodiversity Framework. Rationales for the draft plant conservation targets and suggested indicators are also included in this Appendix (1).

4 The Global Strategy for Plant Conservation (GSPC) was first adopted by the Parties to the Convention on Biological Diversity at its 6th Conference of the Parties (COP) held in The Hague, Netherlands on 19th April, 2002. It was subsequently updated for the period 2011–2020 on 29th October 2010 in Nagoya, Japan. In decision X/17, the Conference of the Parties adopted a consolidated update of the Global Strategy for Plant Conservation for the period 2011-2020 and decided to pursue the implementation of the Strategy as part of the broader framework of the Strategic Plan for Biodiversity 2011-2020. The GSPC incorporated a concise framework of objectives and targets which aim to halt the loss of plant diversity worldwide by 2020.

5 The GSPC has provided a valuable framework to guide plant conservation priorities and actions worldwide, for governments and a wide range of institutions and organisations working at various levels.

6 In 2004, a Global Partnership for Plant Conservation (GPPC) was created to support the worldwide implementation of the Global Strategy for Plant Conservation. It currently includes 63 organisations and institutions as members. In August 2018, a conference was organised by the GPPC, in association with the Secretariat of the Convention on Biological Diversity (SCBD) and Botanic Gardens Conservation International (BGCI), and hosted by the South African National Biodiversity Institute (SANBI), Kirstenbosch National Botanical Garden, Cape Town, South Africa. The conference brought together plant conservation scientists, policy makers and practitioners from across the world to consider the future of plant conservation, and in particular to develop ideas for a global plant conservation strategy for the post-2020 period. The results of the conference were provided to the CBD as a contribution from the GPPC and the plant conservation community in general towards future plans for the CBD in the achievement of the 2050 Vision for Biodiversity and the 2030 Agenda on Sustainable Development.

7 Following the conference a Liaison Group meeting was convened by SCBD in Cape Town, including representatives of the CBD parties and GPPC members. The Liaison Group was invited to review the progress achieved in implementing the GSPC and requested the GPPC to prepare information on ‘options for integrating plant conservation into the post-2020 global biodiversity framework’. Following the meeting, the GPPC prepared a possible first draft of plant conservation objectives, including targets, for the period 2021 to 2030. It was suggested that as far as possible these should be SMART targets.

8 These draft post-2020 plant conservation targets were subsequently reviewed by the members of the GPPC and other experts as part of a broad international stakeholder consultation conducted during 2019. The edits, comments and suggestions made to that draft were then incorporated and are included in this document. A series of draft technical rationales and an explanations of terms used for each of the targets proposed were also prepared and are incorporated.

This document therefore represents continued work by the GPPC to offer suggestions for the Convention on Biological Diversity on options for the close integration of plant conservation elements into the Global Biodiversity Framework, as a successor to the Global Strategy for Plant Conservation.

9 This ambitious but achievable strategy for the conservation of terrestrial and marine plants for the period post-2020 aims to outline a vision and action agenda whereby by the world's plant diversity will be documented, understood, appreciated, safeguarded and used in a sustainable manner as the basis of a new form of relationship with Nature, as an important component of biodiversity in general, that dramatically reduces poverty, ends hunger and nourishes human beings bodily, mentally and spiritually. This Strategy shall form a vital component of the achievement of a vision for biodiversity conservation for 2050.

Draft proposed Plant Conservation (PC) Goals for 2050,

and Plant Conservation Targets for 2030

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GBF and PC Goal 1 for 2050: No net loss by 2030 in the area and integrity of freshwater, marine and terrestrial ecosystems, and increases of at least [20%] by 2050, ensuring ecosystem resilience.

Plant Conservation specific objectives for 2050: Degraded ecosystems are being restored with [XX %] using appropriate native plant species to be resilient, biodiverse and to provide ecosystem services by 2030, and [XX %] by 2050.

Indicators:

i) Proportion of degraded ecosystems being restored using appropriate native plant species including species of conservation concern.

GBF and PC Goal 2 for 2050: The percentage of species threatened with extinction is reduced by [X%] and the abundance of species has increased on average by [XX %] by 2030 and by [XX %] by 2050.

Plant Conservation specific objectives for 2050: [XX % of] known threatened wild plant species are effectively conserved and managed in situ and ex situ, including viable populations by 2030, and all by 2050.

PC specific objectives for 2050: All [threatened] plant species extinctions are prevented.

Indicators:

i) Number of plant species extinctions.
ii) Number of extinctions prevented.
iii) Number of threatened plants effectively protected.

iv) Number of threatened plant species included in recovery plans have been developed [or are being implemented].

v) Number of known threatened wild plant species that are effectively conserved, through integrated (in situ and ex situ) conservation management, including genetically diverse populations.

GBF and PC Goal 3 for 2050: Genetic diversity is maintained or enhanced on average by 2030, and for [90%] of species by 2050.

PC specific objectives for 2050: [XX % of] socio-economically important plant species, including crop wild relatives, are effectively conserved and managed in situ and ex situ by 2030 and [XX %] by 2050.

Indicators:

i) Number of plant species recovery plans have been developed for socio-economically important wild plant species, including crop wild relatives.

ii) Number of viable populations of socio-economically important wild plant species, including crop wild relatives, that are effectively conserved and managed in situ and ex situ.

iii) The proportion of [known cultivars and landraces] [the genepool of crops] in use by farmers represented in seed banks.

GBF and PC Goal 4 for 2050: Nature provides benefits to people contributing to:

(i) Improvements in nutrition for at least [X million] people by 2030 and [Y million] by 2050;

(ii) Improvements in sustainable access to safe and drinkable water for at least [X million] people, by 2030 and [Y million] by 2050;

(iii) Improvements in resilience to natural disasters for at least [X million] people by 2030 and [Y million] by 2050;

(iv) At least [30%] of efforts to achieve the targets of the Paris Agreement in 2030 and 2050.

PC specific objectives for 2050: The diversity / number of plant species and varieties used to support human nutrition, health and well-being maintained by 2030, and increased by [XX %] by 2050.

Indicators:

[To be identified]

GBF and PC Goal 5 for 2050: The benefits, shared fairly and equitably, from the use of genetic resources and associated traditional knowledge, have increased by [X] by 2030 and reached [X] by 2050.

PC specific objectives for 2050: All countries have appropriate policies and actions in place to facilitate efficient and effective international and other exchange and transfer of plant materials, expertise and knowledge that are needed to support conservation, research and sustainable use of plant diversity by 2050.

Indicators:

i) Number of countries facilitating efficient and effective international and other exchange and transfer of plant materials, expertise and knowledge to support conservation, research and sustainable use of plant diversity.
ii) Number of international exchanges of plant material for conservation, research and benefit-sharing purposes.
iii) Numbers of organisations and institution with ABS related accreditations (e.g. BGCI).

DRAFT 2030 TARGETS FOR PLANTS

Reducing threats to biodiversity

Ecological Restoration

1 [PC 1a]: By 2030, at least [XX] % of degraded ecosystems are being restored using native [indigenous] plant species, including species of conservation concern, to be resilient, biodiverse and to provide ecosystem services.

Spatial Planning

2 [PC1b]: By 2030 [XX] countries have included the conservation of plant species diversity into national spatial planning.

Plant Ecosystems

3 [PC2]: By 2030, at least [XX] % of each ecological region, and [XX] % of important plant areas are adequately protected for plant conservation.

Invasive Species

4 [PC3a]: By 2030, the detrimental impact of invasive species and biological invasions is addressed either by control measures or eradication in [XX] % of areas important for plant diversity

5 [PC3b]:Measures are in place to manage pathways to prevent new invasive species introductions and/or establishment.

Pollution

6 [PC4]: By 2030, the [multiple] anthropogenic pressures on [vulnerable] ecosystems and species, including from pollution, excess nutrients from agriculture and development, are understood, minimized, so as to maintain ecosystem integrity and functioning.

Regulating International Trade

7 [PC5b]: By 2030, there has been at least a [50%] reduction in the number of plant species threatened by international trade.

Carbon Sequestration

8 [PC6]: By 2030, [XX] of the areas planted for carbon sequestration to help mitigate climate change, are utilizing appropriate indigenous plant species.

Meeting people's needs through enhanced use and benefit-sharing

Nutrition, Health and Livelihoods

9 [PC7]: By 2030, [XX] % of socio-economically important wild plant species are conserved ex situ, and viable populations are effectively conserved and managed in situ, to ensure they are available to support nutrition, health care, food security and livelihoods, so that overexploitation and ecosystem degradation is prevented..

Sustainable Land Use

10 [PC8a]: By 2030, at least [XX] % of areas under agriculture, aquaculture and forestry are managed sustainably, ensuring the conservation of associated wild and crop plant diversity.

Genetic Resources

11 [PC8b]: By 2030, [XX] % of crop varieties, landraces, forest genetic resources, crop wild relatives (CWR) and other domesticated socio-economically and culturally valuable plant species are conserved ex situ, and viable populations are effectively managed in situ, to prevent genetic erosion and safeguard their genetic diversity.

Urban Green Space

12 [PC10]: By 2030 [X%] of countries have developed, designated or protected biodiversity-rich green spaces in urban areas that are accessible to all.

Access and Benefit Sharing

13 [PC11]: By 2030 [all / X%] of countries are benefitting from the exchange of plant materials and associated traditional knowledge to support plant conservation, ecological restoration and sustainable use.

Tools and solutions for implementation and mainstreaming

Incentives and Subsidies

14 [PC12]: By 2030, at the latest, incentives and subsidies, including afforestation, restoration and carbon sequestration incentives, that are harmful to wild plant diversity are eliminated in order to minimize or avoid detrimental impacts, and positive incentives for the conservation and sustainable use of plant diversity are developed and applied.

Sustainable Development and Addressing Poverty

15 [PC13]: By 2030, at the latest, plant diversity values have been integrated into rural and urban development and poverty reduction strategies and planning processes and have been implemented in natural capital and other national accounting mechanisms and reporting systems worldwide.

Capacity Building

16 [PC15a]: By 2030 all countries have the capacities, institutions, networks, resources and public engagement necessary to implement their plant conservation priorities and actions.

Participatory Planning

17 [PC15b]: By 2025 all countries have commenced implementing an effective and participatory national plant conservation strategy and/or targets and action plan.

Plant Data Systems

18 [PC18a]: By 2030, all users, including country authorities, have access to comprehensive and authoritative global and national expertise, and online information systems, documentation and inventories of their floras and natural habitats.

Assessing Extinction Risk

19 [PC18b]: By 2030, all known plant species have been assessed for their extinction risk and conservation status.

Recovery Planning

20 [PC18c]: By 2030, [all / XX %] of critically endangered plant species have been included in species recovery plans or conservation-focused national spatial planning.

Important Plant Areas

21 [PC18d]: By 2030, [all / XX % of] countries have identified their important areas for plant diversity to be protected.

Traditional Knowledge

22 [PC19]: By 2030, with the full and effective participation of indigenous and local communities, at all relevant levels, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of plant diversity, are respected, safeguarded and preserved to support customary and cultural use of these resources.

Public Awareness

23 [PC20]: By 2030, the value of plant diversity and responsibility for its protection is universally recognised by the world's people, including, the ecosystem services they provide and the steps that can be taken to conserve and use plants sustainably.

APPENDIX 1. PRELIMINARY DRAFT MONITORING FRAMEWORK FOR THE 2030 AND 2050 GOALS + PLANTS

This table, based on that included in CBD/WG2020/2/3/Add.1, takes into account the plant conservation elements and indicators that are included in a draft post-2020 Plant Conservation Strategy. The draft Plant Conservation Strategy welcomes and utilises the framework of draft 2050 Goals and 2030 Action Targets but highlights areas (in red) where plant conservation bring 'added value' to the global biodiversity framework or where specific plant conservation actions are required. Suggested indicators related to these plant conservation elements are also provided. The Appendix provides an overview on how the draft Plant Conservation Strategy is nested within and contributes towards the achievement of the Global Biodiversity Framework.

	A	B	C	D
	Draft 2050 Goals	**Suggested elements of the goals for monitoring**	**Suggested indicators**[1]	**Rationale for the Plant Conservation elements and indicators**
1	No net loss by 2030 in the area and integrity of freshwater, marine and terrestrial ecosystems, and increases of at least [20%] by 2050, ensuring ecosystem resilience.	Change, and rate of change, in extent of natural ecosystems and biomes (overall, for each biome/ecosystem type, and for intact areas, e.g. primary forests).	Forest area as a proportion of total land area. Trends in forest extent and/or tree cover. Trends in primary forest extent.* Continuous Global Mangrove Forest Cover Live coral cover. Species Habitat Index. Wetland Extent Trends Index. Biodiversity Habitat Index. Red List for Ecosystems.*	
		Change in ecosystem connectivity and fragmentation.	*To be identified*	
		Change in ecosystem integrity resilience and degradation and rate of ecosystem restoration.	Proportion of land that is degraded over total land area Global Ecosystem Restoration Index. Cumulative human impacts on	This plant conservation element places native species and biodiversity at the centre of ecological restoration efforts. Planting schemes solely [or primarily] to achieve carbon sequestration and for commercial forestry can

[1] Except where identified with an asterisk (*), the indicators used in this table have been identified by the Biodiversity Indicators Partnership and/or are used to monitor progress towards the Sustainable Development Goals.

	A	B	C	D
	Draft 2050 Goals	**Suggested elements of the goals for monitoring**	**Suggested indicators**[1]	**Rationale for the Plant Conservation elements and indicators**
		Change in the percentage of degraded ecosystems that are being restored using appropriate native plant species to be resilient, biodiverse and to provide ecosystem services	marine ecosystems. Ocean Health Index. Vegetation health index* Human footprint* Proportion of degraded ecosystems being restored using appropriate native plant species including species of conservation concern.	have detrimental impacts on biodiversity, especially where they involve exotic monocultures which displace native species and create low-value landscapes for biodiversity. Ecosystem services can be defined as including carbon sequestration, climate change adaptation and mitigation and other services. Biodiverse ecosystems are generally more resilient against potential damage or degradation.
2	The percentage of species threatened with extinction is reduced by [X%] and the abundance of species has increased on average by [X%] by 2030 and by [X%] by 2050.	Number of extinctions. Change in the number / % of known threatened wild plant species with genetically diverse viable populations that are effectively conserved and managed in situ and ex situ.	Number of species extinctions (birds and mammals and plants). Number of extinctions prevented. Proportion of threatened plants effectively protected. Proportion of threatened plant species for which recovery plans have been developed [or are being implemented]. Proportion of known threatened wild plant species that are effectively conserved, through integrated (in situ and ex situ) conservation management, including genetically diverse populations.	The wording for 2050 Goal 1 proposed by IUCN-SSC is as follows: 'Net species extinction risk stabilised by 2030, extinctions halted from 2020, and average population abundance of native species increased by 20% by 2030 and 60% by 2050.' Effectively 'conserved and managed in situ and ex situ' implies that, where appropriate, species shall have species recovery programmes being implemented and that the conservation of their genetic diversity is being assured or being addressed. Such effective management and conservation of viable plant populations will often be achieved by the integration of in situ, ex situ and other conservation approaches, applied at all relevant geographic scales. While in situ conservation, defined as the conservation of species in their natural habitat, is considered to be the primary approach for conservation as it allows evolutionary processes to continue, when the risk of extinction of plants is high in situ, alternative conservation measures (inter situ, quasi in situ, near situ, introduction ex nihilo) may be adopted. More

	A	B	C	D
	Draft 2050 Goals	**Suggested elements of the goals for monitoring**	**Suggested indicators**[1]	**Rationale for the Plant Conservation elements and indicators**
				specifically, such approaches would address the loss of genetic diversity in a population by introducing new genotypes, or would be required in the case of the definitive destruction of the natural habitat, or when the habitat is not subject to an effective protection measure. Ex situ conservation is defined as the conservation of plant diversity outside its natural habitat. It plays a valuable and often essential complementary role to in situ conservation by providing a safety "back up" and an insurance policy against extinction in the wild. Ex situ conservation can be performed by a diversity of methods: seed conservation including freeze drying, cryopreservation, in vitro culture, living collections (such as in botanic gardens and arboreta), field genebanks. One key element is identifying the most efficient and effective (including cost-effective) methods for each species. The assumption is that effective conservation of threatened species ex situ will include their availability to support in situ conservation, restoration and recovery programmes and to ensure that their genetic variability is included in ex situ holdings Recovery plans may include the incorporation of species and their habitats in national level biodiversity conservation or action plans. Understanding the most efficient and effective means for ex situ conservation and criteria and needs for in situ recovery and management plans, will require extensive conservation biology research, including the development of innovative approaches, such as assisted

	A	B	C	D
	Draft 2050 Goals	**Suggested elements of the goals for monitoring**	**Suggested indicators**[1]	**Rationale for the Plant Conservation elements and indicators**
				migration, to face the global changes expected. Ex situ conservation in the country of origin will be crucial in the case of field genebanks and must rely on the participation of local stakeholders / communities. The development of networks sharing germplasm, data, expertise and common protocols is crucial for the success of conservation.
		Change in conservation status. Change in the number of plants threatened with extinction.	Red List Index.	
		Change in species abundance.	Living Planet Index. Biodiversity Intactness Index.	
3	Genetic diversity is maintained or enhanced on average by 2030, and for [90%] of species by 2050.	Change in genetic diversity of crops and breeds, in situ and ex situ. Change in the number of genetically diverse viable populations of socio-economically important wild plant species, including crop wild relatives, that are effectively conserved and managed in situ and ex situ.	Number of plant genetic resources for food and agriculture secured in medium- or long-term conservation facilities (SDG Indicator 2.5.1a). Proportion of local breeds classified as being at risk, not at risk or at an unknown level of risk of extinction. Proportion of plant species recovery plans have been developed for socio-economically important wild	Socio-economically important plants are interpreted to include Crop Wild Relatives, PGRFA, FGR and other plant species that are used directly for economic and cultural purposes.

	A	B	C	D
	Draft 2050 Goals	**Suggested elements of the goals for monitoring**	**Suggested indicators**[1]	**Rationale for the Plant Conservation elements and indicators**
			plant species, including crop wild relatives. Proportion of genetically diverse viable populations of socio-economically important wild plant species, including crop wild relatives, that are effectively conserved and managed in situ and ex situ. The proportion of [known cultivars and landraces] [the genepool of crops] in use by farmers represented in seed banks and conserved on farm	
		Change in the genetic diversity of wild relatives.	Red List Index (species used for food and medicine and wild relatives of domesticated animals).	
4	Nature provides benefits to people contributing to: (i) Improvements in nutrition for at least [X million] people by 2030 and [Y million] by 2050; (ii) Improvements in sustainable access to safe and drinkable	Change in nutrition. Increase in diversity of species and varieties used in plant-based foods included in agricultural systems.	Change in nutrient availability from biological resources, especially for vulnerable populations.*	
		Change in access to water.	Proportion of bodies of water with good ambient water quality. Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to	

	A	B	C	D
	Draft 2050 Goals	**Suggested elements of the goals for monitoring**	**Suggested indicators**[1]	**Rationale for the Plant Conservation elements and indicators**
	water for at least [X million] people, by 2030 and [Y million] by 2050; (iii) Improvements in resilience to natural disasters for at least [X million] people by 2030 and [Y million] by 2050; (iv) At least [30%] of efforts to achieve the targets of the Paris Agreement in 2030 and 2050.		unsafe WASH services). Percentage of population using safely managed drinking water services. Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type. Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (SDG Indicator 6.4.2).	
		Change in trends in natural based disasters.	Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population (SDG indicator 11.5.1).	
		Trends in the carbon sequestered in natural systems.	IPPC data*	
5	The benefits, shared fairly and equitably, from the use of genetic resources and associated traditional knowledge, have increased by [X] by 2030 and reached [X] by 2050.	Change in the amount of monetary benefits shared. Change in the number of countries / communities benefitting from the exchange of plant materials and associated traditional knowledge to support plant conservation, ecological restoration and sustainable use.	Number of countries with indigenous peoples and local communities that received monetary or non-monetary benefits from granting access to traditional knowledge associated with genetic resources for its utilization* Amount of monetary benefits (in United States dollars) received from the utilization of traditional knowledge associated with genetic resources*	It is understood and expected that the plant conservation element will be achieved in full compliance with the principles and terms of the Nagoya protocol and its associated codes and guidelines, as well as national legislation and regulations adopted in accordance with the Nagoya Protocol at national levels. The achievement of this element will also be undertaken in accordance with the agreed processes under CITES for trade for scientific exchange and research purposes.

	A	B	C	D
	Draft 2050 Goals	**Suggested elements of the goals for monitoring**	**Suggested indicators**[1]	**Rationale for the Plant Conservation elements and indicators**
			Disaggregated information for the indicators reflecting benefits shared under relevant international ABS agreements and instruments* Number of countries that have received monetary or non-monetary benefits from granting access to genetic resources for their utilization* Amount of monetary benefits (in United States dollars) received from utilization of genetic resources* Number of countries facilitating efficient and effective international and other exchange and transfer of plant materials, expertise and knowledge to support conservation, research and sustainable use of plant diversity.	
		Change in the amount of non-monetary benefits shared.	Number of research and development results shared* Number of collaborations in scientific research* Number of participations in product development* Number of transfers of technology* Number of people trained* Number of jobs created* Number of joint ownerships of	

	A	B	C	D
	Draft 2050 Goals	**Suggested elements of the goals for monitoring**	**Suggested indicators**[1]	**Rationale for the Plant Conservation elements and indicators**
			relevant intellectual property rights* Number of international exchanges of plant material for conservation, research and benefit-sharing purposes. Numbers of organisations and institution with ABS related accreditations (e.g. BGCI).	

APPENDIX 2. PRELIMINARY DRAFT MONITORING FRAMEWORK FOR THE 2030 ACTION TARGETS + PLANTS

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
	Reducing threats to biodiversity			
1	Retain and restore freshwater, marine and terrestrial ecosystems, increasing by at least [50%] the land and sea area under comprehensive spatial planning addressing land/sea use change, achieving by 2030 a net increase in area, connectivity and integrity and retaining existing intact areas and wilderness.	Change in extent and rate of change of natural ecosystems and biomes. Land-use change for agriculture* Forest area as a proportion of total land area. Trends in forest extent (tree cover). Change in cropland extent. PC 1a: Increase in the % of degraded ecosystems that are being restored using appropriate native plant species including species of conservation concern – supported by appropriate integrated / ex situ activities.	Continuous Global Mangrove Forest Cover. Live coral cover. Species Habitat Index. Wetland Extent Trends Index. Biodiversity Habitat Index. Numbers of ecosystem restoration strategies and projects and proportion of areas of land under native plant restoration regimes. Number of native plant species available to support ecosystem restoration projects.	This element places native plant species and biodiversity at the centre of ecological restoration efforts. The achievement of this target assumes that steps are in place to identify degraded ecosystems and put in place the measures that are required to ensure their appropriate restoration. Biodiverse ecosystems are generally more resilient against potential damage or degradation. International Standards for the Practices of Ecological Restoration are available to be applied to ecological restoration.
		Spatial planning. PC1b: Coverage and extent of spatial planning including conservation of plant species diversity.	Proportion of land and sea area under spatial planning regimes that adequately integrate biodiversity. The number of priority	'Priority' plants can be interpreted to include threatened plants and those of restricted range, as well as plants of socio-economic importance.

[2] Except where identified with an asterisk (*), the indicators used in this table have been identified by the Biodiversity Indicators Partnership and/or are used to monitor progress towards the Sustainable Development Goals.

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
			plant species included in spatial prioritization and sector plans.	
		Change in ecosystem connectivity.	*To be identified*	
		Change in rate of habitat degradation.	Proportion of land that is degraded over total land area. Cumulative human impacts on marine ecosystems. Vegetation health index.* Ocean Health Index.	
		Habitat restoration.	Area of land restored, by ecosystem* (and resulting benefits)* Global Ecosystem Restoration Index.	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
2	Protect sites of particular importance for biodiversity through protected areas and other effective area-based conservation measures, by 2030 covering at least [60%] of such sites and at least [30%] of land and sea areas with at least [10%] under strict protection.	Change in extent of protected areas and other area-based conservation measures. PC2: Change in the % of each ecological region and important areas for plant diversity that is adequately protected ensuring the protection of viable populations of [XX] % known threatened and socio-economically important wild plant species.	Protected area coverage. OECM coverage.	The core of this element is about the conservation of ecosystems at national and/or regional levels. Since some ecological regions will include ecological networks or protected areas covering significant percentages of their area, national authorities will need to determine appropriate national targets. Ecological regions are understood to mean large areas of land or water that contain a geographically distinct assemblage of natural communities, that share a large majority of their species, ecological dynamics and environmental conditions, and interact ecologically in ways that are critical for their long-term persistence. In the context of this target 'conserved' and 'protected' mean that the area is managed to ensure the persistence of the vegetation, and associated biotic and abiotic components. This target is assumed to include ensuring good connectivity between individual and systems of protected areas as an important part of their conservation. The target may also include important areas for plant diversity (IPAs), Key Biodiversity Areas (KBAs) and regions and areas where restoration work is being undertaken in degraded ecosystems to enhance their conservation status and improve delivery of ecosystem services in tandem with securing plant diversity. This target seeks to ensure that by 2030, the rate of loss of natural habitats and important areas for plant diversity, including forests, is brought close to zero, and natural habitat degradation and fragmentation is significantly reduced. In relation to areas important for plant diversity,

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
				the target has two components – identifying the areas important for plant diversity and then ensuring their effective protection. The most important areas for plant diversity can be identified according to a set of criteria including endemism, species richness, genetic variability patterns and/or uniqueness of habitats, including relict ecosystems, also taking into account the provision of ecosystem services. Protection can be assured through effective conservation measures, including, but not limited to, protected areas. The key challenge will be to ensure that appropriate management measures are taken to maintain and enhance plant diversity.
		Coverage and representativity of protected areas and other area-based conservation measures (ecosystems, and key areas).	Protected Area Coverage of Key Biodiversity Areas. Protected area coverage of ecoregions. Protected Area Representativeness Index. Species Protection Index. Inventory of Important Plant Areas (IPAs), the plant species they contain and their conservation status. (Maybe move to Target 18?)	
		Connectivity of protected areas	Protected Area Connectedness Index	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
			(PARC-Connectedness).	
		Protected area management	Protected Areas Management Effectiveness Governance of protected areas and OECMs (public, private, community, IPLC	
3	Control all pathways for the introduction of invasive alien species achieving by 2030 a [50%] reduction in the rate of new introductions, and eradicate or control invasive alien species to eliminate or reduce their impacts by 2030 in at least [50%] of priority sites.	Change in the number of countries Measures put in place to control introduction pathways, by pathway, distinguishing intentional (release) and unintentional (escape, stowaway, contaminants and corridors) PC3a: Change in the number of invasive alien species and biological invasions with a detrimental impact on plant diversity that are being addressed either by control measures or eradication in areas important for plant diversity PC3b: Change in the number of measures in place to manage pathways to prevent new invasive species introductions and/or establishment.	Legislation for prevention and control of invasive alien species (IAS), encompassing "Trends in policy responses, legislation and management plans to control and prevent spread of invasive alien species" and "Proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species (also, SDG indicator 15.8.1). Number of species assessed for risk. Number of Parties to, and counties applying, relevant international legal instruments that for controlling pathways (BWM Convention; IPPC, OIE, Biofouling guidelines; World Customs Organization Safe Framework of Standards)* Number of countries	These elements seek to address biological invasions as a phenomenon and not just invasive alien species. It therefore combines both the invasion of the alien species (of plants, animals or micro-organisms) and the reactions of ecosystems or habitats into which they are introduced. This is because the species often dubbed "invasive" may not always become invasive when introduced to new localities, ecosystems or habitats. Management plans therefore need to be designed (using the ecosystem approach) to address the damage done to plant species and/or their communities and to restore ecosystem functions, goods and services. This requires that target ecosystems/habitats be defined, in this case as "areas important for plant diversity". It is noted that climate change is enhancing the spread and impact of many invasive alien species, hence future work on this target should ensure that there is adequate preparedness to effectively address biological invasions and that management plans should include options for adaptation to climate change. This element relates to the revised Aichi Target 9 as proposed by the IUCN SSC invasive species specialist group, which is as follows: 'By 2030, 50% of invasive alien species causing significant impacts are regulated, 30% of the most significant

	A	B	C	D
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			monitoring priority invasive alien species*	pathways of introduction are effectively managed, and 50% of the areas most vulnerable to impacts from IAS have programmes in place that control or eradicate priority IAS, and prevent their introduction'. It is clear that in order for this target to be achieved there is a need for significant public awareness campaigns and public involvement in control and management measures.
		Change in the rate of invasive alien species introductions	Trends in the numbers of invasive alien species introduction events. Trends in the numbers of invasive alien species introduction events compared to BAU trends*	
		Change in the rate of invasive species eradications or controlled	Trends in invasive alien species vertebrate eradications. Trends in invasive alien species control* Use of biocontrol*	
		Change in the impact of invasive alien species	Red List Index (impacts of invasive alien species) Economic impacts of invasive alien species** Cost of control of invasive alien species population* Loss of cultural value associated with native biodiversity*	
4	Reduce by 2030, pollution	Change in the trends in nitrogen waste	Nitrogen Use Efficiency. Nitrogen + Phosphate	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
	from excess nutrients, biocides, plastic waste and other sources by at least [50%].		Fertilizers (N+P205 total nutrients). Trends in Loss of Reactive Nitrogen to the Environment. Trends in Nitrogen Deposition.	
		Change in the rate of pesticide use.	Amount of pesticide use*	
		Change in the rate of plastic pollution.	Index of Coastal Eutrophication (ICEP) and Floating Plastic debris Density. Proportion of reusable, recyclable or where viable alternatives do not exist recoverable.	
		Change in amount of other pollutants (including light and noise).	*To be identified*	
		Change in the impact of pollution on biodiversity. PC4: Change in the [multiple] anthropogenic pressures on [vulnerable] ecosystems and species, including from pollution, excess nutrients from agriculture and development, are understood, minimized, so as to maintain ecosystem integrity and functioning.	Index of Coastal Eutrophication (ICEP) and Floating Plastic debris Density Proportion of bodies of water with good ambient water quality. Red List Index (impacts of pollution).	[This rationale needs editing to highlight plant-relevant aspects] Given the ecological inertias related to climate change and ocean acidification, it is important to urgently reduce other anthropogenic pressures on vulnerable ecosystems so as to give vulnerable ecosystems and the plant species they contain time to cope with the pressures caused by climate change. This can be accomplished by addressing those pressures which are most amenable to rapid positive changes and would include activities such as reducing pollution and overexploitation and harvesting practices which have negative

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
				consequences on ecosystems. Indicators for this element include the extent of biomes ecosystems and habitats, the incidence of human-induced ecosystem failure, the health and well-being of communities who depend directly on local ecosystem goods and services, and the proportion of products derived from sustainable sources. In addition to warming caused by the greenhouse effect, increased atmospheric CO2 leads to ocean acidification. Both pressures need to be considered in elaborating policy response options to climate change for many vulnerable ecosystems. It is important to urgently reduce the other anthropogenic pressures on these vulnerable ecosystems, such as land-based pollution/sedimentation, unsustainable harvesting and physical pressures, so as to increase their resilience to climate change.
		Change in the number of countries with effective waste and pollution management programmes and policies.	Number of countries with effective waste management plans*****	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
5	Ensure by 2030 that the harvesting, trade and use of wild species, is legal and at sustainable levels.	Number of countries with regulations in place to address illegal and/or unsustainable harvest. PC5: Change in the number of plant species threatened by international trade.	Progress by countries in the degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing. Progress by countries in the degree of implementation of the international code of conduct for responsible fisheries (FAO stats)* Percentage of Parties with legislation in Category 1 under CITES NLP. Proportion of traded wildlife that was poached or illicitly trafficked (SDG Indicator 15.7.1). The proportion of plants threatened by international trade with management interventions in place to promote sustainable trade. Measurements of decline in illegal trade on endangered plant species and customs seizures. Measurements of public awareness of illegal trade in endangered plant species and capacity of customs /	PC5: This target is consistent with the main purpose of the CITES Strategic Plan: "No species of wild flora subject to unsustainable exploitation because of international trade". The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provides an international framework for the protection of wild flora threatened by international trade.

	A	B	C	D
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			regulatory officials.	
		Change in the conservation status of socioeconomically important species. Red List Index (species used for food and medicine and wild relatives of domesticated animals).	Proportion of local breeds classified as being at risk, not-at-risk or at unknown level of risk of extinction. Comprehensiveness of conservation of socioeconomically as well as culturally valuable species.	
		Change in the area of forests under sustainable management certification.	Area of forest under sustainable management: total FSC and PEFC forest management certification.	
		Change in the health of fisheries.	Proportion of fish stocks within biologically sustainable levels Inland fishery production. Marine Trophic Index.	
		Change in percentage of fisheries under sustainable management certification.	MSC Certified Catch.	
		Change in the impacts of the harvest, trade and use of biological resources on biodiversity.	Red List Index (impacts of fisheries, forest specialist species, impacts of utilisation and impacts of internationally traded species). Living Planet Index (forest specialists, farmland specialists and trends in target and bycatch species).	

	A	B	C	D
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			Wild Bird Index (forest & farmland specialist birds). Proportion of traded wildlife that was poached or illicitly trafficked. No. / % / volumes of plant-based products from number of different countries sold under sustainable management regimes (such as FairWild).	
6	Contribute to climate change mitigation and adaptation and disaster risk reduction through nature-based solutions providing by 2030 [about 30%] [at least XXX MT CO2=] of the mitigation effort needed to achieve the goals of the Paris Agreement, complementing stringent emission reductions, and avoiding negative impacts on biodiversity and food security.	Trends in the amount of carbon stored in ecosystems and emissions avoided.	Indicators related to REDD+	
		Trends in the restoration of degraded ecosystems. PC6: Increase in the % of areas planted for carbon sequestration that are utilizing appropriate indigenous plant species.	Soil Carbon*	This element places native species and biodiversity at the centre of planting and ecological restoration efforts directed towards carbon sequestration. Planting schemes solely [or primarily] to achieve carbon sequestration and for commercial forestry can have detrimental impacts on biodiversity, especially where they involve exotic monocultures which displace native species and create low-value landscapes for biodiversity.
		Trends in use of nature-based solutions.	Percentage of countries with NBS included in NDCs amount of GHG Mt reduction coming from NBS in national plans*	
		Trends in disaster risk reduction.	Number of people with reduced vulnerability due to	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
			NBS (e.g. coastal protection from mangroves, coral reefs).	
		Trends in the resiliency of biodiversity to the impacts of climate change	Bioclimatic Ecosystem Resilience Index (BERI). Reef Fish Thermal Index. Red List Index (reef-building corals). Climatic impacts on European and North American birds. Average marine acidity (pH) measured at agreed suite of representative sampling stations. Large Reef Fish. Species range shifts*	
Meeting people's needs through enhanced use and benefit-sharing				
7	Enhance the sustainable use of wild species providing, by 2030, benefits, including enhanced nutrition, food security and livelihoods for at least [X million] people, especially for the most vulnerable, and reduce human-wildlife conflict by [X%].	Change in benefits PC7: Change in the % of socioeconomically important wild plants, including crop wild relatives, that are conserved and managed to ensure their continued availability to support nutrition, health care, food security and livelihoods. so that overexploitation and ecosystem degradation is prevented.	Estimates of numbers of people benefiting from wild harvest of fish, wildlife, medicinal plants etc* Estimates of value of wild harvest of fish, wildlife, medicinal plants etc* Change in nutrient availability from biological resources, especially for vulnerable populations*	Socio-economically important wild plants are interpreted to include Crop Wild Relatives, as well as plant species that are used directly for economic and cultural purposes. This element is consistent with the second objective of the Convention on sustainable use and its long-term goal to achieve sustainable sourcing of all naturally occurring plant resources. This element can be interpreted to include wild harvested plants and the products derived from them. Plant-based products harvested from wild sources include food products, timber, wood-based products, fibre products, ornamental, medicinal and other plants for direct use. Sustainable management and harvesting aims to ensure that practices do not result in a decline in

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
				the diversity, value or supply of wild harvested plants. It is also assumed that this target includes the integration of social and environmental considerations, such as the fair and equitable sharing of benefits and the participation of indigenous and local communities along at the supply chain integrate. This element also focuses on respecting and securing the plant species and knowledge base of plant resources used to secure livelihoods, food security and health care, especially for Indigenous and Local Communities. This measure is incorporated to ensure that future generations accessing these resources can continue to benefit from their sustainable use. The target should be implemented consistent with the Convention's programme of work on Article 8(j) and related provisions. This target may, in the long run, help local and indigenous communities to adapt to emerging environmental challenges such as climate change.
		Change in incidence of human-wildlife conflict.	Incidence of human-wildlife conflict*	
8	Conserve and enhance the sustainable use of biodiversity in agricultural and other managed ecosystems to support the productivity, sustainability and resilience of such systems, reducing by 2030 related productivity gaps by at least [50%].	Change in trends in pollinators and benefits.	Red List Index (pollinator species). Pollination yield-gap*	
		Change in soil health.	Soil carbon* Soil organic matter. Soil rooting depth.	
		Change in trends in the use of natural pest controls.	Application of integrated pest management.	
		Change in the use of biological friendly agricultural processes.	Indicators used to assess progress towards target 15.2	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
			of the Sustainable Development Goals maintained by FAO.	
		Change in the agricultural area under sustainable management. PC8a: Change in the % of areas under agriculture, aquaculture and forestry that are managed sustainably, ensuring the conservation of associated wild and crop plant diversity.	Areas of agricultural land under conservation agriculture. Proportion of agricultural area under productive and sustainable agriculture.	An ultimate goal is for all production lands to be managed sustainably, without impacts on plant diversity. In the context of this element, agricultural land may be defined as "production lands" where the primary purpose is agriculture, including horticulture, grazing, or wood production. The sectors to be considered under this target include, inter alia, croplands, pasture, forestry, including harvesting of non-timber forest products, and aquaculture. Sustainable management for plant diversity implies that a number of objectives are integrated into the management of such production lands: (i) the conservation of plant diversity including genetic diversity; (ii) protection of other plant species in the production landscape that are unique, threatened, or of particular socio-economic value; and (iii) use of management practices that avoid significant adverse impacts on plant diversity in surrounding ecosystems. The object of this element is therefore encourages the use of good agricultural, aquacultural and forestry practices. Guidance on a definition of sustainable management may be required. 'Agricultural lands' may be interpreted to include land under horticultural production too.
		Change in trends in the genetic diversity of crops and domesticated animals protected. PC8b: Change in the % of crop	Number of plant genetic resources for food and agriculture secured in medium or long-term conservation facilities (SDG	8b: This element aims to ensure that crop varieties, farmers' varieties, plants of horticultural merit, landraces and other domesticated socio-economically and culturally valuable plant species are available to support their use in agriculture,

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
		varieties, landraces, forest genetic resources and other domesticated socio-economically valuable plant species are [conserved] [used sustainably], and viable populations are effectively managed in situ and ex situ, to prevent genetic erosion and safeguard their genetic diversity.	Indicator 2.5.1a).	forestry, horticulture, and other sustainable developmental and social needs, as well as natural systems that provide ecosystem services. 'Genetic diversity' should be interpreted to include crop varieties, traits and variation within genes. Issues related to the conservation of traditional knowledge are relevant to this element.
9	Enhance nature-based solutions contributing, by 2030, to clean water provision for at least [XXX million] people.	Change in the number of people with access to sufficient amounts or quality freshwater.	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe WASH services). Percentage of population using safely managed drinking water services. Total renewable water resources.* Proportion of bodies of water with good ambient water quality (SDG Indicator 6.3.2).	
		Change in the number protected forested watershed, and inland water ecosystems essential for the provision of water.	Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type. Number of watershed restoration projects that	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
			incorporate diverse native plant use.	
		Change in water use intensity.	Human appropriation of fresh water (water footprint). Change in water use efficiency over time. Change in water use efficiency over time (SDG Indicator 6.4.1). Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (SDG Indicator 6.4.2).	
10	Enhance the benefits of green spaces for health and well-being, especially for urban dwellers, increasing by 2030 the proportion of people with access to such spaces by at least [100%].	Change in the extent of urban green space. PC10: Change in the % of biodiversity-rich urban areas that are designated as green spaces and are accessible to all.	*To be identified* Number of countries with botanic gardens or arboreta established in major urban centers. [XX] % of the world's largest cities that have a development strategy that includes urban greening, biodiversity conservation programmes and community gardening.	The development of accessible biodiversity-rich green spaces in cities and other urban areas is a growing need with the increased urbanisation of the world's population. Biodiversity-rich urban green spaces can promote many aspects of sustainable urban life, including promoting environmental education and awareness, native plant gardening, invasive species control and awareness, ecological restoration, storm water management, as well as general physical and mental health and wellbeing of the human population. Botanic gardens and arboreta provide green and public spaces for residents in many of the world's major cities, providing them with biodiversity-rich spaces and experiences. Many municipal parks, gardens and green streetscapes are primarily

	A	B	C	D
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				managed for recreational activities without including biodiversity or plant conservation as important roles or priorities.
		Change in the number of people with easy access to natural environments.	*To be identified* Number of annual visitors to nature reserves, national parks and botanic gardens and other protected areas within easy reach of each country's urban centers.	
11	Ensure that benefits from the utilization of genetic resources, and related traditional knowledge, are shared fairly and equitably, resulting by 2030 in an [X] increase in benefits.	Change in the amount of monetary benefits shared.	Number of countries with indigenous peoples and local communities that received monetary or non-monetary benefits from granting access to traditional knowledge associated with genetic resources for its utilization.* Amount of monetary benefits (in United States dollars) received from the utilization of traditional knowledge associated with genetic resources.* Disaggregated information for the indicators reflecting benefits shared under relevant international ABS	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
			agreements and instruments.* Number of countries that have received monetary or non-monetary benefits from granting access to genetic resources for their utilization.* Amount of monetary benefits (in United States dollars) received from utilization of genetic resources*	
		Change in the amount of non-monetary benefits shared	Number of research and development results shared* Number of collaborations in scientific research* Number of participations in product development* Number of transfers of technology* Number of people trained* Number of jobs created* Number of joint ownerships of relevant intellectual property rights*	
		Change in the number of countries participating in relevant international agreements and with legislative, administrative and policy frameworks or measures on access and benefit sharing	Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits (SDG indicator 15.6.1).	The development and adoption of appropriate policies and actions to facilitate efficient and effective international and other exchange and transfer of plant materials, expertise and knowledge is urgently needed in many countries to support conservation, research benefit sharing and sustainable use of plant diversity. Constraints

	A	B	C	D
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		PC11: Change in the number of countries with appropriate policies and actions are in place to facilitate efficient and effective international and other exchange and transfer of plant materials, expertise and knowledge needed to support conservation, research benefit sharing and sustainable use of plant diversity.	Number of Parties to the Convention on Biological Diversity (CBD) that have deposited the instrument of ratification, acceptance, approval or accession of the Nagoya Protocol. Number of Contracting Parties to the International Treaty on Plant Genetic Resources for Food and Agriculture. Number of countries that have reported legislative, administrative and policy frameworks or measures to implement the Convention's provisions on access and benefit-sharing. Number of countries that have reported legislative, administrative and policy frameworks or measures to implement the International Treaty on Plant Genetic Resources for Food and Agriculture. Total number of transfers of crop material from the Multilateral System of the International Treaty on Plant Genetic Resources for Food and Agriculture received in a country.	in facilitating access, exchanges and collaboration between institutions to support cooperative programmes, particularly at international levels, has slowed progress considerably in achieving plant conservation priorities in many countries. It is understood and expected that this element will be achieved in full compliance with the principles and terms of the Nagoya protocol and its associated codes and guidelines, as well as national legislation and regulations adopted in accordance with the Nagoya Protocol at national levels. The achievement of this target will also be undertaken in accordance with the agreed processes under CITES for trade for scientific exchange and research purposes.

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
	Tools and solutions for implementation and mainstreaming			
12	Reform incentives, eliminating the subsidies that are most harmful for biodiversity, ensuring by 2030, that incentives, including public and private economic and regulatory incentives are either positive or neutral for biodiversity.	Change in the value of subsidies harmful to biodiversity PC12: Change in number of perverse incentives and subsidies, [including afforestation, restoration, biofuel production and carbon sequestration incentives], that are harmful to plant diversity that are eliminated [in order to minimize or avoid detrimental impacts,]and increase in the number of positive incentives for the conservation and sustainable use of plant diversity that are developed and applied.	Trends in potentially environmentally harmful elements of government support to agriculture (producer support estimate). Fuel subsidies for fisheries. Subsidies for pesticide use and fertilizer use.	Substantial and widespread changes to incentives, including subsidies, are required to ensure sustainability. Ending or reforming incentives, including subsidies, that are harmful to plant diversity is a critical and necessary first step that would also generate net socio-economic benefits. In addition, the creation or further development of positive incentives for the conservation and sustainable use of plant diversity, and plant ecosystems, provided that such incentives are in harmony with the Convention and other relevant international obligations, could also help in the implementation of the Strategic Plan by providing financial or other incentives to encourage actors to undertake actions which would benefit plants. [Based on the Technical Rationale for Aichi Target 3].
		Change in the value of positive incentives for biodiversity.	Number of countries with biodiversity-relevant charges and fees. Number of countries with biodiversity-relevant taxes. Number of countries with biodiversity-relevant tradable permit schemes.	
13	Integrate biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts,	biodiversity values integrated into national and local planning, development processes, poverty reduction strategies. PC13: Increase in the	*To be identified*	It is widely recognized that the values of plant diversity are not widely reflected in decision-making. The objective of this element is to ensure that the diverse values of plants and opportunities derived from their conservation and sustainable use are recognized and reflected in all relevant

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
	ensuring by 2030, that biodiversity values are mainstreamed across all sectors and that biodiversity-inclusive strategic environmental assessments and environmental impact assessments are comprehensively applied.	integration of plant diversity values into rural and urban development and poverty reduction, as well as into planning processes, natural capital accounting and reporting mechanisms.		public and private decision-making. For example, though numerous studies, at various scales, have illustrated the economic value of plant diversity and the ecosystem services it underpins. Including the values of plant diversity in national and local development and poverty reduction strategies and planning processes and into nation accounting, as appropriate, and reporting systems, places plants into the same decision framework as other goods and services, and would help give it greater visibility amongst policy-makers and contribute to the "mainstreaming" of plant diversity issues in decision-making processes. Reflecting the values of plants in the planning processes of governments at all levels, including economic, financial, spatial planning, and the application of strategic environmental assessment, will help internalize the costs and benefits of the conservation and sustainable use of plant diversity in decision-making. [Based on the Technical Rationale for Aichi Target 2]
		biodiversity values integrated into national accounts.	*To be identified*	
		Application of biodiversity-inclusive strategic environment assessments and environmental impact assessments.	Number of countries systematically applying environmental impact assessments that integrate biodiversity considerations.* Number of countries systematically applying strategic environmental	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
			assessments that integrate biodiversity considerations.*	
14	Reform economic sectors towards sustainable practices, including along their national and transnational supply chains, achieving by 2030 a reduction of at least [50%] in negative impacts on biodiversity.	*To be identified*		
		Change in the number of private-sector organizations which reflect biodiversity in their planning, valuation, and impact assessment processes.	*To be identified*	
15	Resources, including capacity-building, for implementing the framework have increased from all sources so that by 2030 resources have increased by [X%] and are commensurate with the ambition of the targets of the framework.	Change in the size of flows of financial resources for biodiversity.	Official development assistance for biodiversity.	
		Change in expenditure on biodiversity.	Information provided through the through the financial reporting framework*	
		Change in the number of Parties which have developed national financial plans for biodiversity and have this plan fully resourced. PC15a: Change in the number of countries have the capacity, institutions, networks, resources and public engagement necessary to implement their plant conservation priorities and actions.	Information provided through the through the financial reporting framework* Measurement of the increase in the total financial and other resources available to implement identified priority plant conservation actions. Number of professional training and capacity	15a: In the context of this element, 'capacity' is defined as the process by which individuals and organizations will have obtained, improved, and retained the skills, knowledge, tools, equipment, and other resources needed to achieve the objectives of their national plant conservation strategies and goals. Capacity building can also include a conceptual approach toward social and behavioural change, and the removal of obstacles that lead to infrastructure development allowing the achievement of the stated goals. Significant capacity building can also be supported, encouraged and facilitated through the development of training networks.

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
		PC15b: Number of countries that have commenced implementing an effective and participatory national plant conservation strategy and/or targets and action plans.	building initiatives and number of people trained. Numbers of institutions and organisations involved in implementing plant conservation programmes and membership of plant conservation networks.	15b: The value of developing national plant conservation strategies and or action plans has been recognised through their success in helping to define and guide the achievement of national plant conservation objectives and targets, and towards the broader implementation of the Global Strategy for Plant Conservation (2002-2020). Such strategies can also help to engage a wide range of stakeholders, both governmental and non-governmental, at national and local levels to undertake with plant conservation actions within a common shared framework. It is expected that national plant conservation strategies will include in their scope the conservation of wild plant diversity and plant genetic resources used in food, agriculture and other production systems.

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
16	Establish and implement measures in all countries by 2030 to prevent potential adverse impacts of biotechnology on biodiversity.	Change in the number of Parties to the Convention on Biological Diversity that have adopted and implemented necessary biosafety legal, administrative and other measures.	Percentage of Parties that have the necessary biosafety legal and administrative measures in place* Percentage of Parties that implement their biosafety measures* Percentage of Parties that have the necessary measures and means for detection and identification of products of biotechnology* Percentage of Parties to the Cartagena Protocol on Biosafety implementing the relevant provisions of the Protocol*	
		Change in the number of Parties to the Convention and the Cartagena Protocol that have carried out scientifically sound risk assessments and manage the identified risks.	Percentage of Parties that carry out scientifically sound risk assessments to support biosafety decision-making* Percentage of Parties that establish and, as applicable, implement risk management measures* Percentage of Parties to the Cartagena Protocol on Biosafety implementing the relevant provisions of the Protocol*	
		Change in the number of Parties	Percentage of Parties with	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
		to the Convention and the Cartagena Protocol that have shared and have access to biosafety-related information for the safe use of the products of biotechnology.	mechanisms to facilitate the sharing of and access to information on biosafety* Percentage of Parties to the Cartagena Protocol on Biosafety* implementing the relevant provisions of the Protocol*	
		Change in the number of Parties to the Convention and the Cartagena Protocol that have systems in place for restoration and compensation for damage to conservation and sustainable use of biological diversity.	Percentage of Parties with legal and technical measures for restoration and compensation* Percentage of Parties to the Nagoya – Kuala Lumpur* Supplementary Protocol implementing the relevant provisions of the Supplementary Protocol*	
17	People everywhere take measurable steps towards sustainable consumption and lifestyles, taking into account individual and national cultural and socioeconomic conditions, achieving by 2030, just and sustainable consumption levels.	Change in the trends in the use of resources.	Ecological Footprint. Human Appropriation of Net Primary Production (HANPP). Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP (SDG indicator 12.2.2). Food loss index and food waste index (SDG Indicator 12.3.1).	
		Change in the number of countries with policies in place	Number of countries with sustainable consumption	

	A	B	C	D
	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
		to promote sustainable consumption.	and production (SCP) national action plans or SCP mainstreamed as a priority or target into national policies (SDG Indicator 12.1.1)	
18	Promote education and the generation, sharing and use of knowledge relating to biodiversity, in the case of the traditional knowledge, innovations and practices of indigenous and local communities with their free, prior and informed consent, ensuring by 2030 that all decision makers have access to reliable and up to date information for the effective management of biodiversity.	Change in the rate of generation and access of biodiversity information available. PC18a: Increase in the number of countries with access to comprehensive and authoritative global and national expertise, and online information systems, documentation and inventories of their floras and natural habitats. PC18b: Change in the number of known plant species have been assessed for their [*extinction risk and*]conservation status. PC18c: Increase in the number of species recovery plans that have been developed for critically endangered plant species and for restricted range and threatened species and their integration into national spatial planning.	Growth in Species Occurrence Records Accessible through GBIF. Proportion of known species assessed through the IUCN Red List. Species Status Information Index. The proportion of described plants included in a scientifically verified and up-to-date online flora. and national plant information systems, including number of new plant species discovered and described. Number of countries with access to comprehensive and scientifically verified national plant information. Number of specific training and education programmes in plant	18a: This plant conservation element builds on the GSPC 2020 Target 1, to have available 'An online flora of all known plants' which is expected to have been achieved by the end of 2020. The implementation of this target was undertaken by an international consortium of leading botanical institutions, the World Flora Online (WFO) Consortium, as well as by individual Parties that are preparing and making available electronic Floras at national and other levels. Nevertheless, increasingly comprehensive data continue to be needed to guide conservation action. Further work is required to ensure that the comprehensive data on plant species and their habitats are available. While the WFO provides a valuable and comprehensive baseline on the world's plants, further work is required to ensure that accessibility is improved to meet the needs of users, including verification of the correct names and synonymy, up-to-date geographic distributional information, comprehensive descriptions, verified images and conservation assessments. Some countries, regions and plant groups are still inadequate known and understood. The target aims to support the development of [distributed and widely accessible] information systems that continue to gather, systematize, integrate and present plant data that are needed to support conservation programs, restoration and

	A	B	C	D
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		PC18d: Change in the number of important areas for plant diversity identified and protected.	taxonomy and related information technology. Number of known plant species have been assessed for their extinction risk and conservation status. Number of national and global threat assessments as a proportion of listed taxa.	sustainable use of all of the world's plant species, including relevant aspects of their ecology, habitats and conservation biology. Furthermore, c.2,000 new plant species are discovered and described annually, many of which require to be listed as threatened. Information systems are needed to continue to update and include such new discoveries. It is expected that this will include new focus on making such data more relevant for users, enhance and build the capacity of the community of plant experts supporting such information systems and providing new tools for identification (keys, pictures and descriptions) and include local and vernacular names where possible and ensuring that data are provided in the most relevant languages. 18b: Implementing this element is a priority at national and regional level as it forms the baseline of knowledge for identifying and assessing threatened species. It is expected that assessments will be "Evidence-based", founded on verifiable data in order to ensure that the assessments are objective, repeatable and provide a strong basis for further investment and are suitable to guide conservation action. The Red List Categories and Criteria under the International Union for Conservation of Nature (IUCN) provide a robust framework for this endeavour. However, since the proportion of plants assessed globally is still low, this approach will need to be complemented by drawing upon a wider range of assessments at national, regional and global levels. Parties, other Governments and other relevant

	A	B	C	D
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				stakeholders may consider undertaking assessments of the extinction risk and conservation status of other groups such as algae and fungi (including lichen-forming species). 18c: Planning is an essential precursor to species conservation action and this to other actions whereby conservation assessments are completed for all known species and conservation action is underway. A species recovery plan serves as a road map for species recovery. It outlines the path and tasks required to restore and secure self-sustaining wild populations. It is generally a non-regulatory document that describes, justifies, and schedules the research and management actions necessary to support recovery of a species or multiple species. Such plans may consist of actions that are targeted towards individual plant species, populations or collections of species, and may form a component of the management plans for individual or networks of protected areas or other natural habitats. Species recovery plans may be developed by a wide range of governmental and non-governmental agencies. However, it is expected that they will be widely agreed by the relevant stakeholders responsible for or undertaking the conservation action. 18d: Important Plant Areas (IPAs) are defined as natural or semi-natural sites exhibiting exceptional botanical richness and/or supporting an outstanding assemblage of rare, threatened and/or endemic plant species and/or vegetation of high botanic value. Currently, many such areas may or not be included in national protected area systems.

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				The identification and documentation of areas important for their plant diversity is a prerequisite for their successful conservation.
19	Promote the full and effective participation of indigenous peoples and local communities, and of women and girls as well as youth, in decision making related to the conservation and sustainable use of biodiversity, ensuring by 2030, equitable participation and rights over relevant resources.	Change in the number of countries involving indigenous peoples and local communities in decision-making processes. PC19: Change in the extent of full and effective participation of indigenous and local communities including all genders, at all relevant levels, in respecting, safeguarding and preserving the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of plant diversity, to support customary and cultural use of these resources.	Number of studies completed on plant traditional knowledge, innovations and practices of indigenous and local communities. Number of projects undertaken by indigenous and local communities to safeguard traditional knowledge, innovations and practices relevant for the conservation, sustainable and customary use of plant diversity.	This element focuses on respecting and securing the knowledge base of plant resources used to secure livelihoods, food security and health care, especially for Indigenous and Local Communities. This measure is incorporated to ensure that future generations accessing these resources can continue to benefit from their sustainable use. The target should be implemented consistent with the Convention's programme of work on Article 8(j) and related provisions. This element may, in the long run, help local and indigenous communities to adapt to emerging environmental challenges such as climate change.
		Change in the number of countries recognising traditional knowledge, practices and innovations, traditional occupations and customary use.	Index of Linguistic Diversity.	
		Change in the number of countries with legislation or policies to ensure women's access to land, forests, protected	Percentage of NBSAPs that include actions on ensuring women's leadership and representation in decision-	

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	Draft 2030 targets	**Suggested elements of the targets for monitoring**	**Suggested indicators[2]**	**Rationale for the Plant Conservation elements [and indicators]**
		areas, coastal areas and other key biological resources, and their associated benefits.	making bodies at all levels* Number of Parties that have developed and implemented national gender action plans or strategies for biodiversity* Number of Parties that have guidance or instructions to integrate gender considerations in biodiversity conservation and sustainable use programmes/projects*	
		Change in the participation of women in environmental governance.	Percentage representation of women in sector-specific environmental governance bodies (including communal land governance bodies, forest groups, water governance bodies and fisheries management bodies)*	
20	Foster diverse visions of a good quality of life and unleash values of responsibility, to effect by 2030 new social norms for sustainability.	Change in the number of people aware of the importance of biodiversity. PC20: Increase in the universal recognition of the value of plant diversity and responsibility for its protection by the world's people, including, the ecosystem services they provide and the steps that can	Biodiversity Barometer. Public surveys of citizens, consumers and sectoral participants on plant awareness and understanding issues (such as botanic garden visitors).	There is an urgent need to effectively communicate the value of plant diversity to all relevant sectors, including Indigenous and Local Communities, young people, the business sector, media and policy makers. There is also a need to refocus a communication strategy to address livelihoods, ecosystem products and services. Implementation of this the target will also require the engagement of both the informal and formal education sectors at all levels, including primary, secondary and tertiary education. It is clear that key messages for a communication /

	A	B	C	D
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		be taken to conserve and use plants sustainably.		marketing plan for this target will require the incorporation of plant conservation into national climate change communication strategies, and into other relevant resource management documents or strategies.
		Change in the number of people taking action for biodiversity.	Global Biodiversity Engagement Indicator. The number of people taking part in citizen science programmes monitoring plant diversity.	