



PlantNetwork

Connecting gardens, sharing skills

**An update on Access and Benefit Sharing
and the Nagoya Protocol Training Day**

16th March 2018

Chester Zoo

@plantnetwork

PROGRAMME

9.30	Registration	
9.45	Welcome	PlantNetwork/ Phillip Esseen
10.40	The Nagoya Protocol : Introduction to Legislation and Compliance in the UK?	Thomas Murphy, Policy Adviser - Convention on Biological Diversity and the Nagoya Protocol. Defra
10.00	The Nagoya protocol – obligations, due diligence and what does this mean for gardens?	Matthew Jebb, Director National Botanic Gardens of Ireland
11.20	QUESTIONS and DISCUSSION	
11.45	COFFEE	
12.10	Plant Collections at Chester Zoo	Philip Esseen and Richard Hewitt, Chester Zoo
12.40	Tour of Chester Zoo's National Collections of Nepenthes, Orchids & Cacti	
13.40	LUNCH	
14.25	Implementing Nagoya Protocol in ornamental horticulture	Dr John David Head of Horticultural Taxonomy RHS Garden Wisley
15.05 - 15.45	<p>Workshops</p> <p>1 How many ways can plants arrive into your gardens? What does this mean for managing plants in gardens? What consequences should you consider?</p> <p>2 Identify what we can do collectively to manage the impacts of the Nagoya Protocol.</p>	
15.45 – 16.30	<p>Workshop feedback from groups..</p> <p>Further questions to the speakers.</p> <p>Training day outputs: How can PlantNetwork help?</p>	
6.30	CLOSE	

PlantNetwork website

All presentations from our training and conferences are shared through our website www.plantnetwork.org. Our website search facility also allows you to find previous presentations, articles, resources and downloads.

Speaker biographies

Phillip Esseen, Bsc, BLD, CMLI Curator of botany and horticulture Chester Zoo

Philip graduated with a degree in Botany from Manchester University, followed by a degree in Landscape Design. Since then, he has worked as a Landscape Architect, Nature Conservation Officer, and Parks Manager, working on large land reclamation and habitat restoration schemes in the UK, and explored the relationships between plants, landscape and people.

Philip joined Chester Zoo as Curator of Botany and Horticulture in 2015. His role involves managing the gardens and parts of the wider estate, curating the plant collection, ensuring the zoo plays an increasingly active role in plant conservation, and advising on plant selection and design for enclosures.

Dr. Matthew Jebb, Director of the National Botanic Gardens of Ireland

Matthew Jebb has been the Director of the National Botanic Gardens of Ireland since 2010. Formerly his role was that of horticultural taxonomist and keeper of the National Herbarium since 1996. He is the former Chairman of PlantNetwork: and is the current Hon President. He is also a member of the European Consortium of Botanic Gardens. Matthew spent many years living and working in Papua New Guinea from 1980 onwards. He was the European representative on the bureau of the Convention on Biological Diversity from 2004 to 2006.

Thomas Murphy, Policy Adviser - Convention on Biological Diversity and the Nagoya Protocol. Defra

Thomas is part of the Department for Environment and Rural Affairs' International Ecosystem team and is the UK's policy lead for the Convention on Biological Diversity and the Nagoya Protocol. Thomas also acts as the Nagoya Protocol Focal Point for the UK. Thomas has advised ministers in debates related to the Protocol and as part of the UK delegation at several EU ABS Expert groups Thomas has helped steer implementation of the Protocol within the EU. Before moving into public policy, a graduate of Environmental Management (Land Use) at the University of Greenwich, Thomas worked in the non-for-profit sector to help businesses and the public sector take action on energy efficiency and air quality.

John David, Head of Horticultural Taxonomy RHS Garden, Wisley.

He is currently leading on developing the RHS's horticultural taxonomic research, particularly in the use of molecular techniques for more objective characterisation of horticultural plants. This work has been focused on invasive plants of horticultural origin. He is also responsible for the RHS herbarium and the Society's international cultivar registers. He has been actively involved with policy questions to do with invasive plants, the EU Plant Reproductive Materials legislation and, more recently, the Nagoya Protocol, representing the RHS on various stakeholder bodies. In addition to his RHS role, he is Collections Secretary of the Linnean Society and member of the Chelsea Physic Garden Advisory Committee, as well as being a member of the Editorial Committee for the International Code of Nomenclature for Cultivated Plants.

RESOURCES

The Convention on Biological Diversity (CBD)

Opened for signature at the Earth Summit in Rio de Janeiro in 1992, and entering into force in December 1993, the Convention on Biological Diversity is an international treaty for the conservation of biodiversity, the sustainable use of the components of biodiversity and the equitable sharing of the benefits derived from the use of genetic resources. With 196 Parties up to now, the Convention has near universal participation among countries. The Convention seeks to address all threats to biodiversity and ecosystem services, including threats from climate change, through scientific assessments, the development of tools, incentives and processes, the transfer of technologies and good practices and the full and active involvement of relevant stakeholders including indigenous and local communities, youth, NGOs, women and the business community. The Cartagena Protocol on Biosafety is a subsidiary agreement to the Convention. It seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. To date, 170 Parties have ratified the Cartagena Protocol. The Secretariat of the Convention and its Cartagena Protocol is located in Montreal.

For more information visit: www.cbd.int.

The Nagoya Protocol – Introduction for gardens

The Nagoya Protocol is legislation regarding how wild-collected plants make their way into horticulture. It does not ban the collection of plants from the wild, however provides a framework on how plant material is obtained so that both parties (the collector and the source country) gain from any benefits arising from that collection.

Extract from RHS

The Nagoya Protocol on Access and Benefit Sharing under the Convention on Biological Diversity entered into force on 12 October 2014. To date, by 7th March 2018, it has been ratified by 105 countries.

Up to date information on ratifications and national measures can be found on the ABS CHM. <https://absch.cbd.int/>

The Nagoya Protocol, when implemented at a national level, governs the way genetic resources are accessed (in countries where the organisms carrying them are found) and used (by researchers and commercial entities), and how any benefits arising out of such use should be shared.

The Nagoya Protocol is a legally binding instrument and asks Parties to implement compliance mechanisms to ensure genetic resources are used legally, and to institute penalties if they are not.

EU Regulations on ABS

The EU ratified the Nagoya Protocol in June 2014. The EU Regulation on Access and Benefit Sharing came into force from October 2014, and is **directly applicable in EU member states**. Articles 4 (Obligations of Users), 7 (Monitoring User Compliance) and 9 (Checks on User Compliance) came into force in October 2015.

UK Implementation

The UK is a Party to the NP and has passed a Statutory Instrument to implement compliance measures in the UK. The Office for Product

Safety and Standards has been appointed the National Competent Authority responsible for implementation in the UK

www.gov.uk/guidance/abs

The Nagoya Protocol is a legally binding international agreement, however, it is also a framework with many ambiguities and unresolved issues. None the less this should not make us negative about an agreement that aspires to do the right thing. The most biodiverse rich parts of the world are ironically some of the poorest. It is morally right, and our duty to ensure that when we, in developed countries, exploit this biological wealth we offer a fair and equitable share in the benefits. The Nagoya protocol was unanimously adopted by the Parties to the CBD (196 countries, with only the USA a non-party). It is up to individual countries to implement the protocol through their own domestic law.

There are many positives to the Nagoya Protocol as it will (eventually) provide legal clarity to the three objectives of the CBD, namely: the conservation of biological diversity; the sustainable use of its components; and the fair and equitable sharing of benefits arising from genetic resources.

Implications of the Nagoya Protocol and the EU Regulations

The Nagoya Protocol – Key points

- Applies to genetic resources that are covered by the Convention on Biological Diversity (CBD) (that is accessed since December 1993) and to benefits arising from their utilisation, as well as to associated Traditional Knowledge (TK), and benefits arising from its utilisation.
- Uses definitions in CBD and also defines derivatives and utilisation
- Leaves it to Parties to decide whether to regulate access, but if they so choose then NP lays out clearly what to do in Article 6
- Parties **must** introduce compliance mechanisms. These include the designation of 'one or more checkpoint' to collect information from users of genetic resources to ensure that material utilised as been legally acquired and prior informed consent (PIC) and mutually agreed terms (MAT) complied with

- It encourages countries to explore the need for and modalities of a global multinational benefit sharing mechanism to facilitate benefit sharing and support equity (A10)
- Whereas CBD focused on ACCESS to genetic resources, the trigger for benefit sharing in the NP is 'utilisation' of genetic resources.

The EU Regulations – key points

- The EU Regulations focus on compliance measures for *users of genetic resources in the EU*
- Following the Protocol, Member States are free to decide whether to introduce access measures.
- requires users to exercise 'due diligence' that genetic resources have been legally accessed
- Clearly only apply to utilisation of genetic resources that were accessed since the NP came into force (which gives us welcome certainty)
- Establishes two checkpoints
 - receipt of funding for utilisation project
 - final stage of development of product
- Introduces concept of Union Registered collections - to be included on this list collections need to satisfy certain criteria (their ability to record and track)
- users obtaining material from union registered collections will be deemed to have fulfilled the due diligence requirements
- competent authorities in each MS will carry out checks on user compliance (A9) which will include spot checks.
- MS will introduce penalties for non compliance
- encourages the development of sectoral codes, best practices and model contractual clauses (and following best practice guidance can be used as a defence)
- The EU Regulations will be implemented through further guidance that is yet to be developed by MS. This will be crucial to, for instance, setting procedures for notification of checkpoints and setting due diligence standards for user sectors.

Action for Gardens

- Ensure that all new accessions are collected or transferred to us legally, according to the national law of the provider country.
- record the date of accession into your garden, and also, where possible, the date of legal extraction of the genetic resource from the country of origin.
- review databases in all departments to ensure that they have fields for this information and that they are secure from tampering and have a clear audit trail for any changes made.
- review staff procedure in all departments to ensure that material is always used and supplied in line with terms and conditions under which it was acquired.
- Develop or review ABS policy and specifically Model Supply Agreements. We need to make it clearer in agreements with third parties that we are only supplying material on non commercial terms and that if a change of use is intended they need to inform us so that new PIC and MAT can be negotiated with the Provider.
- Weigh up the risks and benefits of becoming a Union Registered Collection. On the one hand this may mean we are eligible for certain EU funding streams, but on the other we need to consider the possible reputational risk. Some provider countries take the view that the URC idea will make it easier for commercial companies to freely access genetic resources without getting PIC and MAT. We need to ensure our internal processes are robust so that we remain trusted partners. In addition, for some of collections we simply may not be able to meet the URC criteria e.g. requirements for unique identifiers and fully documented samples.
- Need to work with UK ABS focal point, and through the UK ABS stakeholders group to ensure we are consulted on every step of the UK and EU implementation process Thomas Murphy, Defra, is the UK ABS Focal point.
- Need to work closely with Office of Product Safety and Standards to establish best practice and due diligence requirements and standards for our sector are set practically.
- Work with the UK and EU botanic garden/university and non-commercial research sector to develop best practices standards and models to ease implementation.

*Revised from 2015 PlantNetwork article written by China Williams,
Senior Science Officer (Science Policy) at Kew.*

To download a copy of the Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the convention on biological diversity

<http://www.cbd.int/abs/>

Useful Nagoya Protocol links and resources

1. RHS guidance on Nagoya
<https://www.rhs.org.uk/about-the-rhs/blogs/news-blog/August-2016/nagoya-protocol-statement>
2. Linnean Society summary briefing document: www.linnean.org/the-society/news/2017/04/07/7th-april-2017-summary-briefing-document-on-the-nagoya-protocol-access-and-benefit-sharing
3. High Value Chemicals from Plants
<https://hvcfp.net/network-toolkit/nagoya-protocol-and-access-and-benefit-sharing/>

Material Transfer Agreements (MTAs)

A Material Transfer Agreement (MTA) is a document used to outline the terms under which material is supplied. CBD-friendly MTAs generally set out permitted uses of material, terms for supply to others, requirements for benefit-sharing, and usually, non-commercialisation. Many gardens now use a standard form, to which extra terms can be

added where necessary. For example if the material was acquired under a more restrictive permit.

Missouri Botanic Garden MTA example

The Missouri Botanical Garden releases samples only under specific conditions to support appropriate research projects. Samples in the Garden's DNA Bank have been collected solely for the purpose of supporting molecular phylogenetics and will be released only for the study of relationships of plants or for studies aimed at improving our understanding of evolutionary mechanisms. Samples will not be made available for bioprospecting endeavors, screening for genes of interest in agricultural research, or any other commercial application.

In order to defray a portion of the costs of maintaining, expanding and distributing the special collection, a contribution of \$25.00 per sample supplied is requested. For students and those individuals without adequate funding, a request for a complete or partial waiver should be addressed to the Curator of the Herbarium, Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri, 63166-0299, USA.

As a condition of release for any samples specified on the attached list, each applicant agrees to abide by the restrictions stated above and also agrees to:

- 1) All requests to pass either material provided by the Garden or extracted DNA to third parties must be approved, via a material transfer agreement, by the Curator of the Herbarium.
- 2) Acknowledge both the Missouri Botanical Garden and each individual collector of material provided in each publication in which data is used.
- 3) Provide the Garden with reprints from all resultant publications.
- 4) Publish jointly with Garden staff members or their foreign collaborators whenever appropriate.
- 5) Register GenBank/EMBL accession numbers.

Please provide the following information for each request

Taxa Name: _____

Family: _____

TROPICOS Specimen ID: _____

DNA Sample Type(s): _____

Geography: _____

Collector(s) & number: _____

Collection Date: _____

I _____ (name) of _____ (institutional acronym) certify that I have read and understand the above restrictions and agree that I will conform to all of the regulations of the Missouri Botanical Garden.

Signature _____ Date _____

Please print this form and send the completed version to:

Curator of the Herbarium, Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, USA

Extract and Missouri example from Botanic Gardens Conservation International www.bgci.org

Collection Policies

A Collection could include living plants and fungi including seed, pollen and spores; herbarium specimens; DNA; reference material derived from scientific study, e.g. chromosome slides; economic botany artefacts; accompanying literature, i.e. libraries and archives. The collection could be as large as the entire holdings of a botanic garden with an institute mission and linked to a national or international network. Alternatively, it may be just one of several collections in a

botanic garden. Its purpose could be singular or multi-disciplinary. It could be historical, recent or proposed and be of varying size and resources.

A Collection Policy is a written document which acts as a practical management tool by defining the limits of the collection and guiding the actions of its manager through future developments. It should embrace the remit of the organisation; be formulated using a clear methodology; be practical, achievable and flexible; be subjected to constant review and, if necessary, revision. Dr David Rae RBGE

BGCI Magazine Plant Collection Policy-are Guidelines Needed?
Volume 2 Number 6 - June 1996

Collections policy guidance

The process of creating and implementing a policy is as important and beneficial to the garden as the policy itself. A collections management policy is a working document that lies at the heart of the management and development of the garden and its collections. For policies to be effective, they must be understood and accepted by everyone. This means educating the staff, governing authority and volunteers about the purpose of the policies, the distinction between policies and procedures, and how the procedures put policies into action.

Suggested format/contents for creating your Collection Policy

- 1.0 Introduction
- 2.0 Governance
- 3.0 History of current collections
- 4.0 Overview of current collections

- 5.0 Themes and priorities for future collecting
- 6.0 Accession criteria
- 7.0 Deaccession criteria
- 8.0 Access to collections
- 9.0 Related policies – record keeping, labelling
- 10.0 Evaluation and review
- 11.0 Appendices

Example wording, adapted from a range of policy examples.

1.0 Introduction

The purpose of this document is to guide the development and management of the _____ Botanic Gardens living collections. It provides guidelines for which plants are to be collected and held in the gardens and deals with all aspects of the stewardship of those collections. The Collections Policy supports the garden's mission and purpose as defined in our Mission Statement:

2.0 Governance

The horticulture department is responsible for the care and maintenance of the living collections. A collections committee, comprised of representatives from the education, horticulture, visitor services and research departments along with other appropriate staff and at least two representatives from outside the staff will conduct periodic reviews, at least every five years, to keep this policy up-to-date with the garden's Vision, Mission and goals. The Curation Committee has the responsibility for discharging the duties set in this policy.

3.0 History of current collections

4.0 Overview of current collections

The garden's living collections are accessioned and assembled according to the following categories, some collections may represent a number of categories:

- Taxonomic (by plant genus) e.g. Lilac Collection
- Geographic (by geographical location or range) e.g. Mediterranean Garden
- Horticultural (with horticultural significance) e.g. Magnolia Collection
- Morphological (by form, traits or plant characters) e.g. Weeping Tree Collection
- Display (with an aesthetic function) e.g. Scented Garden
- Economic (plants with ethnobotanical interest) e.g. Medicinal Garden
- Conservation (rare or endangered species both wild and cultivated)
- Historically significant planting
- Ethnobotanical and cultural collections e.g. plants that relate to our local communities
- Educational collections e.g. a diverse collection of living plants for use in education, both at a popular and academic level.

5.0 Themes and priorities for future collecting

The development of existing and acquisition of future collections will be determined by an agreed need to:

- Recognise and safeguard native flora
- Ensure the longevity of tree collections through continuous tree assessment and replacement
- Develop and interpret collections that address significant human themes
- Explore the relationship between art, science and nature as demonstrated by our collection
- Preserve, maintain and build our cultural heritage for future generations
- Restore historic collections

- Develop collections that reflect the cultural associations of our local communities
- Develop collections that relate to a particular person
- Develop collections which increase aesthetic and decorative horticultural displays

6.0 Accession criteria

Acquisition Accessions may be acquired by purchase, gift, exchange, or collection. The Curation Committee will approve all acquisitions. Plant material will be acquired in accordance with the selection criteria stated above. Only plant material that has been collected, exported and imported in compliance with applicable laws and regulations will be allowed into the Garden's collection,

Plant material may be acquired by the garden from the following sources:

- Purchases. The appropriate horticulture department member in accordance with the selection criteria stated above may make plant purchases.
- Field collection. Field collectors must comply with all relevant local, national, and international laws and regulations with respect to the collection and movement of plant material. Only plants that are acquired in a way that does not deplete wild populations will be accepted.
- Donations. Donations are welcome if they meet one of our criteria, are needed and are given without restrictions placed by donor. All donated plant material is subject to approval by the Supervisor of Horticulture, or other designated staff member, who has the right to refuse, remove, donate, and/or dispose of gifts.
- Exchanges. The exchange of living material with other gardens and institutions is encouraged and will be subject to approval by the Supervisor of Gardeners or other designated staff member.
- Loans. Loans are temporary holdings of collections from other institutions or individuals. A loan period and other details shall be agreed upon in writing between the loaning institution/individual and the garden.

7.0 De-accession criteria

Deaccessions may be recommended by any member of the Curation Committee, but must be approved by the Committee. Plants shall be deaccessioned under one or more of the following conditions:

- The accession is no longer relevant to the purposes of the garden and is therefore in conflict with the collection policy
- The accession has been replaced by a more desirable accession
- The accession has deteriorated, died, or been stolen. It may be in poor health or not representative of its genus. If possible, an attempt should be made to propagate significant accessions before deaccessioning the specimen
- The accession can be more efficiently preserved in a seed bank
- The accession has been determined to be invasive or maybe encroaching other plants or the garden
- The accession is an unnecessary duplicate

8.0 Access to collections

The Garden aims to provide consistent, fair, and ready access to collections and collection information. Written requests for research use of the collections or collection information by researchers, horticulturists or students may be submitted to the xxxxx for review and recommendation.

No plant materials of any kind may be taken from the Garden without written, signed permission of the curator or head gardener, except for plant materials intended for off-site sales to benefit the Garden.

No plant material from the Garden may be named without the written permission of xxx

All requests for plant material are to be referred to the Plant Records Office. Requests will be honored if the following criteria are met:

- Seed and plant material from the Garden shall be distributed under conditions that comply with the International Convention

of Biological Diversity, especially those activities referring to the exchange of plant material. These conditions include: Plant material is used solely for scientific research, conservation of species, and development of recognised plant collections.

- All plants and propagules that are to be distributed must bear a phytosanitary or nursery inspection certificate.
- The plant is in good health and would not be compromised by the collection of propagules.
- The plant is not considered to be an invasive plant or have significant invasive potential in the region of destination.
- The delivery of the propagules is requested at a time of year conducive to the successful propagation of the plant requested.
- The plant is not available commercially from nurseries.
- The plant can be distributed according to parameters under which it was acquired or collected, including local and international regulations governing its propagation, distribution and use.
- Distributions of some plants may require a Materials Transfer Agreement (MTA).

9.0 Related policies

e.g plant records, labelling.

10.0 Evaluation and review

Garden staff will review the Policy every xxx years and make amendments as required. Changes to the Policy may be determined by the overall health, maintenance, and general condition of the plant collections. In some cases, outside experts may be consulted.

Collection policy examples

From the Board of the Botanic Gardens and State Herbarium (BGA&SH), South Australia Collection Policies 2013

The Botanic Gardens and State Herbarium (BGA&SH), is the corporate entity which includes Adelaide Botanic Garden, Mount Lofty

Botanic Garden, Wittunga Botanic Garden and the State Herbarium of South Australia.

The Living, Herbarium and Cultural Collections of the Botanic Gardens and State Herbarium are used for the purposes outlined in the Mission Statement. The Living, Herbarium and Cultural Collection policies are part of the strategy to conserve and enhance the Botanic Gardens of Adelaide and State Herbarium's role as an exemplary cultural and scientific institution. In particular, the policy provides a framework for maintaining, building and displaying collections and enhancing the richness and uniqueness of the Botanic Gardens and State Herbarium.

Each Policy addresses the following issues:

- Function of the Collections Policy
- Authority and Delegation of Responsibility
- Collection Categories
- Scope of Collection
- Access to and use of Collection
- Photography
- Acquisitions/Accessioning
- Laws and Permit Compliance
- Loans and Material Transfer
- De-accessioning
- Collection Records
- Inventories
- Collection Lists
- Collection Management/Conservation
- Sustainability
- Collection Insurance

These policies are due for review five-yearly. However, comments on the policies may be addressed to the Director or Board at any time.

Function of the Living Collection Policy

The Living Collection supports the Mission Statement for the Botanic Gardens and State Herbarium and is used for the purposes outlined in the Statement.

Through this policy the following tangible and intangible benefits accrue:

- Defined principles and criteria to evaluate all parts of the Living Collection
- Directions for the development of the Living Collection and displays
- Identified resources required for collection development and management
- A framework for separately defined policies for each garden
- A framework for the development of horticultural maintenance manuals for all Focus Collections and displays
- Living collections added to the Botanic Gardens are consistent with the cultural and scientific significance of the Gardens
- Appreciation of the beauty and diversity of plants
- The Botanic Gardens is a place of leisure and education about the interconnectivity of plants, people and culture
- Thoughtful, creative and joyful responses to the Botanic Gardens, plants and environmental concerns
- The Botanic Gardens' Living Collection of plants constitutes a valuable and significant scientific and cultural heritage which can be adequately managed, maintained and conserved
- Enhancement of the North Terrace Boulevard landscape
- Contribution to South Australia's Strategic Plan.

Precise details of the various collections, their location and management are set out in each Garden's detailed management plan.

Authority and Delegation of Responsibility

The Director, Botanic Gardens of Adelaide has decision-making authority and responsibility for acquisitions, de-accessions, collections care and use of the Living Collection. This authority can be delegated by the Director to a staff member from time to time as required.

Collection Categories

The Living Collection consists of:

- Plants on public display
- Plants held for research and conservation projects
- A seed bank collection used for conservation, research, and educational activities.
- Scope of Collection The Living Collection can be divided into seven primary themes:
- Geographical: A collection or display of plants based on a defined geographical area
- Biological and Ecological: Collections and displays of plants which grow together in biological or ecological communities defined by a particular range of environmental conditions
- Taxonomic and Evolutionary: A collection of plants which demonstrates principles of plant classification and evolution
- Ornamental and Landscape: A collection of plants grown for their ornamental and landscape qualities
- Historical and Cultural: Plants which display aesthetic, scientific, historical or social values for past and present generations
- Conservation: Plants which require protection due to their status in line with State, national or international conservation strategies. This will also cover the conservation of old cultivars and ornamental plant collections
- Research Collections: Plant collections which promote scientific research or are assembled for further research

More than one theme may apply to any of the collections. The multi-layered composition of many existing collections increases the potential for interpretation and research.

The Global Strategy for Plant Conservation

In 2010, the Conference of the Parties, by decision X/17, adopted the Updated Global Strategy for Plant Conservation 2011-2020. The Strategy's vision is to halt the continuing loss of plant diversity and to secure a positive, sustainable future where human activities support the diversity of plant life (including the endurance of plant genetic diversity, survival of plant species and communities and their associated habitats and ecological associations), and where in turn the diversity of plants support and improve our livelihoods and well-being. The Strategy includes 16 outcome-oriented global targets set for 2020, and provides a framework to facilitate harmony between existing initiatives aimed at plant conservation, to identify gaps where new initiatives are required, and to promote mobilization of the necessary resources. The global targets for 2011–2020 should be viewed as a flexible framework within which national and/or regional targets may be developed, according to national priorities and capacities, and taking into account differences in plant diversity between countries.

In 2002, the Conference of the Parties, by decision VI/9, had adopted the Global Strategy for Plant Conservation which provided a pilot exercise for the development and use of outcome targets under the first Strategic Plan of the CBD.

The updating of the Strategy for the new decade was undertaken in parallel to the consultations leading to the adoption of the Strategic Plan for Biodiversity 2011-2020 and its implementation should be considered within the broader framework of the Strategic Plan for Biodiversity 2011-2020.

The targets 2011-2020

Objective I: Plant diversity is well understood, documented and recognised

Target 1: An online flora of all known plants.

Target 2: An assessment of the conservation status of all known plant species, as far as possible, to guide conservation action.

Target 3: Information, research and associated outputs, and methods necessary to implement the Strategy developed and shared.

Objective II: Plant diversity is urgently and effectively conserved

Target 4: At least 15 per cent of each ecological region or vegetation type secured through effective management and/or restoration.

Target 5: At least 75 per cent of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity.

Target 6: At least 75 per cent of production lands in each sector managed sustainably, consistent with the conservation of plant diversity.

Target 7: At least 75 per cent of known threatened plant species conserved in situ.

Target 8: At least 75 per cent of threatened plant species in ex situ collections, preferably in the country of origin, and at least 20 per cent available for recovery and restoration programmes.

Target 9: 70 per cent of the genetic diversity of crops including their wild relatives and other socio-economically valuable plant species conserved, while respecting, preserving and maintaining associated indigenous and local knowledge.

Target 10: Effective management plans in place to prevent new biological invasions and to manage important areas for plant diversity that are invaded.

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

Target 11: No species of wild flora endangered by international trade.

Target 12: All wild harvested plant-based products sourced sustainably.

Target 13: Indigenous and local knowledge innovations and practices associated with plant resources maintained or increased, as appropriate, to support customary use, sustainable livelihoods, local food security and health care.

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

Target 14: The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes.

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

Target 15: The number of trained people working with appropriate facilities sufficient according to national needs, to achieve the targets of this Strategy.

Target 16: Institutions, networks and partnerships for plant conservation established or strengthened at national, regional and international levels to achieve the targets of this Strategy.

<http://www.cbd.int/gspc/strategy.shtml>

GSPC Toolkit

The **toolkit for the Global Strategy for Plant Conservation** has been developed under the leadership of Botanic Gardens Conservation International. You are invited to use it, provide feedback, and recommend material to be added.

<http://www.plants2020.net/>

NOTES

