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Item 23 of the provisional agenda*

Plant conservation

Draft guide to the updated Global Strategy for Plant Conservation including suggested sources of indicators and monitoring framework

Note by the Secretariat

1. Pursuant to decisions [15/5](#) and [15/13](#), the Secretariat of the Convention on Biological Diversity and the Global Partnership for Plant Conservation prepared document CBD/SBSTTA/25/5, which contained a set of complementary actions related to plant conservation to support the implementation of the Kunming-Montreal Global Biodiversity Framework.
2. At its twenty-fifth meeting, the Subsidiary Body on Scientific, Technical and Technological Advice considered the document and adopted recommendation 25/4.
3. The present document, prepared by the Global Partnership for Plant Conservation, provides a guide to the updated Global Strategy for Plant Conservation, including suggested sources of indicators and monitoring framework, to support the consideration of item 23 of the Conference of the Parties at its sixteenth meeting.
4. This document is presented in the form and language in which it was received by the Secretariat.

* CBD/COP/16/1.

Draft Guide to the updated Global Strategy for Plant Conservation including suggested sources of indicators and monitoring framework

Mission statement

The Global Strategy for Plant Conservation (GSPC) is a catalyst and international framework for working together at all levels - local, national, regional and global - to understand, conserve and use sustainably the world's immense wealth of plant diversity whilst promoting awareness and building the necessary capacities for its implementation.

Global Strategy Objectives

The Global Strategy for Plant Conservation addresses the challenges posed by threats to plant diversity. The overall purpose of the Strategy is to achieve the three objectives of the Convention, particularly for plant diversity, taking into consideration Article 8(j) of the Convention and the Cartagena Protocol on Biosafety.

The Strategy considers plants in the terrestrial, inland water and marine environments. Further, the Strategy applies to the three primary levels of biological diversity as recognized by the Convention, hence plant genetic diversity, plant species and communities and their associated habitats and ecosystems.

While the Strategy addresses the plant kingdom with its main focus on seed plants, and other well-described groups such as bryophytes and pteridophytes; Parties, other Governments and other relevant stakeholders may wish to consider developing conservation strategies for other groups such as algae and fungi (including lichen-forming species).

The implementation of the Strategy should be considered within the broader framework of the [Kunming-Montreal Global Biodiversity Framework \(KMGBF\)](#). Similarly, the mechanisms required to enable Parties, partners and other stakeholders to effectively implement the Convention and to monitor progress in implementation under the KMGBF will be also relevant for this Strategy.

The Strategy consists of the following five objectives:

Objective I: Plant diversity is well understood, documented and recognized;

Objective II: Plant diversity is urgently and effectively conserved;

Objective III: Plant diversity is used in a sustainable and equitable manner;

Objective IV: Education and awareness about plant diversity, its role in sustainable livelihoods and importance to all life on Earth is promoted;

Objective V: The capacities and public engagement necessary to implement the Strategy have been developed.

Part 1: Rationale

1.1 Rationale for the Strategy

Plants are universally recognized as a vital component of the world's biological diversity and an essential resource for the planet. In addition to the cultivated plant species used for food, timber and fibres, many wild plants have great economic and cultural importance and potential, as future crops and commodities more so as humanity grapples with the emerging challenges of environmental and climate change. Plants play a key role in maintaining the planet's basic environmental balance and ecosystem stability and provide an irreplaceable component of the habitats for the world's animal life. At present, a complete inventory of the plants of the world has not been assembled, but it is estimated that the total number of vascular plant species may be of the order of 450,000.

Of urgent concern is the fact that many plant species, communities, and their ecological interactions, including the many relationships between plant species and human communities and cultures, are in danger of extinction, threatened by such human-induced factors such as, inter alia, climate change, habitat loss and

transformation, over-exploitation, alien invasive species, pollution, clearing for agriculture and other development. If this loss is not stemmed, countless opportunities to develop new solutions to pressing economic, social, health and industrial problems will also be lost. Furthermore, plant diversity is of special concern to indigenous and local communities, and these communities have a vital role to play in addressing the loss of plant diversity.

If efforts are made at all levels to fully implement this updated Strategy:

- (i) societies around the world will be able to continue to rely upon plants for ecosystem goods and services, including food, genetic resources, medicines, clean water, climate amelioration, rich, productive landscapes, energy sources, and a healthy atmosphere;
- (ii) humanity will secure the ability to fully utilize the potential of plants to mitigate and adapt to climate change, recognizing the role of plant diversity in maintaining the resilience of ecosystems;
- (iii) the risk of plant extinctions because of human activities will be greatly diminished, and the genetic diversity of plants safeguarded;
- (iv) the rich evolutionary legacy of plant diversity will be used sustainably and benefits arising are shared equitably to solve pressing problems, support livelihoods and improve human well-being;
- (v) the knowledge, innovations and practices of indigenous and local human communities that depend on plant diversity will be recognized, respected, preserved and maintained; and
- (vi) people everywhere will be aware of the urgency of plant conservation and will understand that plants support their lives and that everyone has a role to play in plant conservation.

1.2 General principles

The implementation of the Strategy should be undertaken within the broader framework of the KMGBF [Framework](#). The pressures on biodiversity and the underlying causes of biodiversity loss affect plants as much as the other components of biodiversity. The complementary components of the updated Global Strategy for Plant Conservation are essential for the effective conservation of plant diversity. Regional components of the Strategy might be developed, perhaps using a biogeographical approach. National plant conservation strategies are already in place in some countries and other countries may also wish to develop such initiatives.

1.3 Flexible Coordination Mechanism

In [decision VII/10](#), the Conference of the Parties welcomed the establishment by the Executive Secretary of a flexible coordination mechanism for the Global Strategy for Plant Conservation. The mechanism serves to facilitate and promote implementation, and monitoring, of the Strategy at all levels (national, regional and global), and currently comprises four elements:

- Meetings of liaison groups: Liaison groups will be convened as necessary according to established procedures.
- National GSPC focal points: National focal points, as determined by Parties, [are listed here](#).
- The Global Partnership for Plant Conservation (GPPC): The Global Partnership for Plant Conservation is an initiative supported by a wide range of international and national agencies and organizations active in plant conservation.
- The CBD Secretariat.

1.4 Technical rationales, milestones and indicators for the updated Strategy

In [decision X/2](#) the Conference of the Parties requested the Executive Secretary, in collaboration with the Global Partnership for Plant Conservation and other partners and relevant organizations, and subject to the availability of the necessary resources to further develop, with the flexible coordination mechanism, the technical rationales, milestones and indicators for the updated Strategy, consistent with the Strategic Plan for Biodiversity 2011-2020, for review by the Subsidiary Body on the Scientific, Technical and Technological Matters at its fifteenth meeting.

1.5 Implementation

Implementation of the GSPC during its previous phases (2002-2010 and 2011-2020) is described in the following:

- [In-depth Review](#)
- [Resolutions and Related Initiatives](#)
- [Flexible Coordination Mechanism](#)
- [National Focal Points](#)
- [Plant Conservation Report](#)

Part 2: The Post-2020 Updated GSPC

In addition to work on the GSPC undertaken by Parties worldwide, over the last two decades the GSPC has been supported by a Global Partnership for Plant Conservation (GPPC). The GPPC is a voluntary partnership of many of the world's leading botanical and plant conservation organisations and institutions. The Partnership was launched in 2004 at the CBD's 7th Conference of the Parties (COP7). Its establishment was welcomed in a Decision of COP 7, which also included the establishment of a flexible coordination mechanism for the GSPC that includes the GPPC. The GPPC is provided with a Secretariat by Botanic Gardens Conservation International (BGCI). The GPPC has grown to unite about 70 members, including 21 international organisations and 47 national organisations in 21 countries.

The Partnership was created to support the Parties in the implementation of the GSPC and has been a catalyst in, helping to mobilise innovative and effective new actions for plant conservation and support capacity building throughout the world. The GPPC has been active in many ways in GSPC implementation, including in the preparation of Plant Conservation Reports and giving greater visibility to the GSPC in national and international fora. Over the years, the GSPC has also involved thousands of plant conservationists in the CBD process, engaging their efforts, often at the community level, and aligning their actions with priorities at national levels.

At the GPPC conference held in South Africa in 2018, hosted by the South African National Biodiversity Institute, a GSPC Liaison Group meeting was held to review the GSPC progress and its future. The development of a post-2020 update to the GSPC was proposed. Subsequently, support for an update came from a range of CBD Parties, including at the informal meetings of the CBD's 24th meeting of its Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA 24) and at international plant conservation conferences and consultations, such as those held in China in 2018 and 2019. It was recommended by SBSTTA 24-rec-02 that an updated GSPC should take the form of a set of complementary actions in support of the implementation of the Kunming-Montreal Global Biodiversity Framework. Following that, at the CBD's COP15 meeting the Parties decided to invite the GPPC to:

“with the support of the Secretariat, prepare a set of complementary actions related to plant conservation to support the implementation of the Kunming-Montreal Global Biodiversity Framework, to be considered by a meeting of SBSTTA following the fifteenth meeting of the Conference of the Parties.”

Following the SBSTTA 24-rec-24 and [decision 15/13](#) of COP15, work began by the GPPC to develop a schedule of complementary actions. A draft post-2020 GSPC that had been developed previously by the GPPC was edited to become an action-based approach, rather than to include new or updated targets. In this way, the suggestions and inputs provided by GPPC members, and by the representatives of the CBD

Parties, could be incorporated into an appropriate draft. When completed, the draft was reviewed and further enhanced by CBD Parties in an [open consultation](#) (3 July to 4 August 2023). All comments received were incorporated and the plant conservation action framework was presented at the SBSTTA 25, along with [SBSTAA 25-inf-4](#) which provided a rationale for each complementary action. That meeting recommended ([SBSTTA recommendation 25/4](#)) that COP16 should adopt the voluntary complementary actions related to plant conservation, and as an update to the GSPC to support the implementation of the Kunming-Montreal Global Biodiversity Framework. The plant-related actions taken together represent the third phase of the Global Strategy for Plant Conservation [2023-2030].

The Voluntary Complementary Actions

Table 1. Voluntary complementary actions related to plant conservation to support the implementation of the Kunming-Montreal Global Biodiversity Framework

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
1. Reducing threats to biodiversity	
Target 1 Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.	Plant conservation in spatial planning and management processes 1. Identify and map, where possible, all plant species in terrestrial, inland water, marine and coastal ecosystems, including at the population level, as well as areas and ecosystems important for plant diversity, using diverse knowledge systems.
Target 2 Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.	Ecological restoration 2. Implement or participate in programmes for the effective restoration of degraded ecosystems and habitats, including to prevent or mitigate the existing drivers of degradation, prioritizing the use of genetically appropriate material of native species, enhancing and conserving soils, considering ecological criteria, associated fungal symbionts, pollinators and dispersers, and including species of conservation concern, as well as climate resilience, long-term commitment, innovative financing and adaptive management, ensuring that the programmes enhance biodiversity and human well-being and are informed, where possible, by traditional knowledge, with the free, prior and informed consent of the indigenous peoples concerned.
Target 3 Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.	Important areas for plant diversity 3 (a) Ensure that important areas for the conservation of plant species and their genetic diversity are identified, well connected and represented within protected areas and other effective area-based conservation measures, including in marine and coastal areas. 3 (b) Develop integrated management plans for important areas for plant diversity and implement programmes to ensure that those areas are effectively documented, protected, monitored and sustainably managed, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
Target 4 Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.	Plant species conservation 4 (a) Ensure that extinction risk and conservation status are known, understood and maintained and that assessments are regularly updated, as far as possible, for known plant species. 4 (b) Develop and implement recovery plans for all known threatened plant species, including management plans for pests, weeds and other known threats and drivers of loss, to significantly reduce extinction risk. 4 (c) Promote programmes to ensure that threatened plant species are effectively conserved, managed, monitored and restored using in situ and ex situ methodologies, aiming to achieve adequate levels of genetic diversity and viable populations and, where appropriate, involving indigenous peoples and local communities. Conservation of genetic diversity 4 (d) Undertake ex situ and in situ conservation programmes for genetic diversity in wild and domesticated plant species and populations, including crops and their wild relatives and other socioeconomically valuable plant species, considering the domestication gradient and the use of surrogates or proxies, ensuring that the genetic diversity within and among populations is effectively documented, managed and monitored, to maintain and restore genetic diversity and safeguard their adaptive potential, taking into account the relevant frameworks and plans of action developed under the Commission on Genetic Resources for Food and Agriculture of the Food and Agriculture Organization of the United Nations. 4 (e) Establish programmes to ensure that domesticated, cultivated species and crop wild relatives are effectively protected, restored and managed using on-farm and in situ methodologies and by applying sustainable management practices using agroecology and other sustainable production practices involving the traditional knowledge of indigenous peoples and local communities, with their free, prior and informed consent. 4 (f) Encourage ex situ operations that artificially propagate threatened plant species to seek cooperative measures that would support in situ conservation, such as technical support, the contribution of funds, the exchange of specimens for reintroduction into the wild, capacity-building and training, technology transfer, investment and infrastructure.
Target 5 Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting	Sustainable harvesting 5 (a) Develop and implement strategies to ensure the sustainable and legal harvesting and use of wild plants, including by determining sustainable harvest levels, and for artificial propagation

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
and protecting customary sustainable use by indigenous peoples and local communities.	or assisted production, respecting and protecting customary sustainable use by indigenous peoples and local communities. Trade in plants 5 (b) Identify wild plants that are currently or likely to be threatened by unsustainable or illegal trade, and support the implementation or development and adoption of national or international guidelines and other measures to ensure that the harvesting of and trade in plants are sustainable, safe and legal.
Target 6 Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.	Monitoring invasive species 6 (a) Develop or strengthen early warning and monitoring and tracking systems, including public awareness programmes, at the national and international levels, to prevent, manage and eradicate potentially invasive alien species that affect or may affect native plants and their ecosystems, and put in place measures¹ to manage pathways of introduction. ¹ Any international measures should be implemented in compliance with the Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization and the International Plant Protection Convention. Controlling invasive species 6 (b) Address the detrimental impact of invasive alien species on plant diversity and ecosystems by undertaking control or eradication measures, with a focus on areas important for plant diversity and considering the impacts of climate change.
Target 7 Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.	Impact of pollution on plants 7. Gather information, research, assess and provide evidence of pollution risks and their negative impacts, and take action to minimize pollution pressures on plant species and their ecosystems.
Target 8 Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation,	Native plant use in climate mitigation and adaptation

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.	8 (a) Consider current and projected impacts of climate change on species, species distribution and ecosystems when implementing plant conservation activities, including those undertaken under Targets 2, 3, 4 and 6. 8 (b) Encourage the use of genetically, biologically and ecologically appropriate native plant species, including species of conservation concern, in areas planted for carbon sequestration and in nature-based solutions and/or ecosystem-based approaches for climate mitigation and adaptation, ensuring that such areas are selected appropriately to avoid negative effects and foster positive impacts on biodiversity.
2. Meeting people's needs through sustainable use and benefit-sharing	
Target 9 Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.	Plants for peoples' needs 9. Co-develop and implement programmes with indigenous peoples, local communities and relevant stakeholders to sustainably maintain and manage wild plants that are of socioeconomic and cultural importance, as well as their ecosystems, and to enhance benefits for people.
Target 10 Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.	Sustainable management of production land 10 (a) Support and put in place sustainable management programmes for existing areas under agriculture, aquaculture, fisheries and forestry and increase the proportion of those areas that is managed sustainably to ensure the conservation and restoration of associated wild plant diversity, including crop wild relatives. 10 (b) Include a special effort to conserve landraces, both in situ and ex situ, and promote the wider use of landraces to support the diversification of crops and cropping systems. 10 (c) Promote and support actions relating to the conservation of wild relatives of edible species as a clear contribution towards food security.
Target 11 Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through	Native plants and ecosystem functions and services 11. Ensure that genetically, biologically and ecologically appropriate and adapted native plant species, including species of conservation concern, are used for the restoration of ecosystems or ecosystem services, including through nature-based solutions and/or ecosystem-based approaches.

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.	
Target 12 Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.	Urban green infrastructure 12 (a) Establish green infrastructure projects focused on plant diversity and connectivity, encouraging the use of native climate-resilient species in plant diversity conservation programmes in urban areas and developing and implementing new strategies for promoting the mainstreaming of biodiversity and ecosystem services into urban and territorial planning and management, taking into account coastal urban areas and coastal and marine ecosystems. Urban plant diversity 12 (b) Develop, designate and protect biodiversity-rich accessible green and blue spaces in urban areas by establishing or strengthening, inter alia, parks, greenways, ponds, watercourses, wetlands, botanical gardens and arboreta in such areas, and ensure connectivity among those spaces, in order to support biodiversity conservation, environmental education and awareness, and human health and well-being effectively.
Target 13 Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.	Access and benefit-sharing for plant conservation 13. Support and encourage measures to facilitate appropriate access to plant genetic resources, ensuring the fair and equitable sharing of benefits that arise from the utilization of such resources and associated traditional knowledge, as well as from digital sequence information originated from those resources, in accordance with applicable international access and benefit-sharing instruments.
3. Tools and solutions for implementation and mainstreaming	
Target 14 Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.	Tools for mainstreaming plant conservation 14. Provide open and accessible data and develop tools to help to measure and integrate the importance of diverse knowledge systems and value of plant diversity into policies, regulations, environmental assessments and planning processes, including rural and urban development, poverty reduction strategies and national accounting and reporting mechanisms.

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
Target 15 Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions: (a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios; (b) Provide information needed to consumers to promote sustainable consumption patterns; (c) Report on compliance with access and benefit-sharing regulations and measures, as applicable; in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.	Sustainable practices in plant use 15 (a) Encourage and support the adoption by businesses, in particular large and transnational companies and other sectors that focus on plants of sustainable practices along supply chains for trade in wild plant species, and promote those practices in such sectors as finance, transport, e-commerce and tourism. 15 (b) Promote and support the development of best practices for the monitoring and evaluation of plant use in sustainable production, to support plant conservation and benefits to indigenous peoples and local communities. 15 (c) Provide information needed to consumers to promote sustainable consumption practices in plant use.
Target 16 Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.	Sustainable consumption 16 (a) Provide information and guidance, including in the form of trade statistics and data, and capacity-building to inform the development of policies and legislative and regulatory frameworks that recognize the importance of wild plants as a source of food, fibres, medicines, pharmaceuticals and construction material and as a resource for other sectors. 16 (b) Develop and support education programmes on the importance of plants and the impacts of the global footprint of consumption, global food waste and overconsumption on plant diversity.
Target 17 Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.	17. Foster and support research and development, especially in developing countries, to enhance the benefits arising from the use of safe biotechnologies related to plant conservation and increase the sustainability and resilience of agrifood systems.

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
Target 18 Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least \$500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.	<i>No particular plant conservation action is required under Target 18, except to support its achievement.</i>
Target 19 Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least \$200 billion per year by 2030, including by: (a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least \$20 billion per year by 2025, and to at least \$30 billion per year by 2030; (b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances; (c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments; (d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards; (e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;	Financial resources for plant conservation 19. Support and mobilize resources from a wide range of appropriate sources to carry out plant conservation actions.

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
(f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity; (g) Enhancing the effectiveness, efficiency and transparency of resource provision and use.	
Target 20 Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.	Capacity-building 20 (a) Establish or strengthen professional training and capacity-building initiatives related to plant conservation, scientific research and monitoring, taxonomy and information management, horticulture, botany, plant conservation biology research, biotechnology and ecological restoration. 20 (b) Establish mechanisms, partnerships and networks to support the accessibility of data, knowledge, technology and South-South, North-South and triangular cooperation for collaborative plant conservation.
Target 21 Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation.	Public awareness programmes 21 (a) Develop or implement programmes to raise public awareness of the value of plant diversity and the ecosystem services that they provide. Plant information systems 21 (b) Support the development and use of existing comprehensive, authoritative and accessible expertise and online information systems, documentation and inventories, as well as access to biological collections (e.g. through digitization) at the local, national and international levels, making available to all countries information on their floras and the status of known plant species and associated ecosystems, while ensuring the free, prior and informed consent of indigenous peoples with regard to access to traditional knowledge and taking into consideration the ongoing work and processes carried out under relevant organizations, such as the Food and Agriculture Organization of the United Nations and its Commission on Genetic Resources for Food and Agriculture. 21 (c) Explore ways to consider various knowledge systems, including traditional knowledge, innovations, practices and technologies, to support plant conservation action.

<i>Targets of the Kunming-Montreal Global Biodiversity Framework</i>	<i>Voluntary complementary actions for the period 2023–2030</i>
	21 (d) Promote the continuous updating of the World Flora Online, including its identification support tools, information on plant distribution and the updating of regional floras. [Citizen science] 21 (e) Develop or support citizen science programmes for identifying, documenting, monitoring, conserving, restoring and sustainably using plant diversity.]
Target 22 Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.	Plant conservation and traditional knowledge 22. Ensure the full equitable, inclusive, effective and gender-responsive participation of indigenous peoples and local communities at all relevant levels, with their free, prior and informed consent, in accordance with national legislation, to build respect for, and safeguard traditional knowledge, innovations and practices related to the conservation and sustainable use of plant diversity.
Target 23 Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.	Gender equality 23. Ensure gender equality in the implementation of plant conservation and restoration actions by proactively implementing a responsive approach, encompassing the recognition of women's rights, equitable access to plant resources and inclusive participation at all levels in decision-making processes, while highlighting the important role of women, as essential knowledge holders, in plant conservation.

Part 3 Some suggested data sources for monitoring indicators for the Voluntary Complementary Actions of the Global Strategy for Plant Conservation to support implementation of the Global Biodiversity Framework.

3.1 Introduction

SBSTTA 25 recommended that COP 16 adopt the voluntary complementary actions related to plant conservation, as an update to the Global Strategy for Plant Conservation (GSPC) to support the implementation of the Kunming-Montreal Global Biodiversity Framework (KMGBF). The monitoring framework established at COP15 is an iterative process alongside the KMGBF goals and targets. Adopted in decision 15/5 and composed of:

- i. Headline indicators
- ii. Binary (yes/no) responses in national reports
- iii. Component indicators
- iv. Complementary indicators

As noted in [CBD/COP/DEC/15/5, Annex 1](#):

Paragraph 3: “Headline indicators use methodologies agreed by Parties and are calculated at a national level based on national data from national monitoring networks and national sources, recognizing that in some cases headline indicators may need to draw on global datasets. If national indicators are not available, then the use of global indicators at a national level must be validated through appropriate national mechanisms. Headline indicators allow for consistent, standardized and scalable tracking of global goals and targets.”

Paragraph 5: “In order to maximize uptake and minimize the reporting burden, the list of headline indicators comprises a small number of indicators which are intended to capture the overall scope of a goal or target in the Kunming-Montreal Global Biodiversity Framework. The headline indicators may not capture all components of a goal or a target but for analytical purposes can be complemented, as appropriate, with the component and complementary indicators.”

It is recommended that Parties use the headline indicators in their national, regional and global monitoring reports. The more detailed component and complementary indicators should be supported by either reporting to Parties or separately to the CBD via flexible coordination mechanisms. It is here that the GSPC plays a vital role. In the [SBSTTA recommendation 25/4](#) the GSPC was invited to:

“6. *Invites* the Global Partnership for Plant Conservation:

- a) to provide guidance on using the monitoring framework for the Kunming-Montreal Global Biodiversity Framework to monitor progress on the implementation of the voluntary complementary actions related to plant conservation, including the identification of its gaps;
- b) to develop specific indicators for each of the voluntary complementary actions;
- c) to develop a template for voluntary reporting on progress in the implementation of the voluntary complementary actions. “

Paragraph 5a has been achieved via liaising with the AHTEG Monitoring Framework co-chairs and identifying gaps regarding plants. This document seeks to address Paragraph 5b and Table 1 through the provision of a list of possible sources for plant indicators developed by the GPPC for the GSPC Voluntary Complementary Actions, aligning with the KMGBF indicators. The GPPC observed the following criteria when developing the GSPC data sources for the GSPC Actions to further align with the KMGBF Indicators:

1. The source for data and metadata related to the indicator are publicly available;

2. Methodology underpinning the data sources is either published in a peer reviewed academic journal or is subjected to a scientific peer review process and validated for national use;
3. The data sources compiled are regularly updated with a time lag of less than five years between updates, (where possible);
4. The sources provide data that should be able to detect trends relevant to the components of the GSPC Complementary Actions;

3.2 For the KMGBF indicators currently there are:

- 36 headline indicators
- 13 'binary' indicators (yes/no questions at the national level) measures that could be compiled through national reports to generate a global scale indicator and fill data gaps
- 52 component indicators that cover components of the goals and targets (optional)
- 257 complementary indicators for thematic or in-depth analysis of each goal and target (optional)

3.3 For the GSPC currently proposed there are:

- 22 Complementary Actions (42 sub-Actions)
- Possible sources of data for measuring progress towards the achievement of the Voluntary Complementary Actions of the GSPC

Table 2. Suggested GSPC data sources to support measurement of the Kunming-Montreal Global Biodiversity Framework complementary indicators.

<i>Voluntary complementary actions for the period 2023–2030</i>	<i>KMGBF Headline indicators</i>	<i>KMGBF Component indicators</i>	<i>KMGBF Complementary indicators</i>	<i>GSPC some possible global sources of data for Indicators</i>
1. Reducing threats to biodiversity				
Plant conservation in spatial planning and management processes 1. Identify and map, where possible, all plant species in terrestrial, inland water and marine and coastal ecosystems, including at the population level, as well as areas and ecosystems important for plant diversity, using diverse knowledge systems.	A.1 Red List of Ecosystems A.2 Extent of natural ecosystems 1.1 Percent of land and sea area covered by biodiversity-inclusive spatial plans*	Priority retention of intact / wilderness areas	Number of countries using natural capital accounts in planning processes Percentage of spatial plans utilizing information on key biodiversity areas Percent of total land area that is under cultivation Extent of natural ecosystems by type Number of countries implementing national legislation, policies or other measures regarding FPIC related to conservation Ecosystem Integrity Index	NBSAPS <u>Bonn Challenge Barometer</u> <u>IUCN ROAM assessments</u> <u>Plantlife database of Important Plant Areas</u> <u>KBA database</u> National Flora Atlases <u>World Flora Online</u>
Ecological restoration 2. Implement or participate in programmes for the effective restoration of degraded ecosystems and habitats, including to prevent or mitigate the existing drivers of degradation, prioritizing the use of genetically appropriate material of native species, enhancing and conserving soils, considering ecological	2.2 Area under restoration	Extent of natural ecosystems by type Maintenance and restoration of connectivity of natural ecosystems	Habitat distributional range Index of Species Rarity Sites, High Biodiversity Areas, Large Mammal Landscapes, Intact Wilderness and Climate Stabilization Areas Increase in secondary natural forest cover Annual tropical primary tree cover loss Forest Landscape Integrity Index Global Ecosystem Restoration Index	<u>Bonn Challenge Barometer</u> GBIF for seeds National planning and assessments <u>Restor platform</u> <u>The Data Warehouse</u> BGCI Global Tree Portal (<i>ex situ</i> tree collections and <i>in situ</i> planting) <u>BGCI PlantSearch</u>

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criteria, associated fungal symbionts, pollinators and dispersers, and including species of conservation concern, as well as climate resilience, long-term commitment, innovative financing and adaptive management, ensuring that the programmes enhance biodiversity and human well-being and are informed, where possible, by traditional knowledge, with the free, prior and informed consent of the indigenous peoples concerned.			Percentage of cropped landscapes with at least 10 per cent of natural land Bioclimatic Ecosystem Resilience Index (BERI) Priority retention of intact / wilderness areas Status of key biodiversity areas Biodiversity Habitat Index Red List Index Red List of Ecosystems Living Planet Index Species habitat Index	<u>BGCI Global Biodiversity Standard certification</u>
Important areas for plant diversity 3 (a) Ensure that important areas for the conservation of plant species and their genetic diversity are identified, well connected and represented within protected areas and other effective area-based conservation measures, including in marine and coastal areas. 3 (b) Develop integrated management plans for important areas for plant diversity and implement programmes to ensure that	3.1 Coverage of protected areas and other effective area-based conservation measures	Protected area coverage of key biodiversity areas Protected Area Management Effectiveness (PAME) ProtConn Protected Area Connectedness Index (PARC-Connectedness) Red List of Ecosystems Connectivity Indicator The number of protected areas that have completed a site-level assessment of governance and equity (SAGE)	Protected area downgrading, downsizing and degazettement (PD) Status of key biodiversity areas IUCN Green List of Protected and Conserved Areas Number of hectares of UNESCO designated sites (natural and mixed World Heritage sites and Biosphere Reserves) Protected area and other effective area-based conservation measures management effectiveness (MEPCA) indicator Protected Area Isolation Index (PAI)	<u>Plantlife database of Important Plant Areas</u> <u>TIPAs data</u> <u>KBA database</u> <u>Protected Planet database of management plans and</u> <u>OECD database</u>

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those areas are effectively documented, protected, monitored and sustainably managed, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.		Species Protection Index	Protected Areas Network metric (ProNet) Extent to which protected areas and other effective area-based conservation measures cover key biodiversity areas that are important for migratory species Coverage of protected areas and other effective area-based conservation measures and traditional territories (by governance type) Ramsar Management Effectiveness Tracking Tool (R-METT) Percentage of biosphere reserves that have a positive conservation outcome and effective management Extent of indigenous peoples and local communities' lands that have some form of recognition Species Protection Index Number of countries implementing national legislation, policies or other measures regarding free, prior and informed consent related to conservation Red List of Ecosystems	

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Plant species conservation 4 (a) Ensure that extinction risk and conservation status are known, understood and maintained and that assessments are regularly updated, as far as possible, for known plant species. 4 (b) Develop and implement recovery plans for all known threatened plant species, including management plans for pests, weeds and other known threats and drivers of loss, to significantly reduce extinction risk. 4 (c) Promote programmes to ensure that threatened plant species are effectively conserved, managed, monitored and restored using in situ and ex situ methodologies, aiming to achieve adequate levels of genetic diversity and viable populations and, where appropriate, involving indigenous peoples and local communities. Conservation of genetic diversity	A.3 Red list Index A.4 The proportion of populations within species with an effective population size > 500	Living Planet Index Number of plant and animal genetic resources secured in medium or long-term conservation facilities Trends in effective and sustainable management of human-wildlife conflict and coexistence Green Status of Species Index Conservation status of species listed in the CITES Appendices has stabilized or improved	Species threat abatement and restoration metric Changing status of evolutionary distinct and globally endangered species (EDGE Index) Percentage of threatened species that are improving in status Proportion of local breeds classified as being at risk of extinction Rate of invasive alien species establishment	National analyses of representation of threatened species within protected areas <u>IUCN Red List</u> Nationally produced plant red list indices. e.g. national Red List (hosted by ZSL) BGCI Global Tree Portal country and species pages BGCI PlantSearch <u>GENESYS PGR, EURISCO</u> The Data Warehouse BGCI ThreatSearch IUCN SSC Quadrennium reporting for plant specialist groups (Seed specialist group, CWR, Orchids)

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4 (d) Undertake ex situ and in situ conservation programmes for genetic diversity in wild and domesticated plant species and populations, including crops and their wild relatives and other socioeconomically valuable plant species, considering the domestication gradient and the use of surrogates or proxies, ensuring that the genetic diversity within and among populations is effectively documented, managed and monitored, to maintain and restore genetic diversity and safeguard their adaptive potential in line with the framework of and actions taken under the United Nations and the Commission on Genetic Resources for Food and Agriculture of the Food and Agriculture Organization of the United Nations. 4 (e) Establish programmes to ensure that domesticated, cultivated species and crop wild relatives are effectively				

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protected, restored and managed using on-farm and in situ methodologies and by applying sustainable management practices using agroecology and other sustainable production practices involving the traditional knowledge of indigenous peoples and local communities, with their free, prior and informed consent. 4 (e bis) Encourage ex situ operations that artificially propagate threatened plant species to seek cooperative measures that would support in situ conservation, such as technical support, the contribution of funds, the exchange of specimens for reintroduction into the wild, capacity-building and training, technology transfer, investment and infrastructure.				
Sustainable harvesting 5 (a) Develop and implement strategies to ensure the sustainable and legal harvesting and use of wild plants, including by	5.1 Proportion of fish stocks within biologically sustainable levels	Red List Index for used species Living Planet Index for used species Sustainable use of wild species	Sustainable watershed and inland fisheries index Red List Index (for internationally traded species and for migratory species)	<u>CITES Appendices</u> CITES CoP proposals and species under review <u>CITES trade database</u>

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determining sustainable harvest levels, and for artificial propagation or assisted production, respecting and protecting customary sustainable use by indigenous peoples and local communities. Trade in plants 5 (b) Identify wild plants that are currently or likely to be threatened by unsustainable or illegal trade, and support the implementation or development and adoption of national or international guidelines and other measures to ensure that the harvesting of and trade in plants are sustainable, safe and legal.			Proportion of legal and illegal wildlife trade consisting of species threatened with extinction Illegal trade by CITES species classification	National legislation regarding trade in plants IUCN Red List Information from certification schemes: FairWild certification; UEBT certification: Organic wild certification; FSC certification; PEFC; Fairtrade
Monitoring invasive species 6 (a) Develop or strengthen early warning and monitoring and tracking systems, including public awareness programmes, at the national and international levels, to prevent, manage and eradicate potentially invasive alien species that affect or may affect native plants and their	6.1 Rate of invasive alien species establishment	Rate of invasive species impact and rate of impact Rate of invasive alien species spread Number of invasive alien species introduction events	Number of invasive alien species in national lists as per the Global Register of Introduced and Invasive Species Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas (in relation to the main vectors and pathways of spreading of such species)	Nationally identified networks of areas important for plant diversity National Invasive species lists and registers National reports and invasive plant databases BGCI Global Biodiversity Standard certification <u>International Plant Sentinel Network data and resources</u>

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ecosystems, and put in place measures¹ to manage pathways of introduction. ¹ Any international measures should be implemented in compliance with the Agreement on the Application of Sanitary and Phytosanitary Measures of the World Trade Organization and the International Plant Protection Convention. Controlling invasive species 6 (b) Address the detrimental impact of invasive alien species on plant diversity and ecosystems by undertaking control or eradication measures, with a focus on areas important for plant diversity and considering the impacts of climate change.			Red List Index (impacts of invasive alien species)	<u>International Plant Protection Convention data</u>
Impact of pollution on plants 7. Gather information, research, assess and provide evidence of pollution risks and their negative impacts, and take action to minimize pollution pressures on	7.1 Index of coastal eutrophication potential 7.2 Pesticide environment concentration*	Fertilizer use Red List Index (impact of pollution)	Trends in loss of reactive nitrogen to the environment Trends in nitrogen deposition Municipal solid waste collected and managed Hazardous waste generation	<u>BGCI Technical Review on the role of botanic gardens in practising and promoting environmental sustainability</u>

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plant species and their ecosystems.				
Native plant use in climate mitigation and adaptation 8. (a) Consider current and projected impacts of climate change on species, species distribution and ecosystems when implementing plant conservation activities, including those undertaken under Targets 2, 3, 4 and 6. 8. (b) Encourage the use of genetically, biologically and ecologically appropriate native plant species, including species of conservation concern, in areas planted for carbon sequestration and in nature-based solutions and ecosystem-based approaches for climate mitigation and adaptation, ensuring that such areas are selected appropriately to avoid negative effects and foster positive impacts on biodiversity.		Total climate regulation services provided by ecosystems and by ecosystem type (System of Environmental Economic Accounts) National greenhouse inventories from land use and land-use change BERI	Above-ground biomass stock in forest (tonnes/ha) National greenhouse inventories from land use and land-use change Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans, strategies as reported in adaptation communications and national communications Carbon stocks and annual net greenhouse gas emissions, by land-use category, split by natural and non-natural land cover	Bonn Challenge Barometer BGCI Global Biodiversity Standard certification Restor Platform BGCI Conservation Action Tracker (for trees)
2. Meeting people's needs through sustainable use and benefit-sharing				
Plants for peoples' needs 9. Co-develop and implement programmes	9.1 Benefits from the sustainable use of wild species 9.2 Percentage of the	Number of people using wild resources for energy, food or culture (including firewood collection,		Global Tree Portal species conservation tracker

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with indigenous peoples, local communities and relevant stakeholders to sustainably maintain and manage wild plants that are of socioeconomic and cultural importance, as well as their ecosystems, and to enhance benefits for people.	population in traditional occupations	hunting and fishing, gathering, medicinal use, craft making, etc.) Red List Index (species used for food and medicine) Living Planet Index for used species		BGCI PlantSearch Conservation Action Tracker (for trees) <u>GENESYS PGR, EURISCO</u> National genebank registers National assessments of in situ protection of socio-economically important plant species National spatial biodiversity plans and land use schemes Fairwild certification
Sustainable management of production land 10. Support and put in place sustainable management programmes for existing areas under agriculture, aquaculture, fisheries and forestry and increase the proportion of those areas that is managed sustainably to ensure the conservation and restoration of associated wild plant diversity, including crop wild relatives.	10.1 Proportion of agricultural area under productive and sustainable agriculture 10.2 Progress towards sustainable forest management	Area of forest under sustainable management: total forest management certification by the Forest Stewardship Council and the Programme for the Endorsement of Forest Certification Average income of small-scale food producers, by sex and indigenous status	Agrobiodiversity Index Changes in soil organic carbon stocks Red List Index (wild relatives of domesticated animals) Red List Index (pollinating species) Proportion of local breeds classified as being at risk of extinction Proportion of land that is degraded over total land area	Certifications: FSC (wood), FairWild (non-wood forest products) Global Farm metric – Sustainable Food Trust <u>GENESYS PGR, EURISCO</u> <u>GBIF data</u> <u>Third FAO Report on the State of the World's Plant Genetic Resources for Food and Agriculture</u> <u>Global Forest Watch</u>

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10. bis Include a special effort to conserve landraces, both in situ and ex situ, and promote the wider use of landraces to support the diversification of crops and cropping systems. 10. ter Promote and support actions relating to the conservation of wild relatives of edible species as a clear contribution towards food security.				<u>PEFC and FSC Certification</u>
Native plants and ecosystem functions and services 11. Ensure that genetically, biologically and ecologically appropriate and adapted native plant species, including species of conservation concern, are used for the restoration of ecosystems or ecosystem services, including through nature-based solutions and ecosystem-based approaches .	B.1 Services provided by ecosystems*	Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services Annual mean levels of fine particulate matter (e.g., PM2.5 and PM10) in cities Proportion of bodies of water with good ambient water quality Level of water stress	Air emission accounts Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management Proportion of population using safely managed drinking water services Mortality rate attributed to household and ambient air pollution (SDG indicator 3.9.1)	Bonn Challenge Barometer National restoration reporting
Urban green infrastructure 12 (a) Establish green infrastructure projects focused on plant diversity	12.1 Average share of the built-up area of cities that is green/blue space for public use for all	Recreation and cultural ecosystem services provided		National databases of biodiversity-rich urban green spaces. <u>BGCI's GardenSearch</u>

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and connectivity, encouraging the use of native climate-resilient species in plant diversity conservation programmes in urban areas and developing and implementing new strategies for promoting the mainstreaming of biodiversity and ecosystem services into urban and territorial planning and management, taking into account coastal urban areas and coastal and marine ecosystems. Urban plant diversity 12 (b) Develop, designate and protect biodiversity-rich accessible green and blue spaces in urban areas by establishing or strengthening, inter alia, parks, greenways, ponds, watercourses, wetlands, botanical gardens and arboretums in such areas, and ensure connectivity among those spaces, in order to support biodiversity conservation, environmental education and awareness, and human health and well-being effectively.				<u>BGCI Technical Review on the role of botanic gardens in urban greening and conserving urban biodiversity</u> <u>Mayors challenge</u> FAO Initiative- Green Oasis, Greenways

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Access and benefit-sharing for plant conservation 13. Support and encourage measures to facilitate appropriate access to plant genetic resources, ensuring the fair and equitable sharing of benefits that arise from the utilization of such resources and associated traditional knowledge, as well as from digital sequence information originated from those resources, in accordance with applicable international access and benefit-sharing instruments.	C.1 Indicator on monetary benefits received C.2 Indicator on non-monetary benefits	Number of permits or their equivalents for genetic resources (including those related to traditional knowledge) by type of permit	Total number of transfers of crop material from the Multilateral System of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) received in a country Total number of permits, or their equivalent, granted for access to genetic resources Total number of internationally recognized certificates of compliance published in the ABS Clearing-House Number of countries that require prior informed consent that have published legislative, administrative or policy measures on access and benefit-sharing in the ABS Clearing-House Number of countries that require prior informed consent that have published information on access and benefit-sharing procedures in the ABS Clearing-House Number of countries that have adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits Estimated percentage of monetary and non-monetary benefits directed towards conservation and sustainable use of biodiversity	<u>CBD ABS Clearing House data</u> <u>Genbank/GENYSYS</u>

<i>Voluntary complementary actions for the period 2023–2030</i>	<i>KMGBF Headline indicators</i>	<i>KMGBF Component indicators</i>	<i>KMGBF Complementary indicators</i>	<i>GSPC some possible global sources of data for Indicators</i>
3. Tools and solutions for implementation and mainstreaming				
Tools for mainstreaming plant conservation 14. Provide open and accessible data and develop tools to help to measure and integrate the importance of diverse knowledge systems and value of plant diversity into policies, regulations, environmental assessments and planning processes, including rural and urban development, poverty reduction strategies and national accounting and reporting mechanisms.		Number of countries with Implementation of the System of Environmental-Economic Accounting	Human Appropriation of Net Primary Production (HANPP) CO2 emission per unit of value added Change in water-use efficiency over time	National natural capital accounts. National policies, regulations, planning and EIA processes include plant biodiversity values. National accounting and reporting systems. National development plans CITES Inf. documents referring to plants
Sustainable practices in plant use 15 (a) Encourage and support the adoption by businesses, in particular large and transnational companies and other sectors that focus on plants of sustainable practices along supply chains for trade in wild plant species, and promote those practices in such sectors as finance, transport, e-commerce and tourism. 15 (b) Promote and support the development of best	15.1 Number of companies reporting on disclosures of risks, dependencies and impacts on biodiversity*	Indicator based on the Task Force for Nature-related Financial Disclosures	Species threat abatement and restoration metric Number of companies publishing sustainability reports	BGCI Global Biodiversity Standard certification BGCI Technical Review on the role of botanic gardens in urban greening and conserving urban biodiversity (15b) Certifications: Fairwild FSC

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practices for the monitoring and evaluation of plant use in sustainable production, to support plant conservation and benefits to indigenous peoples and local communities. 15 (b bis) Provide information needed to consumers to promote sustainable consumption practices in plant use.				
Sustainable consumption 16 (a) Provide information and guidance, including in the form of trade statistics and data, and capacity-building to inform the development of policies and legislative and regulatory frameworks that recognize the importance of wild plants as a source of food, fibres, medicines, pharmaceuticals and construction material and as a resource for other sectors. 16 (b) Develop and support education programmes on the importance of plants and the impacts of the global footprint of consumption, global food waste and		Food waste Index Material footprint per capita Global environmental impacts of consumption Ecological footprint	Extent to which (a) global citizenship education and (b) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (i) national education policies; (ii) curricula; (iii) teacher education; and (iv) student assessments Recycling rate Life cycle Impact assessment (LCIA) e.g. LIME Life-cycle impact assessment method based on endpoint modelling Levels of poverty in developing communities	BGCI Technical Review on the role of botanic gardens in practising and promoting environmental sustainability

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overconsumption on plant diversity.				
17. Foster and support research and development, especially in developing countries, to enhance the benefits arising from the use of safe biotechnologies related to plant conservation and increase the sustainability and resilience of agrifood systems.			Number of countries that have the necessary biosafety legal and administrative measures in place Number of countries that implement their biosafety measures Number of countries that have the necessary measures and means for detection and identification of products of biotechnology Number of countries that carry out scientifically sound risk assessments to support biosafety decision-making Number of countries that establish and implement risk management measures Percentage of Parties to the Cartagena Protocol on Biosafety implementing the relevant provisions of the Protocol Number of countries with legal and technical measures for restoration and compensation Percentage of Parties to the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress Percentage of countries with systems in place for restoration and compensation of damage to	IPSN data and resources

<i>Voluntary complementary actions for the period 2023–2030</i>	<i>KMGBF Headline indicators</i>	<i>KMGBF Component indicators</i>	<i>KMGBF Complementary indicators</i>	<i>GSPC some possible global sources of data for Indicators</i>
			conservation and sustainable use of biological diversity Number of countries that establish and implement risk management measures Number of countries with mechanisms to facilitate the sharing of and access to information on potential adverse impacts of biotechnology on biodiversity and human health	
<i>No particular plant conservation action is required under Target 18, except to support its achievement.</i>	<i>18.1 Positive incentives in place to promote biodiversity conservation and sustainable use</i> <i>18.2 Value of subsidies and other incentives harmful to biodiversity that have been eliminated, phased out or reformed</i>	<i>Value of subsidies and other incentives harmful to biodiversity, that are redirected, repurposed or eliminated</i>	<i>Number of countries with biodiversity-relevant taxes</i> <i>Number of countries with biodiversity-relevant charges and fees</i> <i>Number of countries with biodiversity-relevant tradable permit schemes</i> <i>Trends in potentially environmentally harmful elements of government support to agriculture (producer support estimate)</i> <i>Trends in the number and value of government fossil fuel support measures</i> <i>Amount of fossil-fuel subsidies per unit of gross domestic product (production and consumption)</i>	

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Financial resources for plant conservation 19. Support and mobilize resources from a wide range of appropriate sources to carry out plant conservation actions.	D.1 International public funding, including official development assistance (ODA) for conservation and sustainable use of biodiversity and ecosystems D.2 Domestic public funding on conservation and sustainable use of biodiversity and ecosystems D.3 Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems*		Amount of funding provided through the Global Environment Facility and allocated to the biodiversity focal area Foreign direct investment, official development assistance and South-South cooperation Amount and composition of biodiversity-related finance reported to the OECD Creditor reporting system Dollar value of financial and technical assistance (including through North-South, South-South and triangular cooperation) committed to developing countries Dollar value of all resources made available to strengthen statistical capacity in developing countries Amount of biodiversity-related philanthropic funding Proportion of total research budget allocated to research in the field of marine technology Total amount of approved funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies	National data on institutional capacities, resources available for biodiversity conservation, and changes in human capital available for plant conservation work

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			Number of countries (and number of instruments) with payments for ecosystem services (PES) programmes Number of countries that have (a) assessed values of biodiversity in accordance with the Convention, (b) identified and reported funding needs, gaps and priorities, (c) developed national financial plans for biodiversity, (d) been provided with the necessary funding and capacity-building to undertake the above activities	
Capacity-building 20 (a) Establish or strengthen professional training and capacity-building initiatives related to plant conservation, scientific research and monitoring, taxonomy and information management, horticulture, botany, plant conservation biology research, biotechnology and ecological restoration. 20 (b) Establish mechanisms, partnerships and networks to support the accessibility of data, knowledge, technology and South-South, North-South and triangular cooperation				<u>The World Flora Online</u> National online floras, ecosystem (vegetation/ habitat) type maps and associated descriptions Training and capacity building courses (Universities registers) and student exchange programmes

<i>Voluntary complementary actions for the period 2023–2030</i>	<i>KMGBF Headline indicators</i>	<i>KMGBF Component indicators</i>	<i>KMGBF Complementary indicators</i>	<i>GSPC some possible global sources of data for Indicators</i>
for collaborative plant conservation.				
Public awareness programmes 21 (a) Develop or implement programmes to raise public awareness of the value of plant diversity and the ecosystem services that they provide. Plant information systems 21 (b) Support the development and use of existing comprehensive, authoritative and accessible expertise and online information systems, documentation and inventories, as well as access to biological collections (e.g. through digitization) at the local, national and international levels, making available to all countries information on their floras and the status of known plant species and associated ecosystems, while ensuring the free, prior and informed consent of indigenous peoples with regard to access to traditional knowledge and taking into consideration		Species Status Index Extent to which (a) global citizenship education and (b) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (i) national education policies, (ii) curricula, (iii) teacher education and (iv) student assessments	Growth in number of records and species in the Living Planet Index database Growth in species occurrence records accessible through the Global Biodiversity Information Facility Proportion of known species assessed through The IUCN Red List of Threatened Species™ Number of assessments on the IUCN Red List of Threatened Species™ World Association of Zoos and Aquariums (WAZA) bio-literacy survey (Biodiversity literacy in global zoo and aquarium visitors) Species Status Information Index	Public surveys of citizens, consumers and sectoral participants on plant awareness and understanding issues National natural capital accounts that include the value of plants The World Flora Online Citizen science platforms e.g. iNaturalist and other nationally developed platforms Institutes and networks of Plant conservation organisations, e.g. Botanic Gardens, Museums, arboreta

<i>Voluntary complementary actions for the period 2023–2030</i>	<i>KMGBF Headline indicators</i>	<i>KMGBF Component indicators</i>	<i>KMGBF Complementary indicators</i>	<i>GSPC some possible global sources of data for Indicators</i>
the ongoing work and processes carried out under relevant organizations, such as the Food and Agriculture Organization of the United Nations and its Commission on Genetic Resources for Food and Agriculture. 21 (b bis) Explore ways to consider various knowledge systems, including traditional knowledge, innovations, practices and technologies, to support plant conservation action. 21 (b ter) Promote the continuous updating of the World Flora Online, including its identification support tools, information on plant distribution and the updating of regional floras. [Citizen science 21 (c) Develop or support citizen science programmes for identifying, documenting, monitoring, conserving, restoring and sustainably using plant diversity.]				
Plant conservation and traditional knowledge		Proportion of total adult population with secure tenure rights to land, (a) with legally recognized	Percentage of positions in national and local institutions, including: (a) the legislatures; (b) the public service;	National initiatives that include the full and effective participation of indigenous and local communities

<i>Voluntary complementary actions for the period 2023–2030</i>	<i>KMGBF Headline indicators</i>	<i>KMGBF Component indicators</i>	<i>KMGBF Complementary indicators</i>	<i>GSPC some possible global sources of data for Indicators</i>
22.Ensure the full equitable, inclusive, effective and gender-responsive participation of indigenous peoples and local communities at all relevant levels, with their free, prior and informed consent, in accordance with national legislation, to build respect for, and safeguard traditional knowledge, innovations and practices related to the conservation and sustainable use of plant diversity.		documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure	and (c) the judiciary, compared to national distributions, by sex, age, persons with disabilities and population groups Number of countries with systems to track and make public allocations for gender equality and women's empowerment Proportion of total agricultural population with ownership or secure tenure rights over agricultural land, by sex; and share of women among owners or rights-bearers of agricultural land, by type of tenure Number of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control Number of protected areas that have completed a site-level assessment of governance and equity (SAGE) Trends in number of environmental human rights defenders killed annually, disaggregated by country and gender; and number of indigenous environmental human rights defenders killed Land tenure of indigenous peoples and local communities by sex and type of tenure	National programmes to document traditional knowledge

<i>Voluntary complementary actions for the period 2023–2030</i>	<i>KMGBF Headline indicators</i>	<i>KMGBF Component indicators</i>	<i>KMGBF Complementary indicators</i>	<i>GSPC some possible global sources of data for Indicators</i>
			Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group	
Gender equality 23. Ensure gender equality in the implementation of plant conservation and restoration actions by proactively implementing a responsive approach, encompassing the recognition of women's rights, equitable access to plant resources and inclusive participation at all levels in decision-making processes, while highlighting the important role of women, as essential knowledge holders, in plant conservation.		Proportion of seats held by women in (a) national parliaments and (b) local governments Indicator on national implementation of the Gender Plan of Action Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation; and (b) who perceive their rights to land as secure, by sex and type of tenure	Percentage of positions in national and local institutions, including: (a) the legislatures; (b) the public service; and (c) the judiciary, compared to national distributions, by sex, age, persons with disabilities and population groups Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and share of women among owners or rights-bearers of agricultural land, by type of tenure Number of countries with systems to track and make public allocations for gender equality and women's empowerment Number of protected areas that have completed a site-level assessment of governance and equity (SAGE) Percentage of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group Proportion of countries where the legal framework (including customary	Policies and guidelines in place at local, national and regional level for Gender Equality

<i>Voluntary complementary actions for the period 2023–2030</i>	<i>KMGBF Headline indicators</i>	<i>KMGBF Component indicators</i>	<i>KMGBF Complementary indicators</i>	<i>GSPC some possible global sources of data for Indicators</i>
			law) guarantees women's equal rights to land ownership and/or control	

Part 4: Possible fields and a mechanism for reporting on the Voluntary Complementary Actions of the Global Strategy for Plant Conservation to support implementation of the Global Biodiversity Framework.

4.1 Introduction

In decision VII/10, the Conference of the Parties welcomed the establishment by the Executive Secretary of a flexible coordination mechanism for the Global Strategy for Plant Conservation (GSPC). The mechanism serves to facilitate and promote implementation, and monitoring, of the Strategy at all levels (national, regional and global). In the SBSTTA Recommendation 25/4, paragraph 6 (a) states that the GPPC is invited ‘to provide guidance on using the monitoring framework for the Kunming-Montreal Global Biodiversity Framework to monitor progress on the implementation of the voluntary complementary actions related to plant conservation, including the identification of its gaps.’ The GPPC has met with the AHTEG Monitoring Framework co-chairs to identify synergies and gaps regarding reporting for State actors for plants. This is to reduce duplicate reporting for State actors and ensure reporting for plant species conservation actions are captured.

In its decision 15/6, the Conference of the Parties requested the Executive Secretary to further develop a mechanism for tracking the commitments of non-State actors, including voluntary online reporting, in accordance with the Sharm El-Sheikh to Kunming and Montreal Action Agenda for Nature and People. To prevent burdening stakeholders with excessive monitoring and reporting requirements, recommendations were made to build on existing data gathering and provision using indicators identified by the Parties in alignment with the KMGBF. In order to understand commitments and contributions towards the KMGBF targets from non-State actors conditions were proposed and are listed in decision 15/6. These have been reviewed in light of the GSPC and the voluntary complementary actions. This section of the document sets out the suggested proposed reporting fields and a possible mechanism for non-State actors implementing the GSPC Complementary Actions.

The GPPC has adapted the guidelines and template for reporting commitments to align with the GSPC Actions and, to facilitate easier delivery of reporting, a possible online reporting mechanism is being investigated. The reporting fields use metrics frequently used by the botanical community and that are widely accepted, promoted and used by many corporate, subnational and local authorities. Where non-State actors lack capacity for reporting, tools and support will be provided via the GPPC website and through networks of experts associated with the GPPC. An online reporting function will be discussed at the next GPPC Congress due to be held in March 2025 and a proposal made for online reporting to take place via the GPPC website. Criteria being considered are that measures taken will avoid duplication of reporting, including the reporting by CBD Parties at national levels, and that a reporting mechanism should provide a platform for capacity building by the sharing of information, case studies and lessons learned.

The fields identified that are suggested below represent the information needed from non-State actors in order to analyse their contributions towards the implementation of the GSPC Actions and achievement of the KMGBF set of targets:

REPORTING SECTION 1: GENERAL INFORMATION

- 1.1 Organization (the name of the lead organisation).
- 1.2 Website, if available (the website address for the lead organisation).
- 1.3 Name of focal point for the commitment in the organisation (full name and email of focal point contact in the organisation).
- 1.4 Email of focal point (email address for the focal point in the organisation).
- 1.5 Location (where the organisation’s headquarters are located and/or the location on google maps).
- 1.6 Geographic scope (local, subnational, national, regional or multinational); list the location.

1.7 Type of organisation (academic and research institute; private sector; indigenous peoples and local communities; nation-wide or regional initiative; non-governmental organisation; philanthropic foundation; subnational or local government; regional organisation; intergovernmental organisation/initiative; women's organisation; youth organisation; other (please specify)).

1.8 Field of operation (research, conservation, education, sustainability, social)

REPORTING SECTION 2: GSPC VOLUNTARY COMPLIMENTARY ACTIONS (separate reports for individual actions may be submitted if required)

2.1 What GSPC Action are you reporting on? (drop down, select one only)

2.2 Scale of commitment – single or multiple species, ecosystems and locations (text)

2.3 Coverage of the commitment (select a specific biome/ecosystem, sub-national region, country or group of countries).

2.4 What financial contributions (direct and in-kind) have been made to the achievement of this Action? (text)

2.5 Type of governance model and the programmes put in plan to ensure compliance with CBD models(optional).

2.6 Sustainable Development Goal(s) or other multilateral environmental agreement to which the commitment contributes (optional).

2.7 Partners (other organizations involved in the commitment), name and location.

2.8 Expected impact or outcomes (including positive impacts as well as reduced negative impacts)

2.9 Which indicator/s are you using? (drop down and other)

2.10 Which data source are you using? (drop down and other)

2.11 Brief description (text)

2.12 Timeline (start and end dates/on-going for the work). (Calendar)

2.13 Is this a one-time or recurrent / on-going activity? If recurrent or on-going, indicate the start date, and likely duration.

2.14 Monitoring and reporting (indicate if monitoring and ABS compliance arrangements, if required, are in place and the format and frequency of reporting): Provide Link to monitoring report and other references if available.
