

Review of achievements

2007-2012

Introduction

This review highlights the activities undertaken by BGCI during the period of its five-year plan 2007-2012. The activities and achievements are set out in relation to the broad objectives of the plan. In a period of uncertain funding and increasing environmental problems, BGCI has been particularly proud to see its work gain influence internationally and to consolidate its programmes in China and the US. We have supported a range of activities in Africa that we plan to build on in the future. The success of our work continues to depend on support from our members, the global network of botanic gardens and the partnerships we facilitate.

BGCI (Global) – While following the broad objectives of the five-year plan, since 2007 BGCI's activities at the global level have increasingly consolidated around three key areas of activity: (i) the identification of species under threat – particularly, but not exclusively tree species – and support for activities to conserve these species both *in situ* and *ex situ*; (ii) support for the implementation of the Global Strategy for Plant Conservation (GSPC), working with the broader plant conservation community; and (iii) supporting the efforts of botanic gardens to become agents for change and enhancing their environmental education role.

BGCI China – In 2007 BGCI established an office at the South China Botanical Garden, Guangzhou and appointed a China Programme Coordinator. The same year China's Strategy for Plant Conservation (CSPC) was produced, facilitated by BGCI. This document is the national response to the Global Strategy for Plant Conservation (GSPC). The BGCI China Programme fully supports the implementation of the CSPC and is recognized as having a catalytic impact on plant conservation in China. The programme has developed a focus on the conservation and restoration of globally threatened trees. In 2010 an in depth review of BGCI's China Programme was undertaken. This provided specific recommendations and action points for expanding the programme 2011-13 which has led to increased emphasis on plants for livelihoods.

BGCI US – In 2007, BGCI moved its US office from the Brooklyn Botanic Garden, New York to Chicago Botanic Garden and appointed a new Executive Director. A second staff member of BGCI US is based at the Arnold Arboretum of Harvard University. An exciting programme has been developed and implemented focusing on the development and use of BGCI's global databases, research and conservation of technically challenging species and connecting the rich resources of US gardens with BGCI's global programmes.



Review of BGCI's five-year plan

1. Securing plant diversity

1.1. Reverse the loss of key plant species and their habitats by targeted recovery and restoration programmes enhancing in situ conservation efforts by botanic gardens and partner organizations, in support of Targets 5 and 7 of the GSPC.

Key achievements:

Over the past five years, BGCI has supported the conservation of 29 highly threatened tree species, initiated 3 habitat conservation projects and carried out 5 pilot, community-based restoration projects, working in Latin America, Central and SE Asia and China. In 2012, BGCI launched the Ecological Restoration Alliance of Botanic Gardens, bringing together major botanic gardens from around the world with an ambitious programme to restore 100 degraded ecosystems.

Species conservation

Over the past five years, BGCI has developed a series of projects for the conservation of the world's most threatened tree species. Selection of species takes into account information derived from tree Red Listing activities and local consultation with botanic gardens and other partners. This work is an integral part of the Global Trees Campaign, a joint programme with Fauna & Flora International. The work is mainly focused in China, Colombia and Cuba. In **China**, tree conservation projects focus on a range of globally threatened flagship species.. In each case, as a result of the projects, the conservation status of the species has been significantly improved. The projects have proved to be catalytic, stimulating matching investment and conservation effort by major botanic gardens in China.

To complement the species projects and address a specific threat to native trees in China, a study of illegal transplantation from the wild into urban spaces for amenity planting has been undertaken. The survey undertaken in Shenzhen and Qingyuan in Guangdong, Taizhou in Zhejiang, Xi'an in Shaanxi and Enshi in Hubei has revealed a lack of general awareness of this thriving business, and limited sanctions by authorities despite the official ban.

In **Colombia**, projects have been undertaken to conserve ten of the world's most endangered *Magnolia* spp. working with two botanic gardens and local communities. Research, training, production of educational materials, collaboration with local people and protected area staff, have been important components of the projects.

In **Cuba**, BGCI has worked with the staff of the National Botanical Garden, Havana to map and assess habitats of endemic and globally threatened *Magnolia* species identifying those not within Protected Areas. Conservation measures have included an environmental education campaign, training people in *Magnolia* identification and conservation, *ex situ* propagation and working with farmers to grow the species within coffee production areas.

BGCI is also collaborating with the University of Fribourg to develop a global action plan for the conservation of *Zelkova* species. The first phase of the project, the *ex situ* survey, was completed in June 2010. Subsequently genetic analyses have been carried out, field surveys undertaken and plans drawn up for integrated conservation action.

Habitat Conservation

A number of habitat conservation activities have been supported in China over the past five years. A key element of this work has been with local communities engaging and authorities to understand the underlying causes of plant diversity loss and develop sustainable For example, in the Zi-Ben-Shan solutions. Mountains in West Yunnan, the forest flora has been documented and the conservation status of selected species determined to demonstrate the need for protection, with the aim of getting parts of this area officially protected. Similarly, in Dahetou Village, Yunnan, disputes over tenure boundaries, deforestation and transformation of large parts of the forest into plantations have led to a significant decline of some of the important native tree species, including Magnolia cathcartii and M. doltsopa. BGCI has therefore been working to raise awareness among the local community and authorities of the ecological significance and economic potential of the forest's native plant diversity, and to help them develop and manage the forest more sustainably.

A further project on the Tarim River has also demonstrated strong local interest in participatory schemes to conserve unique riparian forests with *Populus euphratica* which have been declining due to human interventions.

Ecological restoration

Over the past five years, ecological restoration has been increasingly recognized as a global environmental priority. BGCI has responded to this challenge by supporting pilot restoration projects and the formation of the Ecological Restoration Alliance of botanic gardens. Pilot restoration projects have been carried out in **Cambodia, China** and **Pakistan** and all address the key issues of restoring habitats using native species with a focus on securing the livelihoods of local communities.

In southern **Cambodia**, BGCI helped to establish a Community Protected Area (CPA) in Bokor National Park, in order to rehabilitate and conserve degraded forest habitat. The project helped to support the livelihoods of local people by increasing the presence of valuable but threatened *Aquilaria crassna* trees, bamboos and rattans, as well as a range of other economically important medicinal and nutritional plants. The local community continued the project with additional funding secured from the Mohamed Bin Zayed Species Conservation Fund.

In parts of **China**, large-scale plantations of nonnative species have massively reduced the rich botanical diversity on which local communities depend. BGCI is working with local communities in Heshan County, Guangdong, to promote and contribute to forest restoration using native tree species. Similarly in Yunnan province, BGCI supported Xishuangbanna Tropical Botanical Garden to establish a pilot site to study tree and orchid restoration in tropical rain forest on limestone in Xishuangbanna National Nature Reserve. In **Pakistan**, BGCI is working with the Government College University, Lahore, to promote the use of native species in restoring drylands in the south-eastern parts of the country (Punjab province). This is particularly relevant in a country where forestry promotes uniform plantations of fast-growing trees in large-scale afforestation projects. The practical restoration work is accompanied by public outreach and advocacy activities.

In **Russia**, BGCI has been training botanic garden personnel to develop and implement species recovery programmes in steppe habitats, Practical population reinforcement activities for two threatened and ecologically important species (*Stipa ucrainica* and *S. pulcherrima*) were undertaken in the Rostov region and similar work was carried out for target species in forest steppe habitat in the Volga region with populations of rare *Paeonia tenuifolia* and *Iris pumila*. In parallel with these efforts, methodological recommendations for reintroduction of threatened species were developed and published.

Botanic garden, with their combination of skills, facilities and resources are uniquely positioned to support ecological restoration activities. In recognition of this, BGCI responded to requests from a number of key botanic gardens to help develop the Ecological Restoration Alliance of botanic gardens. Following a preliminary survey of ecological restoration projects undertaken by botanic gardens around the world, BGCI organized two preparatory meetings in 2011 and the Alliance was formally launched in May 2012 with ambitious aims. BGCI acts as the coordinator. 1.2. Ensure that 50% of threatened plant species are in accessible *ex situ* collections (preferably in the country of origin) including 75% that are Critically Endangered, acknowledging our global facilitating role for Target 8 of the GSPC.

Key achievements:

BGCI's PlantSearch database is the only global monitoring tool for GSPC Target 8 and it also provides an essential tool for conservation planning and prioritization.

BGCI has developed the PlantSearch database as a planning and monitoring tool for ex situ collections of botanic gardens. The number of botanic gardens providing data on their collections has increased from around 300 in 2007 to over 600 by 2012. The database is linked to a number of other relevant databases, including the IUCN Red List of threatened species. This allows BGCI (as well as the gardens themselves) to identify globally threatened species in botanic garden collections. An analysis of the database in 2010 allowed BGCI to identify approximately 25% of threatened plant species in ex situ collections. This information provided the basis for a report submitted to the Convention on Biological Diversity (CBD) in 2010. The report also highlighted serious lacks in the quantity and quality of information available that constrain efforts to monitor progress towards GSPC Target 8.

BGCI has also been monitoring progress towards Target 8 at the regional level. In Europe, a consolidated list of regionally threatened plants was developed based on national Red Lists and species distribution data. 1,917 threatened species were identified. Comparing this list with BGCI's PlantSearch database and a database of European seed bank holdings developed by the European Native Seed Conservation Network allowed 808 threatened taxa (42% of the total) to be identified in *ex situ* collections.

Similarly, the North American Collections Assessment reviewed the extent to which threatened plant species of Canada, the US and Mexico are in *ex situ* collections. Again a first step was to produce a consolidated regional list of threatened species. The assessment showed that 39% of the 9,496 North American threatened taxa are maintained in germplasm or living plant collections in North America.

BGCI also uses the PlantSearch database to carry out species-based surveys of botanic garden collections. For example, international surveys of *ex situ* collections of oaks, maples, magnolias and rhododendrons have all been completed in the last five years. These surveys have allowed us to identify which of the most threatened species in these families are represented in ex situ collections, and which are not - valuable information for conservation planning and prioritisation. Similarly, BGCI and the International Organisation for Succulent Plant Study (IOS) are collaborating on a project to review the conservation status of ex situ collections of cactus and succulent plants. Initial results in 2012 show that 180 succulent species listed as threatened on the IUCN Red List (CR, EN and VU) are currently recorded as held in botanic garden collections.

A survey of African trees in *ex situ* collections was undertaken in 2011. This indicated that botanic gardens in DRC, Kenya, and Uganda are collectively growing over 30 of the tree species that are included in the IUCN Red List as globally threatened. They are thus contributing significantly to the *ex situ* conservation of these

species with both plant material and expertise currently or potentially available to support reintroduction to the wild. In addition they grow a wide range of other indigenous tree species that have potential for use in forest restoration and other tree planting schemes.

While it is important to know which threatened species are included in botanic garden collections, to be of use for conservation and restoration purposes, such collections must be genetically representative of the species. BGCI is therefore now developing projects to assess the quality of conservation collections in botanic gardens. BGCI US has undertaken a project with the US Forest Service, Cincinnati Zoo and Botanical Garden's Center for Research Endangered Wildlife, of and Longwood Graduate Program to understand the conservation value of living collections of four threatened oak species. The project is now undertaking research that will improve options for ex situ conservation of threatened oaks globally. Among other threats, the continued survival of the US species is threatened by a combination of stresses relating to climate change and the advance of Sudden Oak Death (Phytophtora ramorum), making ex situ conservation an important conservation priority. In Europe, BGCI is working on a similar project with the University of Ghent botanic garden to assess the conservation value of collections of selected species of magnolia, hydrangea and cacti.

PlantSearch

1.3. Enhance the conservation and sustainable use of threatened medicinal and nutritional plants to address human wellbeing and livelihood issues as a contribution towards Targets 3 and 13 of the GSPC.

Key achievements:

BGCI has produced the first ever list of globally threatened medicinal plants to guide conservation action, has identified important areas for medicinal plant conservation in 5 countries and carried out surveys on the sustainable use of medicinal and nutritional plants in China, Brazil, Mexico and India.

Responding to this objective, BGCI has produced a list of 3,000 key medicinal plant species and linked the information to records of *ex situ* collections in the PlantSearch database. Consultation resulted in the identification of action priorities with the results published in 2007. Subsequently BGCI has supported community-based medicinal plant conservation in China, Indonesia, Vietnam, Madagascar and Uganda.

In partnership with IUCN and funded by the Global Environment Facility (GEF), plant conservation needs assessments were completed in six countries (Cameroon, Costa Rica, Madagascar, Morocco, Philippines and Sri Lanka). On the basis of these assessments, important areas for plant conservation, especially those important for medicinal plants, were identified as a focus for future work.

Following on from the GEF project, in **Madagascar**, BGCI worked with the IUCN/SSC Madagascar Plant Specialist Group, to prepare a consolidated checklist of medicinal and nutritional plants and Important Plant Areas

(IPAs) of the island. Two practical conservation projects were also supported.

In Uganda, a BGCI workshop in 2009 brought together the directors of all four botanic gardens in Uganda with botanists at Makerere University, the government agency responsible for medicinal plants and other conservation agencies. Two pilot projects were subsequently undertaken. One with the Nature Palace Botanical Garden located near Kampala, supported ex situ facilities for propagation of medicinal plants favoured by local people. The second pilot project carried out by Tooro Botanical Garden in west Uganda, supported the documentation of the local medicinal plants, as well as developing community-based conservation for species under threat. A followup workshop was held in Uganda in 2011 to discuss national medicinal plant conservation priorities.

In **China**, BGCI is supporting the conservation and sustainable use of threatened medicinal plants in central Hunan. Local communities have a long tradition of collection and cultivation of local crop varieties and medicinal plants that grow in association with the paddy fields, slope-farming lands and forested hills and mountains. This project aims to promote the reintroduction and sustainable use of a number of threatened medicinal species.

Also in China, BGCI is supporting communitybased conservation and sustainable use in Junggar, Xinjiang. This region is a temperate desert ecosystem where habitat degradation and loss through mining activities, indiscriminate use and overgrazing have led to a significant decline of plant populations valued for local livelihoods. A training programme for local farmers has been initiated to raise awareness of unsustainable collection and to improve cultivation of *Cistanche deserticola*, a medicinal species of major economic importance.

Building on BGCI's experience of data collection and its global expert network, a rapid overview of *Wild flora for improved rural livelihoods in China, Brazil, India and Mexico*, was undertaken in 2012, focusing on success stories and lessons learnt in sustainable management and commercialisation of wild flora and its products. The study has stimulated more detailed analyses in Brazil and Mexico and contributes guidance to policy-makers and conservation practitioners.

1.4. Lead international efforts to address the impacts of climate change on wild plants through the implementation of a global action plan agreed with botanic gardens and conservation partners.

Key achievements:

BGCI produced a leading report on 'Plants and Climate Change' and ensured that climate change was fully reflected in revised targets for the GSPC in 2010.

At the global level, the main framework guiding plant conservation action is the GSPC. In 2006 BGCI held an expert meeting on plants and climate change. The resulting *Gran Canaria Declaration II on Plants and Climate Change* called for greater attention to be given to addressing the impacts of climate change on plants in the GSPC-post 2010. In 2008, BGCI produced a comprehensive report *Plants and climate change: which future?* which was highly regarded and set the scene for a global consultation on the future of the GSPC. As a result, the revised targets for the GSPC 20112020 adopted in 2010 reflect more fully the need to take urgent action to address climate change.

Recognising that montane forests and tree species are likely to be urgently affected by climate change, BGCI has been involved in a three year research project with the University of Bournemouth to assess the impacts of climate change in such ecosystems.

One of the predicted consequences of climate change is an increase in the frequency and severity of attack by alien invasive pests, diseases and species. In recognition of this, BGCI is working with the United States Forest Service and other partners to assess the potential for development of an international sentinel plant network, where living plant collections at botanic gardens around the world are connected and capable of serving as early warning systems to help predict and prevent the incursion of new pests (insects, pathogens, or plants) associated with climate change.



2. Enabling people and botanic gardens

2.1. Ensure that comprehensive information on threatened plants, the impact of climate change on plant diversity and the consequences of loss of plant diversity on human wellbeing are available to all our members and the wider biodiversity community, through the development of our unique global databases, comprehensive website and respected publications, in support of all the GSPC Targets and in particular Target 2.

Key achievements:

BGCI has made a significant contribution to global Red List information, researching and publishing Red Lists for major tree groups. It continues to develop its unique GardenSearch and PlantSearch databases and has produced a wide range of manuals, guidelines and reports for the botanic garden community.

In general information on globally threatened plant species remains inadequate. To help address this issue, BGCI became a partner in the IUCN Red List Partnership in 2009. We host the IUCN/SSC Global Tree Specialist Group that has undertaken over 2,800 Red List species assessments since 2007, publishing 6 reports. We have developed a collaboration on an additional Red List project for the family Hydrangaceae with the University of Ghent Botanic Garden and work closely with the Royal Botanic Gardens, Kew on a collaborative approach to species Red Listing. BGCI has also supported the red listing of medicinal plants in Madagascar as mentioned above and has coordinated a bioinformatics project in East Africa. This aimed to build capacity and skills on various aspects of information management; increase regional capacity for biodiversity informatics by providing IT equipment and training and to produce a joint Red List of threatened plants for the region.

BGCI's role in networking and consultation led to our involvement in the 4D4Life project that aimed to develop the Catalogue of Life as a taxonomic checklist of all known species.

2.2. Assist botanic gardens to develop communication, education and public awareness programmes that i) communicate the importance of plant diversity and ecosystem services in sustainable livelihoods and ii) promote informed action, as a major contribution towards Target 14 of the GSPC.

Key achievements:

BGCI has consolidated its work in this area over the past five years through publications, enhancement of the education component of the BGCI website and a wide range of workshops and training initiatives. Working with botanic gardens has remained at the core of BGCI's work in communication and education but resources developed are made available to the wider educational community.

Over the past five years, BGCI's education team has become increasingly involved in helping botanic gardens to assess and build their social role, reaching out to the wider community and engaging with new audiences. Following a BGCI commissioned research project into the feasibility of botanic gardens developing their social role, a series of pilot projects were carried out with six botanic gardens in the UK. To promote this work, four short films of the gardens' projects have been produced and currently in production is an animation and a 'how-to manual' for botanic gardens.

In related work, BGCI commissioned a piece of research with Cardiff University to look at the relationship between Islam and conservation action. This resulted in the publication 'Islamic Gardens in the UK' the first ever research report on this topic. The results are published on BGCI's website and in a peer reviewed journal (Journal for the Study of Religion, Nature and Culture). Building on this work, BGCI developed a series of classroom and botanic garden education resources focusing on plants and Hinduism, Christianity, Islam and Humanism.

Following on from the publication of BGCI's report on plants and climate change, BGCI created a series of educational resources on climate change which are translated into Chinese and Spanish. During this project, BGCI worked with Design Bridge, a design and branding company, to create a simulation game, which won a silver award at the Design Effectiveness Awards in 2011.

BGCI is also a major partner in 'INQUIRE' an EU funded project involving 17 partners in 11 countries. The project involves training teachers throughout Europe to use inquiry based teaching in science education. BGCI has been responsible for coordinating the Partners within the project and the dissemination work package which has involved developing the multi-lingual website www.inquirebotany.org

In an effort to engage young people in plant conservation, BGCI partners with the Fairchild Tropical Botanic Garden in the Fairchild Challenge/BGCI Global Option. Over 3,000 students to date have participated in the Global Option which consists of an international competition for teenagers and involves schools from around the world. In recent years the competition has included designing cartoons to illustrate the effect of climate change on plants, a CD cover for an environmental song, a plant conservation poster and an Olympic wreath using native plants. The Global Option with BGCI's logo is promoted to over 100,000 students annually.

Continuing the focus on helping botanic gardens to engaging with the wider public, BGCI is developing a series of plant conservation messages to be used by botanic gardens and other organizations worldwide and BGCI (US) is developing a set of resources for botanic gardens on 'Interpretation for conservation' based on input from 136 individuals representing 110 botanic gardens.

2.3. Enhance the skills and expertise of botanic gardens staff in horticulture, plant conservation techniques and environmental education through training, staff exchanges, provision of relevant information and networking, as a major contribution towards Target 15 of the GSPC.

Key achievements:

Over the past five years, BGCI, has run a number of well-received training courses and workshops for botanic garden staff and has produced a range of respected manuals and guidelines on key issues that need to be addressed by botanic gardens.

Since 2003, in collaboration with Kadoorie Farm and Botanic Garden, Hong Kong, BGCI has been supporting a scholarship programme for botanic garden professionals from mainland China. Covering a wide range of plant conservation topics, this two-week training is also aimed at forging closer working relations and knowledge exchange between botanic gardens from China and Hong Kong SAR. To date, nine courses have been run for a total of 50 Chinese trainees.

In 2009, BGCI ran the SE Asia Botanic Garden Management Course developed with the Botanic Gardens of Australia and New Zealand (BGANZ). Through this two-week course, 14 participants from 7 countries were trained in all aspects of botanic garden management. In 2012, a shorter course focusing on *ex situ* conservation was run for African botanic gardens in conjunction with the South Africa National Biodiversity Institute (SANBI); 12 participants from 9 countries benefited from this course.

BGCI is a partner with the Morton Arboretum and the American Public Gardens Association in ArbNet, an on-line community which facilitates the exchange of information and the sharing of knowledge, experience, and other resources between arboreta. An outdoor, interpretative panel exhibition "Vanishing Acts: Trees under pressure" has been developed by the Morton Arboretum and BGCI to raise awareness of tree conservation needs.

In relation to botanic garden education, two international diploma courses have been run with RBG, Kew. These five-week intensive courses have trained 19 participants from 15 countries. In addition, a distance learning course on site-based education for sustainability has been developed in with South collaboration London Bank University, Field Studies Council, RSPB, Birdlife International, London Zoological Society and Wetland Link International. The course was run as a pilot in 2011 and the course in its final version will be offered in 2013.

To support the work of botanic gardens, BGCI published a wide range of relevant manuals and guidelines. These are made available in both print and electronic format, and where possible, translated into other languages. In the past five years, BGCI has produced Manuals on:

- Methodological Recommendations for Botanic Gardens on the Reintroduction of Rare and Threatened Plants (Russian and English);
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (English, Chinese, Spanish and Italian);
- Convention on Biological Diversity (CBD);
- Reducing Emissions from Deforestation and Forest Degradation (REDD+);
- Integrated Tree Conservation Manual (English, Chinese and Spanish);
- A Guide to the Global Strategy for Plant Conservation (GSPC) (English, French, Spanish and Chinese).

BGCI also works with individual botanic gardens supporting development and capacity building on a case-by-case basis. In the past five years, BGCI has provided support for:

- Overall development of the new Oman national botanic garden;
- Arboretum transformation at Lushan Botanical Garden in China, including a review of the collection and the

introduction of a new recording and labelling system introduced;

- Developing the educational and interpretational resources and capacity at the Bishkek Botanic Garden in order to raise awareness of the importance of native plant diversity in Kyrgyzstan;
- A two-day workshop at the Tbilisi Botanical Garden and Institute of Botany to address the main challenges faced by Georgian botanic gardens. Support was subsequently provided for databasing collections and facilitating an exchange visit with the Brooklyn Botanic Garden.

Networking botanic gardens remains a fundamental role of BGCI. We provide the Secretariat for the European Botanic Gardens Consortium and support other national and regional networks to the extent practicable. In North America for example we are actively involved in the American Public Gardens Association (APGA) with the Executive Director of BGCI (US) serving as vice-chair or chair of the Plant Conservation Professional Section for 4 years and on the programme selection committee for annual conferences.

As a means to share experiences and best practice examples in relation to botanic garden management, plant conservation and BGCI produces education, two serial publications which are distributed to all its members and made available on the BGCI **BGiournal** focuses on website. plant conservation and the scientific work of botanic gardens, while Roots address educational issues. Both journals are produced twice per year. Recent issue of Roots have been themed on enquiry-based education, children's gardens and science and culture, while BGjournal has focused on scientific innovation, management of alien invasive species and international partnerships for conservation.

2.4. Hold a series of global congresses for the botanic garden community with a focus on securing plant diversity, promoting plantfocused environmental education and enhancing sciencebased knowledge for the benefit of people and the planet, as a major contribution to Target 16 of the GSPC.

Key achievements:

BGCI's Global Congresses are generally regarded as the most important networking events for the botanic garden community.

BGCI organizes a global congress and a global education congress every 3 years. In the past five years, the global congresses were held in China, (2007 - with over 700 participants) and with 370 Ireland (2010, participants representing 53 countries). The education congresses were held in South Africa (2009 -110 delegates, 23 countries) and Mexico (2012 -150 delegates from 31 countries). During these congresses participants have the opportunity to present their work either as oral presentations or posters, organize thematic symposia, attend workshops and launch new initiatives.



3. Influencing decision making and policy

3.1. Act as a leading advocate ensuring that the conservation and sustainable use of plant species is fully addressed by international biodiversity policy and related agreements with a focus on CBD and CITES to support all the targets of GSPC.

Key achievements:

The GSPC has been acknowledged as one of the most successful programmes of the CBD and the essential role of BGCI in securing its adoption and promoting its implementation is well recognized by the Parties to the CBD.

BGCI works closely with the CBD Secretariat, ensuring that commitments of the Convention related to plant conservation, particularly in the framework of the GSPC, are met. In this respect, BGCI has prepared an on-line toolkit for the GSPC and a series of GSPC-related publications (see 3.3 below).

With the support of the CBD Secretariat, BGCI is also involved in organizing a series of regional capacity building workshops for national GSPC focal points and other relevant stakeholders focused on developing an understanding of the linkages between the GSPC and the targets of the CBD Strategic Plan for Biodiversity at the national level. Workshops have so far been held for Southern Africa, Central America and Europe.

In the USA, BGCI has carried out a botanical capacity assessment. This aimed to assess the nation's current and future botanical capacity to conduct research in the plant sciences, to educate the public, train the next generation of plant scientists, and to conserve and manage

native plant species and habitats. The report outlined where botanical capacity, particularly human capacity, is lacking across all sectors (government, academic, and private). This has been communicated through two publications, three posters and seven presentations at national and international meetings.

BGCI also promotes the importance of plants to policy makers through participation in relevant conferences and meetings – for example at CBD COPs and SBSTTA meetings and recently at the IUCN World Conservation Congress in Korea. At these meetings BGCI makes interventions, organizes side events and generally advocates on behalf of plant conservation.

3.2. Promote the work of botanic gardens related to plant diversity conservation, human wellbeing, environmental education and climate change to policy and decision makers, as well as the wider public, both nationally and internationally.

Key achievements:

BGCI is recognized internationally as the body representing botanic gardens globally and staff regularly talk at conferences and meetings on behalf of the botanic garden community.

As well as participating in relevant international and national conferences and meetings (as noted in 3.1 above), BGCI also promotes the work of botanic gardens wherever and whenever it is able. Notable examples include the following:

- Organising a botanic garden exhibition at the Chinese Olympics;
- The publication of two popular books on botanic gardens;

 Collaboration with other agencies, such as the World Association of Zoos and Aquaria;

3.3. Engage with policy makers and wider society to ensure that the CBD continues to pay full attention to the conservation and sustainable use of plant species beyond 2010, addressing the urgent threat of climate change.

Key achievements:

BGCI has built on its successful role in promotion and implementation of the GSPC over the past five years and has consolidated its position through an MOU with the CBD Secretariat and new contractual arrangement since 2010.

In 2009, BGCI successfully secured funding from the Boeing Company to organise a series of stakeholder consultations on the GSPC as part of the process of developing new targets for the period 2011-2020. Workshops were held in the USA and South Africa and providing recommendations to the CBD Secretariat and ensuring that the updated GSPC targets effectively addressed climate change issues.

BGCI launched a public campaign 'Plants for the Planet' in the lead up to the 10th Conference of the Parties to the CBD, mobilizing public support for the adoption of the revised GSPC. Nearly 3,500 signatures in support of the GSPC have been collected.

Following the adoption of the revised targets in 2010, a major focus of BGCI's activities has been the development of a 'Toolkit' on the GSPC. This is a web-based resource providing information for policy makers and plant conservation practitioners on the GSPC and its implementation. The toolkit provides background information, guidance, tools and resources to support the development of national responses to the GSPC, as well as the implementation of the 16 targets of the GSPC. The toolkit is available in all the UN languages (English, French, Spanish, Arabic, Chinese and Russian). BGCI has also produced a range of publications on the GSPC to raise awareness of the Strategy.

At the national level BGCI supported the development of the Chinese Strategy for Plant Conservation (CSPC) published in 2008, bringing together the three CSPC focal agencies (Chinese Academy of Sciences, State Forestry Administration, Ministry of Environmental Protection). This was followed by a review of progress in 2012, also supported by BGCI.

Similarly in Japan, BGCI worked with partners on the development of the Japanese response to the GSPC. The key role of Japanese botanic gardens in conserving plant diversity was recognised during this process, with the Japanese Association of Botanic Gardens playing a lead role in the process.

In 2012, BGCI has also promoted awareness of the GSPC in Korea and Mexico.

3.4. Ensure mechanisms are in place to facilitate informed decision making by forging links between conservation best practice and biodiversity policy.

Achievements:

This has mainly been achieved by linking practical activities with the GSPC which in turn, since 2010, supports the Strategic Plan for Biodiversity. Regional workshops in Africa and Europe (as mentioned in 3. 1 above) contribute to this objective, as does our work in supporting the development of national responses to the GSPC in China and Japan.

Membership

BGCI membership has remained stable over the last five years; currently there are nearly 500 institutional members and 160 individual (associate) members. There are seven Patron Gardens (Royal Botanic Garden Edinburgh, Royal Botanic Gardens, Kew, Chicago Botanic Garden, United States Botanic Garden, Al-Thani Botanic Centre, National Botanic Gardens, Glasnevin, Ireland and the Royal Botanic Gardens, Sydney).

Sources of income

BGCI began the period under review with a real need to diversify its' sources of income. In 2007 the largest funder contributed 61 percent of total funds. With the period of funding from this major Corporate donor coming to an end a major challenge was to reduce organisational costs and attract new sources of income. By 2011 the organisation had achieved an improved spread of funders with four organisations each contributing over 10% of restricted funding. These four organisations represent government and private foundations. The need to diversify funding continues as BGCI enters a period of moderate growth. BGCI US has generated its own funding since 2008 and contributes to the general development of BGCI's global information resources.

Publications

- BGCI (2010) Towards a New Social Purpose: Redefining the Role of Botanic Gardens, executive summary, Botanic Gardens Conservation International, Richmond, UK
- BGCI (2011) Growing the Social Role: Partnerships in the Community, Botanic Gardens Conservation International, Richmond, UK
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