



CBD



**CONVENTION ON  
BIOLOGICAL DIVERSITY**

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INTERSESSIONAL MEETING ON THE  
OPERATIONS OF THE CONVENTION  
Montreal, 28-30 June 1999

SUBMISSIONS RECEIVED BY THE EXECUTIVE SECRETARY CONCERNING  
DECISION IV/8 PARAGRAPH 2

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*Biodiversity Group*

Mr Hamdallah Zedan  
Officer in Charge  
Secretariat  
Convention on Biological Diversity  
World Trade Centre  
393 Saint-Jacques Street  
Suite 300  
Montreal Quebec Canada H2Y 1N9

Dear Mr Zedan

**Re: Decision IV/8 (Access and benefit-sharing) of the fourth meeting of the Conference of the Parties to the Convention on Biological Diversity**

Thank you for your letter of 13 November 1998 in which you invited Australia to submit relevant information in accordance with Decision IV/8, on ex situ collections which were acquired prior to the entry into force of the Convention on Biological Diversity, to be used as background documentation for the inter-sessional meeting on the operation of the Convention scheduled for 7-9 June 1999.

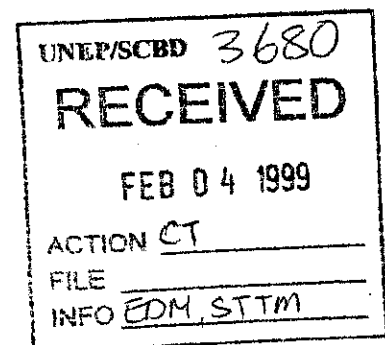
We have considered your request carefully. We note that many parties to the Convention have expressed concern regarding this issue. You will recall, however, that at COP 4 Australia expressed a reservation based on the grounds that ex situ collections acquired before the Convention came into force were specifically excluded from the scope of the Convention's coverage. Australia's view supports the principle that past actions are not usually covered by subsequent international agreements. For this reason we feel unable to meet your request at this stage.

Yours sincerely

A handwritten signature in cursive script, appearing to read "V Blazely".

Veronica Blazely  
Biodiversity Convention and Strategy Section

20 January 1999



中华人民共和国国家环境保护总局  
STATE ENVIRONMENTAL PROTECTION ADMINISTRATION  
115 Xizhimennei, Nanxiaojie, Beijing 100035, The People's Republic of China

FACSIMILE SHEET

Date: January 14, 1999	No. of Pages: 1 (Including this sheet)
To:	From:
Name: Hamdallah Zedan Officer-In-Charge	Name: Mr. Yue Ruisheng Division Director
Organization: Secretariat of the Convention on Biological Diversity	Dept.: International Organizations, Intl. Cooperation Dept.
City/Country: Montreal, Canada	Fax: (8610) 66151762
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Message:

**Re: Submission of the Information in Accordance with Decision IV/8  
and the Name of the Expert**

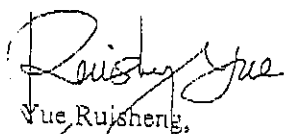
Dear Zedan,

Thank you for your letter dated 13 November 1998 concerning the above mentioned subject.

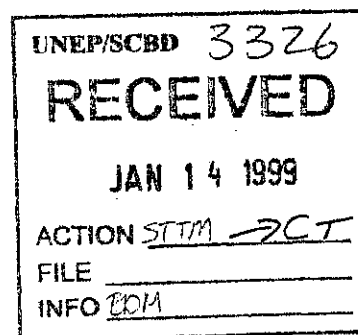
I am glad to inform you herewith that the information you required has been prepared and the name of the experts on the issue of access and benefit-sharing has been decided. The State Environmental Protection Administration recommends Mr. WANG Dehui, Deputy Director-General of Natural and Ecological Conservation Department of SEPA as the expert. Attached please find the materials prepared by Mr. Wang in accordance with Decision IV/8.

With best regards.

Sincerely yours,

  
Yue Ruisheng,

Director of International Organizations Division,  
International Cooperation Department,  
State Environmental Protection Administration of China



If you experienced any problem in receiving this transmission, please inform the sender at the telephone number listed above.

## CHINA'S POLICIES, LEGISLATION, MEASURES AND PROGRAMMES ON CONSERVATION, USE AND BENEFITS-SHARING OF GENETIC RESOURCES

Wang Dehui, Deputy Director-General

(Department of Nature and Ecology Conservation, SEPA, Jan. 12, 1999)

### I. Diversity and Significance of Genetic Resources in China

China is one of the richest main origin and distribution centers for crops, domesticated animals and poultry. China has more than 7,000 years of agricultural history. A long ago, the Chinese people began to exploit, utilize, domesticate and cultivate abundant genetic resources. Most of the cultivated plants and domesticated animals originate from China, moreover, China conserves large amounts of their wild forms and relatives.

China is abundant in plant genetic resources, according to statistics, China has planted more than 600 agricultural crop species, out of which 237 originated in China. Up to now, over 300,000 accessions of various crop genetic resources have been collected, in which, there are 200,000 for rice, 55,000 for beans, over 31,000 for cotton, sugar, tobacco and vegetable oil, over 18,000 for vegetable, 11,000 for fruit trees and over 15,000 for grass, green fertilizers and others. In addition, China has over 1,000 species for economic forest trees, 11,000 species for medicinal plants, 4,215 species for forage grasses and 2,200 species for ornamental flowers originated from China.

China is one of the countries having the richest species of domesticated animals. According to statistics, there are 2,222 varieties and breeds, including economic animals and artificially-bred insects, among which, there are 66 for horses, 73 for bulls, 79 for sheep, 113 for pig, 109 for chicken, 35 for duck. In China, there are 601 species for domesticated livestock and poultry, in which 385 originate from China, 126 introduced abroad and 90 for improved species. China has 430 varieties of domesticated animals and 171 varieties of domesticated poultry. The number of the domestic animals and poultry in China amounts to 18.1% of the total in the world, among which the domestic animals are 15.4% and domestic poultry is 32.0% of the total in the world.

### II. China's Laws and Regulations of Genetic Resources

China pays great attention to the conservation and sustainable utilization of genetic resources and has promulgated a series of laws and regulations.

Article 9 of the Constitution of the People's Republic of China stipulates that the State guarantees the reasonable utilization of natural resources and conserves precious flora and fauna. Any of units or persons may not seize or deteriorate natural resources by any means. The Chinese Criminal Law includes a section of environmental resources deterioration crime. China has promulgated some laws concerning genetic resources conservation including Environmental Protection Law, Marine Environmental Law, Forestry Law, Grassland Law, Fishery Law, Wild Animal Conservation Law, Quarantine Law on Import and Export Animals and Plants, etc.

The main regulations include regulations on reproduction and Conservation of Aquatic Resources, Regulations on Plant Quarantine, Detailed Regulations on Implementing Forestry Law, Detailed regulations on Implementing Grassland Law, Regulations on Seed Management, Regulation Concerning Protection of Wild Plants, etc.

On the basis of national laws and regulations, local regulations and department rules concerning genetic resources conservation have been established. In 1991, the Standing Committee of National People's Congress stipulated Quarantine Law on Import and Export Animals and Plants. When animals and plants and their products are imported and exported, the vessels that contain animals and plants and their products as well as the transportation instruments from epidemic areas have to be quarantined.

The State Council issued the Regulations on Seed Management in 1991. Article 8 of the regulations stipulates that the State conserves germplasm resources, the State collects, conserves and utilizes crops and forest germplasm in a planned way. Article 9 stipulates that any of units or persons introducing germplasm abroad shall register in management department of germplasm resources and provide appropriate amounts of seed for conservation and utilization based on relevant regulations. Article 10: any of units or persons which exchanges germplasm resources with foreign countries shall abide by relevant stipulations set by agricultural and forestry administration departments.

In 1991, Ministry of agriculture issued the Detailed Implementation Rules of Regulation on Crop Seed Management. It made regulations concerning germplasm resources management, species selection and examination, production, management, quarantine and storage of seeds: the State will be responsible for collecting, storing and using crop species resources in a planned way. Any of units or persons may not deteriorate germplasm conserved by the State. The State possesses and conserves germplasm resources. The two-level systems are adopted for long- and mid-term storage of crop germplasm resources. The Germplasm Resources Institute under Chinese Academy of agricultural Sciences (CAAS) takes charge of long-term storage, while the relevant institutes under CAAS and those at provincial level are responsible for mid-term storage. The State encourages units or persons to actively introduce foreign germplasm resources, but they should submit reports on the introduced crop variety, name of specimens, source, place of origin, introduced time and other relevant information. Any of units or persons which provides germplasm resources to other countries shall go through the procedure of registration and approval according to national rules on categorized management of crop germplasm resources.

In 1994, the State Council issued Regulations on Management of Breeding Livestock and Poultry. In the chapter of conservation of germplasm of livestock and poultry, it stipulates: the State shall protect domesticated animal germplasm resources at different levels; the State will establish resources reserves, gene bases and determination stations for domesticated animal species in a planned way in order to carry out special conservation of rare and endangered varieties and breeds. Governments above county level will support the mass examination, determination, conservation, fostering and utilization of domestic animal germplasm resources. The import and export of domesticated animal germplasm shall be conducted according to relevant national stipulations.

In 1997, the State Council issued the Regulations on Conservation of New Plants Varieties. The regulation has stipulated clearly the content, ownership, examination and approval, the conservation period, termination and no-change period of the ownership right. Ministry of Agriculture issued Provisional Regulations on Import and Export of Crop Seed (Seedling) in 1997. It has explicitly regulated the management and supervision of import and export for seeds used in agricultural production and germplasm resources.

### III. Genetic Resources Conservation Action Plan in China

#### 1. Action plan

In 1996, the Chinese Government formally issued Biodiversity Conservation Action Plan in China (BAP). Based on the principles and obligations of CBD and needs of biodiversity conservation and sustainable utilization in China, BAP puts forward 7 specific objectives, among which Objective 4 is to conserve genetic resources related to crops and domestic livestock. The specific actions include: conserve genetic resources of crops, grasses and vegetables; conserve genetic resources of domestic livestock and conserve the genetic resources of forestry trees.

In 1995, Ministry of Agriculture formulated the Ninth Five-year Plan and Plan for the Agricultural Environment Protection for 2010. Its strategic target is to list conservation and sustainable utilization of genetic resources as one of key technological projects and one of the ten basic practical research projects of agricultural sustainable development. The major actions include: to strengthen basic research on genetic resources diversity, including germplasm resources collection and storage technology, assessment and utilization, selection and breeding of new species of crops and domesticated animals and fishes, and the technology of domestication; strengthen the system construction of seeds and seedlings; build or expand 10 renovation centers of crop germplasm, 6 breeding centers of domestic livestock and poultry, 5 breeding centers of pasture grass and 6 breeding centers of aquatic products, and strengthen the establishment of seed management and supervision.

#### 2. Progress of action plan

For the purpose of reasonable utilization of genetic resources, China has built large numbers of installations. Up to now, China built 27 mid-term germplasm banks for crop genetic resources, 15 storage gardens for fruit tree resources with 22,700 accessions, 10 resource gardens for perennial crop species, and freshwater fish germplasm banks, bull and sheep sperm banks embryo storage facilities, etc. In addition, China built a microorganism species storage bank and 90,000 live bacteria are collected and stored in it. China also built 2 wild animal cell banks and a medicinal plant germplasm bank for storing over 900 medicinal plants, built a long-term crop germplasm bank with 40,000 accessions and 19 tree seed banks.

In the field of in-situ conservation, China built wild plant nature reserves for wild walnut (*J. cathayensis*), apricot, lotus, etc., built crucian carp etc. fish germplasm resources protected area, and 1,768 breeding farms for horse, ox, pig and poultry, etc.

### IV. Scientific Research and Publicity and Education

### 1. Scientific research

In the field of inventory of genetic resources, "Economic Plants of China", "Economic Animals of China" have been published. China has collected and published variety records of 10 crops such as rice, wheat, cotton etc., completed some variety records of domestic animals such as bull, horse, sheep, ass, etc. and published some records of some flower variety resources.

China has done some work on collection, storage and determination of genetic resources. 330,000 accessions of 160 crop species have been collected and stored in the seed bank; 2,799 pasture grass have been collected; determination of the biological features and agricultural characteristics of 3,186 pasture grass accessions have been made. 601 varieties and breeds of domestic animals have been identified in China.

In the field of storing technology, genetic resources conservation techniques have been studied and utilized, such as using low temperature technique for storing seeds, pollen, sperm, cells, etc.

China established a database system of crop variety resources of 141 crops with 270,000 accessions and 1,254,000 data items.

In the field of biotechnology, over 50 new varieties and more than 80 new germplasm of over 20 crops like rice, wheat etc. have been fostered with pollen cultivation and gene engineering technology. China is able to apply techniques of embryo transfer, external fertilization, gene metastasis and embryo conservation to domesticated animal embryo engineering.

### 2. Publicity and education and personnel training

To use all kinds of mass media to publicize the significance of genetic resources conservation, to raise public awareness of genetic resources conservation and to change those habits which are not good for genetic resources conservation and its reasonable utilization. With the assistance of relevant international organizations, holding technical training of crop variety resources collection, storage and database construction

## V. Problems Existed in Genetic Resources Conservation

The major problems in the agricultural crop genetic resources include: it is better conservation for cultivar and worse for wild varieties and the wild relatives; the collection and storage are good for main crops, but worse for "small" crops; the collection and storage are good for varieties in those areas where have convenient communications and pay less attention to those in outlying districts. Especially, due to the rapid economic development, the wild relatives resources are deteriorated seriously.

The major problems in the conservation of animal variety resources include: the significant status of animal resources has not been understood and it is slack in the conservation of local fine varieties; The dynamic monitoring of variety resources has not been conducted systematically; The management work has not been evaluated effectively; It doesn't carry out comprehensive resources investigation in border areas.

## VI. The National Programmes of Capacity Building Concerning Access and Benefit-sharing of Genetic Resources



There is no a specific policy or plan concerning access or benefit-sharing of genetic resources in China. However, for implementing CBD, conserving and sustainable utilizing Chinese genetic resources, The China Country Study on Biodiversity and the China's National Report on Implementation of CBD contain some policies and plans concerning the access and benefit-sharing of genetic resources. The China Country Study on Biodiversity emphasizes that China is big agricultural country and it is often necessary to input and output genetic resources. Therefore, it is of great significance to make specific laws on the access and benefit-sharing of genetic resources.

Section 1 of Article 15 in CBD stipulates: "Recognizing the sovereign right of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation" CBD considers that the access of genetic resources is dependent on laws and regulations of that country providing genetic resources. For this reason, those countries providing genetic resources shall make laws concerning the access of genetic resources. China is one of the richest countries in genetic resources, and as the major original country and providing country of genetic resources, China shall formulate national legislation according to obligation of CBD and her national conditions. Taking the national legislation as the norms handling the access of genetic resources between China and other countries. It can conserve China's genetic resources and ensure China share advantageously the benefit of genetic resources with applying countries. Meanwhile, it will provide legal basis for the countries that want to access genetic resources from China.

At present, the legislation for genetic resources conservation, introduce, output is rather weak in China. Although the State Council has already issued the Regulation on Seeds and Regulation on Livestock and Poultry, they are neither adequate nor do they address some issues in detail. In these regulations, the targets to be protected, measures to be taken and management mechanisms for genetic resources are not addresses. In particular, there are no specific regulations concerning the collection, storage, introduction and transportation of genetic resources. In this regard, the existing regulations should be modified or a new specialized law formulated based on the international situation and requirements of CBD.

The proposed regulation on genetic resources , management should clearly include in its contents: the type of classification and annex of inventory of genetic resources that can be provided; requirements of genetic resources access and procedure of examination and approval; the principle of prior to informed agreement, that of achievements sharing and benefit distribution in the development of genetic resources, and rules of intellectual property rights protection, etc. In addition, relevant regulations should also be worked out, including report system for import and export of genetic resources, examination and approval system, the quarantine system for imported and exported genetic resources and the pilot breeding requirements, etc.

China is one of the richest countries in genetic resources in the world, she is also a developing country and is limit in economy. So that she urgently needs technical and financial support by the international society so as to conserve her abundant genetic resources that can provide necessary materials for agricultural sustainable development and human future.



Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit

Geschäftszeichen (bei Antwort bitte angeben)

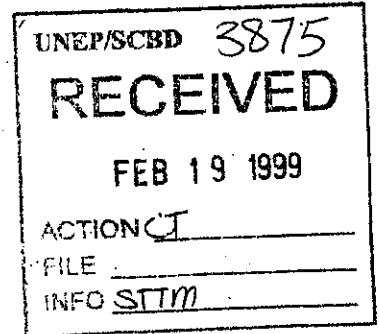
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Number of pages: 13

Decision VI/8 on ex situ collections

Dear Sir/Madam,

Referring to Decision IV/8 para. 2 and the letter dated 13 November 1998 from the Secretariat of the Convention on Biological Diversity, the Federal Republic of Germany herewith kindly submits a report of the project:

Contribution of the German Botanic Gardens to the Conservation of Biodiversity and Genetic Resources - Assessment and Development Concept" (Annex I)

which is carried out by the Botanic Garden of the University of Bonn for the German Association of Botanic Gardens (Verband Botanischer Gärten e.V.) in cooperation with Botanic Gardens Conservation International - BGCI - and is sponsored by the German Federal Ministry for Environment, Nuclear Safety and Nature Conservation (BMU) through the Federal Agency for Nature Conservation (BfN).

The Federal Republic of Germany strongly supports projects and efforts by Botanical Gardens and other institutions to support to the further implementation of the Convention on Biological Diversity and to explore and fully develop their potential and their capabilities to contribute to the conservation of biological diversity and the sustainable use of and the fair and equitable sharing of benefits arising out of the use of genetic resources, taking into account the issue of collections acquired prior to the entry into force of the Convention and relevant resolutions and decisions. In doing so, the following aspects merit due consideration:

Botanical gardens can play an important role in ex-situ conservation of biological diversity and its components,

they can and do greatly contribute to fostering public awareness for the intrinsic value of biological diversity and of the ecological, genetic, social, economic, scientific, educational, cultural,

recreational and aesthetic values of biological diversity and its components and the importance of biological diversity for evolution and for maintaining life sustaining systems of the biosphere,

while not engaging in uses of genetic resources on a commercial scale, botanical gardens can offer important skills, methods, practices and information and other capacities relevant for the conservation and sustainable use of biological diversity, which need to be explored and fully applied for the benefit of the Convention's objectives and implementation in the spirit of co-operation and a sharing of benefits,

they are in need for access to and exchange of samples and material to fulfil their mission on the basis of clear and effective procedures taken into account their often limited administrative capacities and to this end developed policies and model agreements, which they strive to further elaborate with relevant stakeholders.

Additional encloser, a paper on „Policy of participating Botanic Gardens on access to genetic resources and benefit sharing“ (third draft). This paper was sent to us by the Botanic Garden of the University of Bonn with the request to inform you about this activity. Please take into account, that these positions have not been agreed with the Association of Botanic Gardens in Germany. But we feel that the policy can be helpful with a view to a broad discussion on the ex situ collections. We would like you to take account of this contribution against the aforementioned background.

Yours sincerely



I.A. Schwenzfeier

Annex:

- Annex 1 : Brief report on the project: „Contribution of the German Botanic Garden to the Conservation on Biodiversity and Genetic Resources - Assessment and Development Concept“
- Annex 2 : Policy of participating Botanic Gardens on access to genetic resources and benefit sharing



Brief Report on the project:

**„Contribution of the German Botanic Gardens to the  
Conservation of Biodiversity and Genetic Resources“  
- Assessment and Development Concept -**

On behalf of the Association of Botanic Gardens in Germany (Verband Botanischer Gärten e.V.) and in co-operation with Botanic Gardens Conservation International (BGCI) the project „Contribution of the German Botanic Gardens to the Conservation of Biodiversity and Genetic Resources“ is carried out by the Botanic Garden of the University of Bonn. It is financed by the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) through the Federal Agency for Nature Conservation (BfN).

The aim of the two-years project is to document the achievements and vast experiences of the German Botanic Gardens in Biodiversity conservation, to identify their potentials and weaknesses and to develop a concept of strategies for achieving a greater contribution in conservation activities on national and international level. The results bring out clearly that Botanic Gardens in Germany play an important role in research and conservation of Biodiversity and that furthermore exist a great potential to strengthen those activities. The conclusions of the project will be published in the next months.

In Germany exist 94 Botanic Gardens visited by about 14 Million people per year. They probably cultivate more than 50.000 plant species originating from almost all vegetation zones of the world. Beyond the traditional tasks of teaching and research they nowadays take more and more their responsibility for nature conservation.

In 1996 the Association of Botanic Gardens in Germany already published a declaration about the Biological Diversity in the context of the CBD. One main activity of the project was to initiate a broad discussion between the German Botanic Gardens about the current and potential contribution of Botanic Gardens to the conservation of Biodiversity. An important step was to realise a two-days workshop about that issue. About 50 representatives of 40 gardens came together to exchange their ideas and experiences concerning the CBD. As one consequence of the workshop two working groups were founded:

One group developed a concept for the „National protected collections“ in Germany (see <http://www.botanik.uni-bonn.de/botgart/schutzsamml.htm>). The aim of that concept is to ensure the conservation of valuable ex-situ plant collections. Supported by the project the implementation of the concept will now be initiated.

In response to the Convention on Biological Diversity the second group worked out a voluntary „code of conduct“ that outlines how Botanic Gardens should react in regard to the new conditions (see <http://www.botanik.uni-bonn.de/botgart/vregeln.htm>). Based on that code of conduct, a „Material Supply Agreement“ was additionally designed. The aim of these papers is to take concerted action of the German Botanic Gardens in the issue of access to Genetic Resources and Benefit Sharing as claimed in the CBD. The project members will act as facilitators of this process.

As participants in an international Botanic Gardens project „Access to Genetic Resources and Benefit Sharing“, initiated and realised by The Royal Botanic Gardens Kew, the project members contribute to the international discussion about that subject area. Furthermore, the discussion about Botanic Gardens and CBD will be stimulated in Botanic Gardens of Eastern Europe and West and Central Asia.

All project activities intent to enable the Botanic Gardens above all in Germany to exhaust their potentials to be part of the national and international conservation network.

POLICY OF PARTICIPATING BOTANIC GARDENS  
ON ACCESS TO GENETIC RESOURCES AND BENEFIT-SHARING:  
THIRD DRAFT

PREAMBLE

*THE BOTANIC GARDENS SUBSCRIBING TO THIS POLICY,*

*Recognising* the vital role of botanic gardens world-wide in conservation, research and education;

*Affirming* their commitment to cooperate fairly and equitably, subject to national legislation, with Stakeholders for the benefit of mankind and the conservation and sustainable use of biological diversity;

*Recognising* the sovereign rights of States over their own biological resources and the authority of national governments to determine access to genetic resources, subject to national legislation;

*Acknowledging* the interests of other Stakeholders in biological resources and associated information;

*Determined* to honour the letter and spirit of the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and other international, regional and national laws and policies concerning biodiversity; and

*Committed* to honouring the terms and conditions under which they have acquired biological resources in the past;

*HAVE AGREED AS FOLLOWS:*

## ARTICLE 1 - OBJECTIVES

The objectives of this policy are:

- a) to ensure that the activities of the Participating Gardens involving access to genetic resources are consistent with the provision of the Convention on International Trade in Endangered Species, the Convention on Biological Diversity and other international, regional and national laws and policies concerning biodiversity;
- b) to promote international cooperation between Participating Gardens and other Stakeholders;
- c) to establish conditions that facilitate access by others to the genetic resources within the collections held by the Participating Gardens and that enable Participating Gardens to access the genetic resources of others, whether found in *in situ* or *ex situ* conditions; and
- d) to promote the fair and equitable sharing of the benefits arising from the use of genetic resources by the Participating Gardens and by others to whom the Participating Gardens provide genetic resources.

## ARTICLE 2 - DEFINITIONS

In this policy, the following terms have the following meanings:

*Access* means the acquisition of biological resources for the purposes of using the genetic resources contained in them;

*Acquisition* means obtaining, through collection, receipt or other means;

*Benefit-sharing* means sharing the benefits arising from the use of genetic resources;

*Biological resources* means, but is not limited to, genetic resources, organisms or parts thereof, populations; or any biotic component of ecosystems with actual or potential use or value for humanity.

*Botanic garden* means an institution holding documented living plant collections for the purposes of scientific research, conservation and education.

*Commercialisation* means, but is not limited to, the following activities: sale, filing a patent application, obtaining or transferring intellectual property rights or other tangible or intangible rights by sale or licence or in any other manner, commencement of product development, conducting market research, and seeking pre-market approval.

*Derivatives* means, but is not limited to, progeny, modified or unmodified extracts and any compounds or chemical structures based on or derived from genetic resources, including analogs.

*Genetic resources* mean any material of plant, animal, fungal, microbial or other origin containing functional units of heredity of actual or potential value.

*Material acquisition agreement (MAA)* means an agreement between two or more organisations or individuals setting out the terms on which an organisation or individual acquires biological resources. An MAA is a type of material transfer agreement.

*Material supply agreement (MSA)* means an agreement between two or more organisations or individuals setting out the terms on which an organisation or individual supplies biological resources. An MSA is a type of material transfer agreement.

*Material transfer agreement* means an agreement for the transfer of biological resources;

*Participating Gardens* means those botanic gardens listed in Annexe 1 hereto.

*Prior informed consent* means the consent of the government or other Stakeholders required by national law, which must be obtained prior to access to genetic resources based on full disclosure of information, such as the intended use of the resources;

*Recipient* means an organisation or individual, whether governmental or non-governmental, that acquires genetic resources from a Participating Garden.

*Source Country* means a country from which a genetic resource was collected or received from *in situ* conditions by a Participating Garden.

*Stakeholder* means a person or organisation affected by or with an interest in the activities at stake. Stakeholders involved in conservation and the granting of collecting permits and prior informed consent for access may include relevant departments of central government, local authorities, private individuals such as landowners, indigenous peoples, local communities, and non-governmental organisations.

*Standard Material Acquisition Agreement (SMAA)* means the Standard Material Acquisition Agreement developed to implement this policy, a *pro forma* of which is attached hereto as Annexe 2.

*Standard Material Supply Agreement (SMSA)* means the Standard Material Supply Agreement developed to implement this policy, a *pro forma* of which is attached hereto as Annexe 3.

*Supplier* means an organisation or individual, whether governmental or non-governmental, that provides biological resources to a Participating Garden.

## ARTICLE 3 - ACQUISITION

### 3.1 PRIOR INFORMED CONSENT

3.1.1 When it collects or otherwise gains access to genetic resources, each Participating Garden will abide by national law and best practice and make reasonable and sincere efforts to obtain the prior informed consent of the appropriate government authorities of the Source Country and of appropriate Stakeholders.

### 3.2 SUPPLIERS

3.2.1 Each Participating Garden may accept genetic resources from any Supplier which subscribes to the principles set out in this policy.

### 3.3 MATERIAL ACQUISITION AGREEMENTS

3.3.1 When obtaining access to genetic resources, each Participating Garden will make reasonable and sincere efforts to clarify the respective roles, rights and responsibilities of the Participating Garden, the Source Country, and relevant Stakeholders in activities involving the utilisation of genetic resources. In particular, each Participating Garden will make reasonable and sincere efforts to:

- a) obtain prior informed consent, including government authorisation, for access to the genetic resources concerned and for their use;
- b) ensure that any collection, import, export and other handling of the genetic resources have been in accordance with all relevant national and international laws; and
- c) clarify the terms and conditions under which the materials are acquired and can subsequently be used.

3.3.2 Where a Supplier providing a Participating Garden with genetic resources does not do so under the Supplier's own material transfer agreement, and when the collecting permits currently in use in a particular country do not satisfy the principles set out in Article 3.3.1, a Participating Garden may propose to the Supplier that they enter into the SMAA or another form of material acquisition agreement which contains those principles.



**ARTICLE 4 - RECORDS,  
TRACKING AND STAFF MANAGEMENT**

**4.1 RECORDS**

4.1.1 Each Participating Garden will make reasonable and sincere efforts to acquire and maintain records of the source, origin, collection date, taxon, permit information and conditions of use and other relevant data associated with the specimens in its collections in order to be able to implement this policy.

**4.2 TRACKING**

4.2.1 In order to be able to fulfil its commitments under this policy now and in the future, each Participating Garden will develop and implement appropriate mechanisms to track the accession of specimens into its collections, the different uses of specimens and their derivatives held in its collections, and the supply of specimens and their derivatives to Recipients.

**4.3 STAFF MANAGEMENT**

4.3.1 Each Participating Garden will establish systems of staff line management and individual staff responsibilities for the implementation of and compliance with this policy. Each Participating Garden will clarify the authorisation of the members of its staff to agree, on its behalf, the terms of access and benefit-sharing associated with the acquisition and supply of biological resources and their derivatives.

**ARTICLE 5 - SUPPLY**

**5.1 SUPPLY OF GENETIC RESOURCES**

5.1.1 Each Participating Garden may supply genetic resources for purposes such as conservation, research and education.

5.1.2 At the time of supplying genetic resources or their derivatives, each Participating Garden will clarify with the Recipient whether the supply is for commercial or for non-commercial purposes.

5.1.3 When supplying genetic resources or their derivatives, each Participating Garden will honour any terms and conditions to which it committed when acquiring the genetic resources, such as any conditions set out in collecting permits or material acquisition agreements.

5.1.4 To the extent possible, when supplying genetic resources or their derivatives, each Participating Garden will treat genetic resources acquired prior to the entry into force of the Convention on Biological Diversity and those acquired after its entry into force in the same manner.

## 5.2 RECIPIENTS

5.2.1 Each Participating Garden may supply genetic resources to any Recipient which subscribes to the principles set out in this policy.

## 5.3 MATERIAL SUPPLY AGREEMENTS

5.3.1 Each Participating Garden will supply genetic resources under a Material Supply Agreement obliging each Recipient:

- a) to share benefits arising from its use of the genetic resources and their derivatives fairly and equitably with the Participating Garden who will then share them fairly and equitably with the Source Country, as set out in Article 6;
- b) not to commercialise the genetic resources or their derivatives without the explicit consent of the Participating Garden; and
- c) not to pass the genetic resources or their derivatives on to third parties without ensuring that the third parties enter into written agreements containing terms that are no less restrictive.

5.3.2 The material supply agreement used will either be the SMSA or another form of material supply agreement which contains the principles set out in Article 5.3.1.

## ARTICLE 6 - BENEFIT-SHARING

### 6.1 COMMITMENT TO SHARE BENEFITS

6.1.1 Each Participating Garden will make reasonable and sincere efforts to share the benefits arising from the use of genetic resources and derivatives fairly and equitably with the Source Country and Stakeholders, as appropriate.

6.1.2 To the extent possible, each Participating Garden will share the benefits arising from the use of materials acquired prior to and after the entry into force of the Convention on Biological Diversity in the same manner.

## 6.2 BENEFITS

6.2.1 The object of sharing benefits is to achieve fairness and equity and to create incentives and provide resources for the conservation of biological diversity and the sustainable use of its components.

6.2.2 Depending upon the circumstances, including commitments to share benefits made in Material Acquisition Agreements and Material Supply Agreements, each Participating Garden may be able to share a range of monetary and non-monetary benefits that arise from the use of genetic resources including:

- taxonomic, biochemical, ecological and other information and data, through research results, publications and educational materials;
- access to collections and databases;
- benefits in kind, such as augmentation of national collections in the country providing the genetic resources;
- the transfer of technology such as hardware, software and know-how;
- training in science, *in situ* and *ex situ* conservation and management, information technology and management and administration of access and benefit-sharing;
- institutional development, strengthening and management;
- joint research and development, through collaboration in training and research programmes, participation in product development, joint ventures and co-authorship of publications; and,
- in the case of commercialisation, monetary benefits such as royalties.

## ARTICLE 7 - IMPLEMENTATION

### 7.1 PROGRESSIVE IMPLEMENTATION

7.1.1 The Participating Gardens will need to build their respective human and institutional capacities in order to be able to implement this policy fully. Therefore, over time, each will develop measures such as staff manuals and guidelines, record keeping systems and mechanisms for sharing benefits.

## 7.2 FEEDBACK AND CONTINUAL IMPROVEMENT

- 7.2.1 Each Participating Garden recognises that this policy document will need to be revised periodically in order to reflect changes in international and national law and acknowledged best practice. The Participating Gardens are committed to the continual improvement of this policy in response to feedback and suggestions which are welcomed from Stakeholders.

## 7.3 BROADENING PARTICIPATION

- 7.3.1 The Participating Gardens subscribing to this policy are committed to working with the broader botanic gardens community to develop a harmonised system for access to genetic resources and benefit-sharing. To this end, they have produced an accompanying guide to this policy [footnote with title] which explains the reasons behind the choice of language in the policy and accompanying standard material transfer agreements. The guide also explores the implications of the policy for Participating Gardens and their Stakeholders and the internal process necessary prior to committing to and implementing the policy.
- 7.3.2 [NOTE: Explore possibilities for future process to revise and broaden subscription to the policy.]

[NOTE: Annexes 1, 2 and 3 will be attached]

Teilnehmer des Pilotprojektes „Botanic Garden Policy on Access to Genetic Resources and Benefit-Sharing“

**Australien:**

- Dr. Helen Hewson, Australian National Botanic Gardens, Canberra

**Brasilien:**

- Tania Sampaio, Instituto de Pesquisas, Jardim Botânico do Rio de Janeiro

**China:**

- Prof. He Shan An, Nanjing Botanic Garden, Nanjing

**Deutschland:**

- Georg Rauer, c/o Botanischer Garten der Universität Bonn
- Marliese von den Driesch, Botanischer Garten der Universität Bonn

**Ghana:**

- Dr. George Owusu-Afriyie, Aburi Botanic Gardens,

**Großbritannien:**

- Kerry ten Kate, Royal Botanic Gardens, Kew, Pilot Project Co-ordinator
- Dr Linda Brown, Department for International Development, UK
- Dr. Michael Way, Royal Botanic Gardens, Kew,
- Julia Willison, Botanic Gardens Conservation International, Descanso House, 199 Kew Road, Richmond Surrey
- Dr Peter Wyse-Jackson, Botanic Gardens Conservation International, Descanso House, 199 Kew Road, Richmond Surrey

**Kanada:**

- Dr. David Galbraith, Royal Botanic Gardens, Hamilton

**Kolumbien:**

- Dr. Alberto Gomez-Mejía, Jardín Botánico del Quindío, Armenia

**Malaysia:**

- Dr. Saw Leng Guan, Forest Research Institute Malaysia (FRIM), Kuala Lumpur

**Marokko:**

- Prof. Mohamed Rejdali, Institut Agronomique et Vétérinaire Hassan II, Dept d'Ecologie, Rabat

**Mexiko:**

- Dr. Robert Bye, Jardín Botánico del Instituto de Biología (UNAM) Universidad Autónoma de México, MEXICO

**Russische Föderation:**

- Dr. Victor Kuzevanov, Botanic Garden of Irkutsk State University, Irkutsk RUSSIAN FEDERATION,  
*(Dieser Teilnehmer wird durch das F+E-Vorhaben im Rahmen des internationalen Pilotprojektes finanziert)*

**Spanien:**

- Dr. J. Esteban Hernández Bermejo, Jardín Botánico de Córdoba

**Südafrika:**

- Dr. Maureen Wolfson, Kirstenbosch National Botanical Institute, Pretoria

**USA:**

- Dr. Michael Balick, New York Botanical Garden
- Dr. James Miller, Missouri Botanical Garden



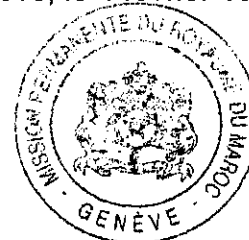
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La Mission Permanente du Royaume du Maroc auprès de l'Office des Nations Unies à Genève et des autres Organisations Internationales en Suisse présente ses compliments au secrétariat de la Convention sur la diversité biologique et suite à sa note relative à la décision IV/8 adoptée par la 4ème Conférence des Parties à la Convention, a l'honneur de l'informer que le Maroc est déjà lié au réseau de l'Organisation de l'Alimentation et de l'Agriculture (FAO) pour les banques de gènes (collection de base). Aussi, une stratégie et un plan d'action au niveau national sont au dernier stade de leur réalisation et aux termes desquels il est recommandé de doter le Maroc d'un cadre législatif et réglementaire moderne répondant aux objectifs de la Convention sur la diversité biologique.

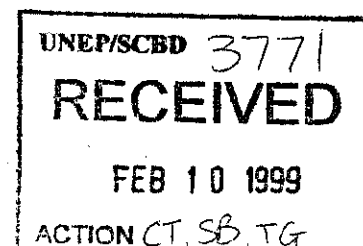
Par ailleurs, il y a lieu d'informer le secrétariat de la Convention que Mlle Khadija JDIDI, juriste au Secrétariat d'Etat à l'Environnement est désignée par le Maroc pour prendre part à la réunion d'experts qui aura lieu du 4 au 8 octobre 1999.

La Mission Permanente du Royaume du Maroc saisit cette occasion pour renouveler au secrétariat de la Convention sur la diversité biologique l'assurance de sa haute considération. *JK*

Genève, le 4 février 1999



Secrétariat de la Convention sur  
la diversité biologique  
World Trade Centre  
393 Saint-Jacques Street, Suite 300  
Montréal, Québec  
Canada H2Y 1 N9



TO:  
Secretariat of CBD

FROM:  
Dr. Yaroslav Movchan  
CBD National Focal Point  
Deputy Minister

*Re: Ukraine proposals on Decision IV/8: Access and benefit-sharing*

Kyiv, October 30, 1998

Dear Madame/Sir,

In addition to our letter of October 30, 1998, on nomination experts on benefit sharing please find below information about legislation on biotechnology and about genetically modified organisms and resources for genetics, breeding and selection.

Ukraine does not have yet any special law covering these issues and problems. To some extent, the trans-border entry of living modified organisms is regulated by the existing laws, particularly the Laws of Ukraine "On protection of natural environment" (Articles 53, 57, 58, 71, 72), "On the animal world" (Articles 45, 46, 48, 52, 53, 58, 59), "On ecological expertise" (Articles 1, 5, 7, 14, 51), "About approving the Temporary order for import, state testing, registration and using of cross-genes variety plants in Ukraine" (The decree of Cabinet of Ministries of Ukraine, N1304 from 17.08.1998y.) The Committee on Safety Control and Regulation of Work with Genetically Modified Organisms (of the National Academy of Sciences of Ukraine) has prepared a draft of the Law of Ukraine "On state regulation of activities in genetic engineering" and submitted it for consideration by relevant government authorities.

Ukraine possesses very rich genetic resources of species, varieties, forms, breeds, lines and strains of plants, animals and microorganisms representing both native and non-native taxa. These resources are deposited and conserved in natural environment and habitats, in cultivation, collections, gene banks (including cryobanks) in numerous reserves, parks, botanical gardens, institutes, universities, etc. Ukraine has 478 genetic reservates (total area ca. 24,000 ha). These reservates represent major forest types and plant communities, including common oak and Scots pine (57.3%), European beech (13.3%), spruce (11.5%), fir (5.4%), oak *Quercus petraea* (2.6%), Crimean beech (0.6%), etc. The genetic reservates are also represented in forests with participation of rare and endangered species, such as *Pinus stankeviczii*, *P. cembra*, *Taxus baccata*, *Arbutus andrachne*, *Pistacia mutica*, etc. There are 3,079 ha of elite forests in Ukraine; the state inventory lists 4,065 elite trees.

M. M. Hryshko Central Botanical Garden of the NASU houses unique collections consisting of ca. 13,000 species, varieties, forms and cultivars of ornamental, medicinal, fodder, edible and other useful plants native to Ukraine and many other regions of the Globe, large pomological collections, etc. Of special value are the collections of tropical and subtropical plants (more than 3,000 species and cultivars), one of the best in Europe orchid collections, 4,500 species and cultivars of ornamental plants, 1,800 species and forms of trees and shrubs.

The Nikita Botanical Garden of the Ukrainian Agricultural Academy has unique collection of ca. 9,300 species and cultivars of plants; it is one of the best representations of the flora of Mediterranean dry subtropics. E. M. Kondratyuk Donetsk Botanical Garden has a



collection representing mostly plants of the Southeast of Ukraine: about 9,000 species and cultivars, ca. 500 taxa of trees and shrubs, populations of 169 species listed in the Red Data Book of Ukraine, including 16 species of feathergrass (*Stipa*). The collection of O. V. Fomin Botanical Garden of Taras Shevchenko Kiev University consists of 8,000 species and forms (4,500 in greenhouses and conservatoria and 3,500 in open ground cultivation). Collections of rhododendrons, ferns, spiraeas and magnolias are especially valuable. Rich collections of ornamental and rare plants are represented in arboreta "Sofiyivka", "Oleksandriya" (Alexandria), "Trostyanets" (500--800 species of trees and shrubs), Botanical Garden of I. Ya. Franko Lviv University, and some other gardens and parks.

Genetic collections and gene banks at some institutes of the NASU are extremely rich and in many respects unique. The collection of microbial cultures at D. K. Zabolotny Institute of microbiology and virology contains 20,000 strains, including unique samples of phytopathogenic microflora, parasitic fungi, etc.

The unique collection of cultivars, forms, hybrids, strains and lines of agricultural crops (rye, wheat, maize, sugar beet, etc.) at the Institute of Plant Physiology and Genetics contains more than 20,000 specimens and can be used for breeding and selection of the mentioned crops both in Ukraine and other countries.

The gene bank (100 units), collections of recombinant DNA (200 units) and microbes-producers of medicinal substances (200 units) are created at the Institute of Molecular Biology and Genetics. The bank of cell lines at the P. E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology contains 14,000 lines of human and animal cells; ca. 200 of these lines are unique.

The Center of Genetic Resources of the V. Ya. Yur'yev Institute of Plant-Growing unites several unique collections into the integrated system of Genetic resources of cultivated plants, which includes the following most important parts:

- collection of field crops at the Institute of Plant-Growing (42,000 specimens);
- collection of medicinal plants at the Institute of Medicinal Plants (ca. 500 specimens);
- pomology collection at the Institute of Pomology (7,000 specimens);
- ampelographic (grape) collection at the V. E. Tairov Institute of Viticulture and Wine Production (485 specimens)

Every one of the mentioned collections is at least the third in the world by its value.

The main task of the Animal Genetic Resources Bank is conservation and improvement of local breeds of cattle (Grey Ukrainian, Ukrainian Whitehead, Brown Carpathian, etc.) and their use in cattle breeding. The bank contains ca. 1,700,000 sperm doses of bulls belonging to 20 milk breeds, 10 meat breeds and more than 12 synthetic populations.

The collection of rare breeds and populations of fowl [chicken] at the Institute of Fowl of the Ukrainian Agricultural Academy consists of 15 breeds, breed groups and populations.

The collection of microbial strains used in wine production consists of 1,076 specimens; the Strain Bank of microorganisms of veterinarian importance unites unique collections (more than 500 specimens) into an integrated resource system.

The Askania-Nova Zoo is regarded as the leading institution in CIS countries, and one of the best ten in the world for its practical activities, experience and theoretical achievements in acclimatization and re-acclimatization of animals. The Zoo is specialized in biology of ruminant mammals native to steppes, savannas, deserts and mountains, waterfowl and rare steppe birds. The zoo keeps in captivity 3 species of large flightless birds (ostriches, emus and rheas) and 72 species of other birds, including 15 species listed in the Red Data Book of

Ukraine (steppe eagle, common crane, demoiselle crane, ruddy shelduck, etc.). There are 36 species of introduced mammals (total number 900 animals), including 7 especially rare species (370 animals), such as Przewalski's wild horse (*Equus caballus*), saiga antelope (*Saiga tatarica*), the Siberian wild goat (*Capra sibirica*), markhur goat (*Capra falconeri*), desert zebra (*Zebra grevyi*), etc.

Thus, collections and gene banks of many research institutions, ministries and agencies are extremely important for conservation of both natural and cultivated genetic and species biodiversity. According to the "Regulations for procedure of selecting national heritage scientific objects" (1997), the State Register of such objects has been established. In 1997 the National Academy of Sciences of Ukraine and Ukrainian Agricultural Academy proposed to include into the Register additional objects.

Table 7. List of scientific objects of the National Academy of Sciences of Ukraine (NASU) and Ukrainian Agricultural Academy (UAA) proposed for inclusion into the State Register of Natural Heritage Scientific Objects"

?	Name of object	Responsible institution
1.	Ukrainian Nature Steppe Reserve	NASU
2.	Black Sea Biosphere Reserve	NASU
3.	Nature Reserve "Dunayski Plavni"	NASU
4.	Lugansk Nature Reserve	NASU
5.	Karadag Nature Reserve	NASU
6.	Dendrological Reserve Oleksandriya (Alexandria)	NASU
7.	Dendrological Reserve Sofiyivka (Sophiyivka)	NASU
8.	Dendrological Reserve Trostyanets	NASU
9.	Collections and expositions of the National Natural History Museum	National Natural History Museum
10.	Collections of cultivars, hybrids, lines and strains of agricultural crops	Institute of Plant Physiology and Genetics NASU
11.	Herbarium, collections and expositions of the State Natural History Museum, Lviv	State Natural History Museum NASU
12.	Dolphinarium of the A. A. Kovalevsky Institute of Biology of Southern Seas	Institute of Biology of Southern Seas NASU
13.	Collection of plants (KW Herbarium) of the M. G. Kholodny Institute of Botany NASU	State Natural History Museum NASU
14.	Greenhouses, herbarium and living collections of the M. M. Hryshko	Central Botanical Garden NASU
15.	Greenhouses, herbarium and living collections of the Donetsk Botanical Garden	Donetsk Botanical Garden NASU
16.	Greenhouses, herbarium and collections of the Kryvyi Rig Botanical Garden NASU	Kryvyi Rig Botanical Garden NASU
17.	Collection of microbial cultures of the D. K. Zabolotny	Institute of Microbiology and Virology
18.	Gene bank, collection of recombinant DNA, collection of microbes-producers of medicinal substances of the Institute of Molecular Biology and Genetics NASU	Institute of Molecular Biology and Genetics NASU
19.	Cryobank of biological objects of the Institute of Problems of Cryobiology and Cryomedicine NASU	Institute of Problems of Cryobiology and

		Cryomedicine NASU
20.	Bank of cell lines of the P. E. Kavetsky Institute of Experimental Pathology, Oncology and Radiobiology NASU	Institute of Experimental Pathology, Oncology and Radiobiology NASU
21.	Bank of cell lines of the O. O. Bogomolets Institute of Physiology NASU	Institute of Physiology NASU
22.	F. E. Falz-Fein Biosphere Reserve "Askania-Nova"	UAA
23.	Arboretum of the State Nikita Botanical Garden UAA	State Nikita Botanical Garden UAA
24.	Center of plant genetic resources of V. Ya. Yur'yev	Institute of Plant-Growing UAA
25.	Collection of microbial strains for wine production "Magarach"	Institute of Grape and Wine UAA
26.	Bank of microbial strains of veterinarian importance	Institute of Veterinary UAA
27.	Bank of animal genetic resources	Institute of Animal Breeding and Genetics UAA
28.	Collection of rare breeds of chicken	Institute of Fowl Breeding UAA
29.	Biotechnology complex	Institute of Selection and Genetics UAA

Sincerely,

**Ya. Movchan**



联合国  
粮食及  
农业组织

FOOD AND  
AGRICULTURE  
ORGANIZATION  
OF THE  
UNITED NATIONS

ORGANISATION  
DES NATIONS  
UNIES POUR  
L'ALIMENTATION  
ET L'AGRICULTURE

ORGANIZACION  
DE LAS NACIONES  
UNIDAS PARA  
LA AGRICULTURA  
Y LA ALIMENTACION

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Our Ref.: UN 62/1 PL 40/14

Your Ref.:

UNEP/CBD/ISOC/Inf.1

Page 28

31 DEC 1993

Dear Mr. Zedan,

I refer to your letter of 27 October, by which you brought to our notice paragraph 2 of Decision IV/8 of the Conference of the Parties, which requested the Executive Secretary to invite information on "ex situ collections acquired prior to the entry into force of the Convention on Biological Diversity and which are not addressed by the Commission on Genetic Resources for Food and Agriculture of the Food and Agriculture Organization of the United Nations". You asked if we could provide you with relevant information.

Genetic Resources addressed by the Commission on Genetic Resources

By its mandate (Conference Resolution 3/95) the Commission on Genetic Resources for Food and Agriculture addresses "all components of biodiversity of relevance to food and agriculture". This is in harmony with Decision II/15 of the Conference of the Parties to the Convention on Biological Diversity, which recognizes "the special nature of agricultural biodiversity, its distinctive features and problems needing distinctive solutions". Among the terms of reference of the FAO Commission is, "subject to approval by the Governing Bodies of FAO, as appropriate, to respond to requests from the Conference of the Parties to the Convention on Biological Diversity in the specific area of genetic resources of relevance for food and agriculture."

Ex situ Collections of Plant Genetic Resources for Food and Agriculture and the revision of the International Undertaking

In the case of plants, Resolution 3 of the Nairobi Final Act recognized "the need to seek solutions to outstanding matters concerning plant genetic resources within the [FAO] Global System for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture, in particular (a) access to ex situ collections not acquired in accordance with this Convention". Following FAO Conference Resolution 7/93, our Members are negotiating the revision of the International Undertaking on Plant Genetic Resources, in harmony with the Convention, including the matter of such ex situ collections, through the Commission on Genetic Resources for Food and Agriculture.

..//

Mr. Hamdallah Zedan  
Officer-in-Charge  
Secretariat of the Convention on Biological Diversity  
World Trade Center  
393 Saint-Jacques Street, Suite 300  
Montreal, Quebec  
Canada H2Y 1N9

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The Conference of the Parties to the Convention on Biological Diversity has repeatedly signified its support for these negotiations, and, in Decision III/11, "affirms its willingness to consider a decision by the Conference of the Food and Agriculture Organization of the United Nations that the International Undertaking should take the form of a protocol to this Convention once revised in harmony with this Convention". Most recently, Decision IV/6 "urges that the momentum in the intergovernmental negotiations of the revision of the International Undertaking on Plant Genetic Resources in harmony with the Convention should be maintained with a view to its timely conclusion before the end of 1999".

#### The International Network of *Ex Situ* Collections under the Auspices of FAO

The revised International Undertaking is expected to provide a definitive solution to the outstanding issue of *ex situ* collections of plant genetic resources for food and agriculture. Meanwhile, in accordance with Article 7.1 of the International Undertaking, FAO has established the International Network of *Ex Situ* Collections under its Auspices. As we reported to the Conference of the Parties at its Second Session, Agreements have been signed with twelve Centres of the Consultative Group on International Agricultural Research on 24 October 1994, whereby they brought their *ex situ* collections into this Network. By these Agreements, the Centres recognize the intergovernmental authority of FAO and its Commission in setting policies for the International Network, undertake to hold designated germplasm "in trust for the benefit of the international community" and "not to claim ownership, or seek intellectual property rights over the designated germplasm and related information". Negotiations continue with a number of countries and institutions that have offered to bring their *ex situ* collections of plant genetic resources for food and agriculture into the Network.

#### Other genetic resources of relevance to food and agriculture

**FAO has not yet specifically addressed sectors of genetic resources of relevance to food and agriculture covered by the Commission according to its mandate, other than plants.** However, for animal genetic resources for food and agriculture, the Commission has established an Intergovernmental Technical Working Group which could eventually consider *ex situ* collections of animal genetic resources obtained prior to the entry into force of the Convention, within the context of the Global Framework for the Management of Animal Genetic Resources for Food and Agriculture.

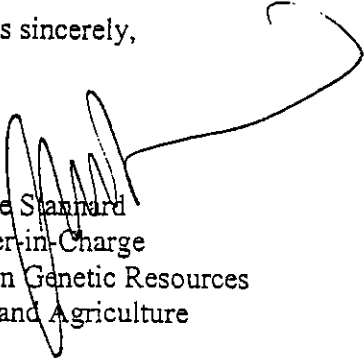
#### Genetic resources not of relevance to food and agriculture

Please note that the Commission on Genetic Resources for Food and Agriculture, by its mandate, would not be able to address genetic resources which are not of relevance to food and agriculture, as defined in Article 1 of the Constitution, i.e. including forestry and fisheries. These appear to include much of the material maintained in botanical gardens and zoological parks. FAO gave a preliminary report on a survey of *ex situ* plant genetic resources maintained in botanical gardens, in its report to the Second Conference of the Parties (attached for easy reference), and noted that "only part of the *ex situ* germplasm in botanical gardens is of immediate relevance to food and agriculture." I attach, for your information, a copy of the completed survey which may still be of value in your current task. It is available in English, French and Spanish at the URL <http://web.icppgr.fao.org/CGRFA/Ex5/docs.html>, as Background Study No. 5. We have no further information on non-agricultural *ex situ* collections.

Sources of information

From January 1999, summary information on material within the International Network of *Ex Situ* Collections under the Auspices of FAO can be found on our World Information and Early Warning System, at URL <http://apps.fao.org:8080/wiews.new>, where there are also links to the individual International Agricultural Research Centres' collections. It will be possible to identify all "FAO in trust" designated material covered by their agreements with FAO. General information on animal genetic resources is available on the Domestic Diversity Information System at the URL <http://dad.fao.org/dad-is/Home.htm>.

Yours sincerely,



Clive Stannard  
Officer-in-Charge  
Commission on Genetic Resources  
for Food and Agriculture

cc: Mr. Geoffrey Hawtin  
Director General, International Plant Genetic Resources Institute



Fax: +1-514-2886588

21 December 1998

Hamdallah Zedan  
Officer-In-Charge  
Secretariat of the Convention on Biological Diversity  
World Trade Centre  
393 Saint-Jacques Street, Suite 300  
Montreal, Quebec  
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Dear Dr Zedan

I acknowledge receipt of your letter of 27 October concerning Decision IV/8 of the Conference of the Parties, relative to access and benefit-sharing and the request for information on *ex situ* collections. I reply on behalf of all the CGIAR Centres in my capacity as Programme Leader of the CGIAR System-wide Genetic Resources Programme.

The *ex situ* collections of genetic resources, acquired prior to the entry into force of the Convention on Biological Diversity, are of species of relevance to food and agriculture and come under the mandate of the FAO Commission on Genetic Resources for Food and Agriculture. In 1994, the CGIAR Centres brought their *ex situ* germplasm collections into the International Network of *Ex Situ* Collections under the auspices of the FAO. Under the terms of the Agreements signed between the Centres of the CGIAR and the FAO, the Centres undertake to hold designated germplasm in trust for the benefit of the international community and not to claim ownership or seek intellectual property rights over the designated germplasm and related information. Currently, 500,000 germplasm accessions are designated in trust under the International Network. Information on these collections is available through the CGIAR System-wide Information Network for Genetic Resources (SINGER) on the World Wide Web at <http://singer.cgiar.org>

Please do not hesitate to contact me should you require further information on the CGIAR.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Geoff Hawtin", is written over a light-colored background.

Geoffrey Hawtin  
Director General

cc: Mr Jose Esquinas-Alcazar, Secretary, FAO Commission on Genetic Resources for Food and Agriculture, FAO

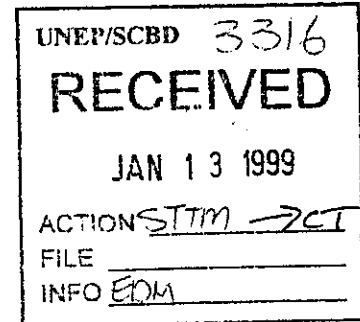


## Botanic Gardens Conservation International

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Hamdallah Zedan  
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Convention on Biological Diversity  
United Nations Environment Programme  
World Trade Centre  
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Canada H2Y 1N9



7 January 1999-01-07

Dear Dr Zedan

**Re: Decision IV/8 (Access and benefit-sharing) of the fourth meeting of the Conference of the Parties to the Convention on Biological Diversity**

Thank you for your letter of 13 November concerning the above matter. I have pleasure in sending you information on the work and collections of botanic gardens worldwide relevant to the decisions made by COP IV of the CBD, together with details of the activities and role of Botanic Gardens Conservation International in coordinating such work.

Botanic Gardens Conservation International (BGCI) is the international network organization linking over 500 botanic gardens in 120 countries for biodiversity conservation and environmental education. We are keenly aware of the need for botanic gardens to fully address the issues of access and benefit-sharing included within the CBD and how these issues impact on their current and future management practices of living plant collections.

According to the databases maintained by BGCI, botanic gardens globally maintain living collections of representatives of as many as 80,000 plant species (in total numbering more than 4 million living plant accessions). BGCI also holds information on more than 1,700 botanic garden institutions worldwide - especially focused on their collections, facilities, conservation and educational activities and priorities. Furthermore, BGCI estimates that more than 90% of all living collections in botanic gardens were obtained prior to the CBD coming into effect and so the forthcoming discussions are indeed of very great significance and concern to us and for all botanic gardens.



*Botanic Gardens Conservation International is an independent charity registered in the United Kingdom with member botanic gardens all over the world. It was established in 1987 to encourage the botanic gardens and arboreta of the world to work together as a global network for conservation.*

Charity Registration No. 328475



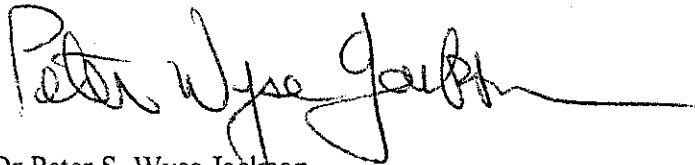
BGCI is currently preparing a Manual for botanic gardens to the CBD and has been very active in promoting the need for botanic gardens to adapt and reassess their missions, practices and priorities to ensure that they become fully involved in CBD implementation at all levels.

My organization would be extremely pleased and interested to being included in discussions relating to these issues and offer our services to assist in any way we can, including reviewing and contributing to drafts of background documentation for the fifth meeting of the Conference of the Parties, if that would be appropriate.

Please let me know if there is any additional and specific information that wish to receive from BGCI.

I look forward to hearing from you.

Yours sincerely

A handwritten signature in black ink, appearing to read "Peter Wyse Jackson", with a long horizontal flourish extending to the right.

Dr Peter S. Wyse Jackson  
Secretary General

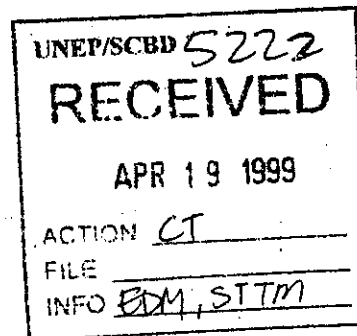


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*ISIS contributes to the preservation of biotic diversity by providing global specimen and species catalogues and auxiliary information services, to support long-term collective species conservation and preservation programs.*

7 April 1999

Mr. Hamdullah Zedan  
Acting Executive Secretary  
Convention on Biological Diversity  
World Trade Centre  
393 Saint-Jacques Street  
Suite 300  
Montreal, Quebec  
Canada H2Y 1N9



Dear Executive Secretary Zedan,

Thank you for contacting ISIS for (1) information on *ex situ* components of biodiversity held by the global zoo community, and for (2) case history information regarding processes and outcomes of the zoo communities' varied efforts to return benefits of several kinds to the range states.

Given the four weeks of time available, we can make only a very limited and partial response to your request for case studies. Almost all such *ex situ* programs are organized at local, national or regional level, and it would take a significantly longer time to mobilize detailed case studies from the members of the global network. Please let me know if this is an important objective over the next several months. Partly because of the limited time, the cases listed here are biased towards North American programs (for which more information was readily at hand in our North American office).

Also, a brief explanatory note on ISIS and its' coverage: 520 zoos from 56 countries are voluntary members of ISIS. An estimate in the World Zoo Conservation Strategy, published 5 years ago, suggests that these assembled computerized specimen records cover about 40% of the live holdings of terrestrial vertebrate specimens held in the world's 1,000 "recognized" zoos. ISIS is an international non-profit organization, and an International NGO Member of IUCN and a Member of BCIS. ISIS also serves as the Secretariat for the World Zoo Organization.

Your first request (*ex situ* inventory):

At present, 275,000 living vertebrate specimens of 7600 species are registered with ISIS (plus an additional 1,000,000 of their ancestors). Condensed information on these ISIS-registered specimens is included in the enclosed set of ISIS "Abstracts". Far more detail on each specimen is held in our database. The Abstracts show the current living inventory of ISIS-member sorted by species, with the separate holdings of each zoo presented after their name – usually an abbreviated city name. Zoos are grouped by region. Similar information is offered on the public part of ISIS' web site at [www.isis.org](http://www.isis.org).

Your second request (case histories) – on such short notice we can give only a listing of selected interesting cases and a very little supporting documentation. The cases fall into a number of different categories

### **I. CASE LIST 1. Return of species to the wild in the range state, after their extinction there, from zoo stock in other countries:**

- Wisent (*Bison bonasus*) returned to Poland's Bialowieza Forest from several European zoos after the World War.
- Przewalski's horse (*Equus caballus przewalski*) returned to Chinese and Mongolian re-introduction projects from American and European zoos after extinction in the wild.
- Arabian Oryx (*Oryx leucoryx*) returned to Oman, Israel, Jordan and Saudi Arabia by North American and European zoos after extinction in the wild.
- Pere David's deer returned to China after its' extinction there.
- Guam Rail returned to Guam archipelago by U.S. zoos.

Note: There are additional cases where captive breeding within the range state has played a critical or important role in restoration of an extinct or endangered species.

### **II. PARTIAL CASE LIST. Return of species from zoos abroad to range state to supplement small or declining wild populations at risk of extinction:**

- Bali mynah (*Leucopsar rothschildi*) (Foreign zoos to Bali reserve).
- Andean condor (North American zoos to Andean countries where local populations had been extirpated).
- Golden Lion tamarin (Foreign zoos to Poco des Antes Reserve in Brazil)
- Puerto Rican toad (U.S. mainland zoos to Puerto Rican re-introduction programs.
- ...more not listed here...

### **III. PARTIAL CASE LIST. Transfer of technology, knowledge and training from zoos to range state wildlife or zoo personnel:**

- Programs of the Jersey Wildlife Preservation Trust, which provide wildlife management training for range state nationals, working with a species at risk both in captive breeding programs and in the wild after release. Jersey has focused on Mauritian species in particular, playing a major role in the restoration of Mauritian kestrel and Mauritian Pink Pigeon, and others.
- Another similar example is the Australasian Regional Association of Zoological Parks and Aquaria and Sydney's Taronga Zoo providing wildlife training, public educational techniques and materials, etc. to the government of Fiji, to help protect the Fijian Crested Iguana.
- World Zoo Association Training Grants (funding zoo staff training workshops in Malaysia and Indonesia, Costa Rica, Brazil, Papua New Guinea to date through an annual training grant program).
- IUCN/SSC/CBSG workshops – see enclosed list; zoos support individual workshops focused on taxa they hold, but also contribute through annual pledges the core funding of CBSG). These CBSG workshops around the world provide training in modern conservation biology techniques (population and habitat viability assessment), rapid assessment (CAMP process), and management/human factors areas (group facilitation).
- Regional Zoo Association Faunal Interest Groups (FIGs)/ Taxon Advisory Groups (TAGs). Several regional zoo associations have these groups which in many cases assist the range countries wildlife preservation efforts and range country zoological institutions in various ways.
- Adopt A Park programs by zoos. A growing number of zoos around the world help support one or more national parks or protected areas. For example, the Minnesota Zoo has provided patrol boats,

two-way radios, and other field equipment to help Ujong Kulon in Sumatra protect the remaining Sumatran rhino.

- Adopt a Zoo programs (Vietnam's major zoos in Hanoi and Ho Chi Minh (Saigon) city are being aided by the World Pheasant Association, the Jamaica Hope Zoo by Forth Worth Zoo, Madagascar's Antananarive Zoo by the San Francisco Zoo, etc.)
- "Research an Ecosystem - Catalyze a Park" programs (i.e. WCS - see the enclosed Annual Report of one leading zoological institution, the Wildlife Conservation Society (which operates several zoos and aquariums in New York). Their major field conservation research program has had the secondary effect of catalyzing the range countries to set up protected areas around research sites, once the biodiversity there was brought to their attention by the research efforts of WCS. The total result of this one organizations' activities to date is 115 million acres of protected areas (1) in a dozen countries.
- Voluntary zoo-zoo aid in crisis situations. Sumatran tiger - Australasian zoos holding this species voluntarily sent \$25,000 of tiger food in 1998 to Malaysian/Indonesian zoos holding this native species (who reported animal feeding emergencies in a time of regional currency collapse).

#### IV. PARTIAL CASE LIST. Return of funds to range state organizations in exchange for loan or purchase of zoological specimens:

- Giant Panda (current loan arrangement of People's Republic of China with Zoo Atlanta); will return millions of dollars to China for *in-situ* protection of Giant panda.
- Black rhino from South Africa have been brought into zoo breeding programs, with funding for patrol helicopters and other rhino-protection programs returned by the international zoo community.
- More not listed here...

#### V. PARTIAL CASE LIST. Research findings as an indirect return to the range state:

- Development of immobilization techniques and drugs in zoological settings which are later used by wildlife managers. For example, techniques and equipment developed in zoos were transferred to Indian Forest Service personnel, for use on wild tigers.
- Development of a normal serum chemistry and hematology database for wildlife species. The ISIS Phys Norms database has been used to help range state wildlife managers detect and diagnose wildlife diseases affecting wild populations.
- Life history data from zoological populations (the ISIS database) is being used by Birdlife International to improve its population-viability-based assessments of the IUCN Red List status of the world's threatened bird species.
- Subsonic communication among African Elephants, discovered through initial work at the Portland Zoo, Oregon, USA, is important to understanding elephant group communication and behavior in the wild.

We hope this partial listing of interesting cases indicates something of the scope and diversity of the benefits returned to range states by the zoological community. We would welcome further contact on this matter.

Most sincerely,



Nathan R. Flesness  
Executive Director, ISIS

Encl: ISIS Abstracts for 31 Dec 1998, CBSG Workshop list, AZA Conservation & Science Reports, WCS Annual Report for 1998



# WORLD FEDERATION FOR CULTURE COLLECTIONS

UNEP/CBD/ISOC/Inf.1  
Page 37

Campinas, December 2<sup>nd</sup>, 1998

Re: Decision IV/8 (Access and Benefit Sharing) of the fourth meeting of the Conference of the Parties

Dear Dr Zedan,

In reply to your request for information on the status of pre-CBD deposits and the measures to promote benefit sharing arrangements, the World Federation for Culture Collections (WFCC) is publishing the appended note in the December WFCC Newsletter, asking for the provision of data to be collated by the WFCC Biodiversity Committee and submitted to the CBD Secretariat. In addition I am copying your request to the organizers of the following forthcoming meetings on Culture Collections:

- Micro-organisms Sustainable Use and Access Regulation International Code of Conduct (MOSAICC) Workshop Organized by the Belgium Node of Culture Collections with support of DGXII Brussels, Belgium, 8-9 February, 1999 Chair/organizer: Dr Jan de Brabandere/ Dr Philippe Desmeth
- WDCM Symposium: Microbial Resources Centers in the 21st century - New Paradigms Tokyo, Japan, February 16th, 1999 Organized by: WFCC-MIRCEN World Data Centre for Microorganisms Chair: Dr Hideaki Sugawara
- OECD Conference on Scientific and Technological Infrastructure Support for Biological Resource Centers (BRCs) Conference Center, Ministry of International Trade and Industry (MITI), Tokyo, Japan 17-18 February 1999 Chair: Professor Kazuo Komagata, Tokyo Agriculture University, Japan

The WFCC has been very active in following developments of the CBD and advising its members on mechanisms for the implementation of the Convention at the microbial level. To this end, it has carried out the following:

[1] 1995, gained observer status at COP meetings with the aim of reporting relevant developments back to members and contributing information on ex-situ microbial genetic resources;

[2] 1996, developed an Information Document (Access to ex-situ microbial genetic resources within the framework of the Convention on Biological Diversity <http://wdcn.nig.ac.jp/wfcc/InfoDoc.html>) which was summarised by the CBD Secretariat as an information document (UNEP/CBD/COP4/Infodoc.19);

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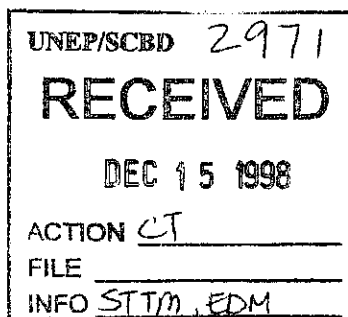
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Ex-officio: Dr. I. Siv (Australia, Past President); Dr. H. Sugawara (Japan, Director WDCM)

[3] attended a number of Biosafety Protocol meetings as observers; attended a number of CBD meetings to provide microbiological input;

[4] 1997/8 participated in the EU MOSAICC programme for the development of a voluntary code of conduct and model MTA and PIC Forms for the implementation of the CBD by culture collections and microbiologists;

[5] 1998, organised a workshop on the economic value of microbial genetic resources, the recommendations of which are online from the WFCC web site (<http://wdcn.nig.ac.jp/wfcc/Halifax98.htm>)

[6] is taking steps to determine the extent of pre-CBD deposits in culture collections and the information associated with them.

[7] is planning on-going meetings on various CBD issues at the forthcoming IUMS Conference in 1999 (Sidney, Australia) and the WFCC Congress (ICCC9) in 2000 (Brisbane, Australia).

We would be pleased to provide further information on any of these activities and hope that this helps with the preparation of the document for COP5. The WFCC is anxious to work with the CBD in developing procedures for the implementation of the CBD that meet its obligations yet protects the flow of essential material for research, teaching, standard testing and commercial development.

*Best personal  
regards*

Yours sincerely,



Vanderlei Perez Canhos  
WFCC President

Copied to the WFCC Executive Board and  
Biodiversity Committee Chair

To: Dr. Hamdallah Zedan  
Officer-In-Charge  
CBD Secretariat  
Word Trade Centre  
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Montréal, Québec, Canada H2Y 1N9

ANNEX: Note to be released with the December 98 WFCC Newsletter

A letter has been received by the President of the WFCC from the CBD Secretariat informing the Federation that following decision IV/8 on access and benefit sharing taken by the Parties at the Fourth Conference of the Parties (COP4), the Secretariat is requested to prepare a background document on pre-CBD ex-situ deposits and the implementation of measures to promote benefit sharing arrangements. The background document will be presented at the CBD intersessional meeting to be held from 7-9 June 1999, before its submission for consideration by COP5. The Secretariat requests support in providing information on this issue from the WFCC.

At present the CBD applies to post-CBD resources only, but there are moves by some to extend compliance with the CBD to pre-CBD deposits as well. While this would require agreement from the Parties to the Convention, it is important that the WFCC members consider the practicability and consequences of such compliance.

There are two issues to consider.

1) Do the collections have the information on pre-CBD deposits needed in order to apportion benefits?

2) If so, do the collections have the resources to meet the requirements?

It may be that some collections have the same level of information (depositor, country of origin, date etc) on pre-CBD deposits as with the post-CBD deposits so that compliance may not be a problem. With other collections it may be that the required information is not, and has never been, supplied to the collection. In these cases compliance will be impossible. The President of WFCC is writing to the CBD Secretariat suggesting that these issues be discussed at two forthcoming international meetings (OECD meeting in Tokyo, February 1999; MOSAICC meeting in Brussels, February 1999). In addition, the WFCC could provide an interim summary on the numbers and level of information available on pre-CBD deposits so that at least the practicability of compliance with any future decision can be incorporated into the Secretariat report to COP5. To this end, the Biodiversity Committee would be willing to receive brief indications about the level of information available and to compile this for the CBD Secretariat.

Collections willing to support this effort could send a note to [barbara@biostrat.demon.co.uk](mailto:barbara@biostrat.demon.co.uk) (Fax: +44 1778 570175) with the following information:

- Name of Collection:
- Country in which collection is resident:
- Approximate number of pre-CBD deposits (pre 1993): [<100; >100;>1000; other ]
- Whether the following information is likely to be available: country of origin; name of depositor; date of deposit: [ All available; Some available; None available ]
- Comments: eg on type of data available; manpower required to get full data; data on cards/in digital format

This information will allow the WFCC to give the CBD an indication of the practicability of any likely future need for compliance and the extent of the workload for which support would be required in order to cooperate. Whether collections are willing to comply in extending CBD compliance to pre-CBD deposits (as the Botanical Garden, Kew, has agreed) is a matter for them and their governments. It should be stressed that to date no decision has been made about extending compliance to pre-CBD deposits.

ROYAL BOTANIC GARDENS, KEW

POLICY ON ACCESS TO GENETIC RESOURCES  
AND BENEFIT-SHARING

The Royal Botanic Gardens, Kew (RBG Kew) is a non-profit, non-departmental public body whose mission is: 'to ensure better management of the Earth's environment by increasing knowledge and understanding of the plant and fungal kingdoms - the basis of life on earth'. To achieve this mission, RBG Kew uses its collections and the skills of its staff in systematics, horticulture and conservation.

RBG Kew intends to honour the letter and spirit of the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and other international, regional and national laws and policies concerning biodiversity.

Many of RBG Kew's activities contribute to the implementation of the CBD's first two objectives of conservation and the sustainable use of the components of biological diversity. RBG Kew has developed this policy to implement the specific provisions of the CBD on access to genetic resources and the third objective of benefit-sharing, to inform its partners about how it intends to do so, and to promote dialogue and good practice within the international community.

This policy covers:

1. the acquisition of genetic resources;
2. the supply of genetic resources;
3. the fair and equitable sharing of the benefits arising from their use;
4. the commercial use of genetic resources; and
5. further development of our strategy on access and benefit-sharing.

From 1 January 1998, the policy set out in this document establishes the framework within which RBG Kew will develop formal agreements and collaborate with those who provide genetic resources to, or receive them from, RBG Kew.

This policy is released publicly on the understanding that it is not itself legally binding.

For the next 18 months, RBG Kew will work to build the skills and institutional capacity needed to implement the policy fully, and cannot guarantee that it will do so at present. As it endeavours to implement this policy, RBG Kew will monitor the feasibility of doing so, and seek feedback from its staff and external collaborators in order to improve its policy and practice on access and benefit-sharing.



When it collects *genetic resources*<sup>1</sup> in the future, RBG Kew will promote the study, conservation and sustainable use of biodiversity. It will also make reasonable efforts:

- (1) to obtain the prior informed consent of the country providing those genetic resources;
- (2) to obtain the prior informed consent of *stakeholders*<sup>2</sup>, as required by law in the country in question and according to best practice; and
- (3) to share, fairly and equitably, the benefits arising from the use of the genetic resources.

This policy will be implemented (1) through partnerships and agreements with the countries and stakeholders providing genetic resources to, and receiving them from, RBG Kew and (2) through procedures and training for RBG Kew staff.

## 1. ACQUISITION OF GENETIC RESOURCES

RBG Kew's acquisition<sup>3</sup> policy comprises:

- a collections strategy;
- criteria for suppliers of genetic resources to RBG Kew; and
- material acquisition agreements (MAAs).

### 1.1 COLLECTIONS STRATEGY

RBG Kew *acquires*<sup>3</sup> genetic resources through its collecting activities and by receiving materials sent or brought to RBG Kew. It does so according to the strategy set out in its Corporate Strategic Plan, and by working with *collaborators*<sup>4</sup> in *source countries*<sup>5</sup>, in particular, with *counterpart organisations*<sup>6</sup>. In its future collecting activities, RBG Kew will make reasonable efforts to obtain prior informed consent for the acquisition of genetic resources.

<sup>1</sup> Genetic resources are any material of plant, animal, fungal, microbial or other origin containing functional units of heredity of actual or potential value. This definition is adapted from the definitions of genetic materials and genetic resources in Article 2 of the Convention on Biological Diversity. The practical application of this definition to RBG Kew's collections will evolve according to best practice.

<sup>2</sup> A stakeholder is a person or organisation affected by or with an interest in the activities at stake. Stakeholders involved in conservation and the granting of collecting permits and prior informed consent for access may include relevant departments of central government, local authorities, private individuals such as landowners, indigenous peoples, local communities, and non-governmental organisations.

<sup>3</sup> Section 1 of this policy on acquisition of genetic resources does not apply to loans of materials containing genetic resources to RBG Kew.

<sup>4</sup> Collaborators share common objectives with RBG Kew, and work with RBG Kew in the source country (see below). The principal collaborator is generally the counterpart organisation (see below).

<sup>5</sup> A source country is a country from which a genetic resource was collected or received by RBG Kew.

<sup>6</sup> Counterpart organisations are source country botanic gardens, herbaria, research institutes or other organisations some or all of whose activities are similar to those of RBG Kew. They are often designated as partners by the source country government and invited to participate in fieldwork and subsequent studies. Duplicate specimens would normally be lodged with the counterpart organisation.

## 1.2 CRITERIA FOR SUPPLIERS

In order to fulfil its commitments under this policy, RBG Kew may not accept genetic resources from organisations and individuals if it is not satisfied that they are acting in good faith and are able to fulfil the obligations arising from the CBD, national laws on access to genetic resources and material transfer agreements.

## 1.3 MATERIAL ACQUISITION AGREEMENTS (MAAs)

RBG Kew will make reasonable efforts to clarify in a written agreement the respective roles, rights and responsibilities of RBG Kew, the source country, and relevant stakeholders in activities involving the collection of genetic resources and associated research, including prior informed consent. Where collecting permits do not clarify benefit-sharing or other obligations, RBG Kew may suggest that a *material acquisition agreement*<sup>7</sup> (MAA) between the *Supplier*<sup>8</sup> and RBG Kew be used to clarify the terms on which RBG Kew acquires the genetic resources from the Supplier.

## 2. SUPPLY OF GENETIC RESOURCES

RBG Kew supplies genetic resources to *Recipients*<sup>9</sup> including botanic gardens, herbaria, government departments and businesses worldwide. All genetic resources will be supplied by RBG Kew on terms that oblige Recipients to share benefits with, as appropriate, the source country and Suppliers of those genetic resources in the event that benefits arise from the Recipients' use of those genetic resources or their *derivatives*<sup>10</sup>. Agreements may also cover the exchange and use of information.

RBG Kew's policy on the supply of genetic resources comprises:

- a supply strategy;
- criteria for Recipients of genetic resources from RBG Kew; and
- material transfer agreements (MTAs).

### 2.1 SUPPLY STRATEGY

RBG Kew will supply genetic resources subject to the terms of any permits or material acquisition agreements under which they were received from Suppliers.

RBG Kew will supply genetic resources to Recipients who meet its criteria. Emphasis will be placed on supplying genetic resources to support the conservation of biological diversity and the sustainable use of its components, and to build capacity in taxonomy and other systematics to help to meet these objectives.

<sup>7</sup> Material acquisition agreements (MAAs) are documents setting out the terms on which an individual or organisation (in this case, RBG Kew) acquires genetic resources. An MAA is a type of material transfer agreement.

<sup>8</sup> Suppliers are those organisations or individuals, whether governmental or non-governmental, that provide genetic resources to RBG Kew.

<sup>9</sup> Recipients are those organisations or individuals, whether governmental or non-governmental, that receive genetic resources from RBG Kew.

<sup>10</sup> Derivatives, for purposes of this policy, include progeny, modified or unmodified extracts and any compounds or chemical structures based on or derived from genetic resources, including analogs.

RBG Kew will supply genetic resources subject to material transfer agreements between RBG Kew and Recipients.

The special case of commercial use by Recipients of genetic resources obtained from RBG, Kew is covered in section 4 of this policy.

## 2.2 CRITERIA FOR RECIPIENTS

In order to fulfil its commitments under this policy, RBG Kew may not supply genetic resources to organisations and individuals if it is not satisfied that they are acting in good faith and are able to fulfil the obligations arising from the CBD, national laws on access to genetic resources and material transfer agreements.

## 2.3 MATERIAL TRANSFER AGREEMENTS (MTAs)

RBG Kew will supply genetic resources subject to material transfer agreements between RBG Kew and Recipients, whose terms will oblige each Recipient:

- (1) to share benefits arising from its use of the genetic resources and their derivatives fairly and equitably with RBG, Kew;
- (2) not to commercialise the genetic resources or their derivatives without the prior written agreement of RBG Kew; and
- (3) not to pass the genetic resources or their derivatives on to third parties without ensuring that the third parties enter into similar agreements.

# 3. BENEFIT-SHARING

RBG Kew's benefit-sharing policy comprises:

- a benefit-sharing strategy;
- an indicative list of benefits that may be shared; and
- benefit-sharing mechanisms.

## 3.1 BENEFIT-SHARING STRATEGY

RBG Kew will make reasonable efforts to share the benefits arising from access to genetic resources and derivatives fairly and equitably with the Source Country and the appropriate stakeholders within it.

The object of sharing benefits is to achieve fairness and equity and to create an incentive for the conservation of biological diversity and the sustainable use of its components. Depending on what is appropriate and fair in the individual circumstances, monetary and non-monetary benefits may be shared.

In the future, agreement on the benefits to be shared and identification of those with whom these benefits should be shared, are increasingly likely to take place before access to genetic resources takes place, when collecting permits or material acquisition agreements are signed. However, RBG Kew will nevertheless make reasonable efforts to share benefits fairly and equitably with appropriate beneficiaries where benefits arise from the use of genetic resources which:

- (1) were acquired by RBG Kew on terms that did not require the sharing of benefits;
- (2) were acquired prior to the introduction of this policy; or
- (3) were acquired prior to the entry into force of the Convention on Biological Diversity.

For the special case of commercial contracts, see section 4 of this policy. With respect to monetary benefits, RBG Kew starts from the assumption that fifty percent of net revenue from royalties received by RBG Kew arising from the commercial use of genetic resources should be shared with Source Country and other stakeholders, as appropriate. This proportion may be altered, however, in individual cases, subject to mutual agreement on what is fair and equitable.

### **3.2 INDICATIVE LIST OF RESULTS AND BENEFITS THAT MAY BE SHARED**

The benefits arising from the utilisation of genetic resources that will be shared will depend on the specific circumstances of the case, and upon mutual agreement. The kinds of benefit that may be appropriate in different situations may include, but are not necessarily limited to, some or all of the benefits listed below. It is important to realise that RBG Kew will not always be able to share these benefits. What is possible, and thus fair and equitable, will vary from case to case.

Different kinds of benefit that RBG Kew may be able to share include:

- taxonomic, biochemical, ecological and other information, through research results, publications and educational materials;
- benefits in kind, such as augmentation of national collections in the country providing the genetic resources;
- the transfer of technology such as hardware, software and know-how;
- training in science, *in situ* and *ex situ* conservation, information technology and management and administration of access and benefit-sharing;
- joint research and development, through collaboration in training and research programmes, participation in product development, joint ventures and co-authorship of publications;
- paid use of local guides, scientists and facilities; and
- in the case of commercialisation, monetary benefits such as royalties.

### **3.3 BENEFIT-SHARING MECHANISMS**

Non-monetary benefits such as technology transfer and training will be accomplished through partnerships with organisations and individual beneficiaries, as mutually agreed. The mechanism for the sharing of any monetary benefits will be mutually agreed with beneficiaries in advance, and will normally involve the transfer of funds to a nominated account. RBG Kew is also establishing a 'Kew Benefit-Sharing Fund' (see Annexe 1).

## **4. COMMERCIAL USE OF GENETIC RESOURCES**

As part of its mission, RBG Kew investigates plants and their constituents for taxonomic and research purposes. Some projects are sponsored by organisations with the aim of discovering and developing marketable products.

RBG Kew will make reasonable efforts to share fairly and equitably with source countries any benefits received by RBG, Kew arising from the utilisation of plant- and fungal-derived products for commercial purposes. This will include any genetic resources not falling within the reach of the access and benefit-sharing provisions of the Convention, such as collections obtained from non-party countries and collections obtained prior to the Convention's entry into force. RBG Kew is committed to providing both monetary and non-monetary benefits, as appropriate, throughout the period of such utilisation.

In order to balance the interests involved, RBG Kew has developed a policy that provides Source countries with the opportunity to receive both monetary and appropriate non-monetary benefits received by RBG, Kew while protecting commercial partners from risks such as open-ended financial obligations, the danger of losing patent and other intellectual property protection through public disclosure and exposure to delays in the product development process caused by protracted negotiations.

### **4.1 COMMERCIAL USE OF GENETIC RESOURCES ACQUIRED BY KEW BEFORE 29 DECEMBER 1993**

RBG Kew's policy on the commercialisation of 'pre-CBD' genetic resources (namely those acquired before the entry into force of the CBD on 29 December 1993) is set out in Annexe 1.

### **4.2 COMMERCIAL USE OF GENETIC RESOURCES ACQUIRED BY KEW AFTER 29 DECEMBER 1993**

Where a Recipient of genetic resources from RBG Kew notifies RBG Kew that it is interested in exploring the commercial use of the genetic resources supplied, and the genetic resources in question were obtained by RBG Kew after the entry into force of the CBD on 29 December 1993, RBG Kew will contact the source country and, as

appropriate, the Supplier and relevant stakeholders. According to their wishes, and with their prior informed consent, in each case RBG Kew will pursue one of three options:

- (1) agree terms with the Recipient bilaterally, taking the Supplier's and the source country's rights, requirements and interests into consideration;
- (2) agree terms with the Recipient and the Supplier and the source country together; or
- (3) put the Recipient in contact with the Supplier and the source country and play no further part itself.

## 5. FURTHER DEVELOPMENT OF OUR STRATEGY ON ACCESS AND BENEFIT-SHARING

Currently, RBG Kew is developing:

- **guidelines** for staff on how to implement this policy;
- an improved **collections strategy**;
- more detailed policies on the **acquisition** of genetic resources by RBG Kew;
- more detailed policies on access and benefit-sharing for **information** acquired with genetic resources, e.g. ethnobotanical data; and
- **procedures** for monitoring, evaluating and enforcing this policy.

RBG Kew recognises that this policy document will need to be revised periodically in order to reflect the wishes of the UK government, source country governments and stakeholders, based on changes in law and acknowledged best practice.

RBG Kew is committed to the continual improvement of this policy.

We welcome your views on this document and how we can implement it, to help us improve our practice.

In common with other organisations facing similar challenges, RBG Kew will need to build its human and institutional capacities in order to be able to implement this policy.

We are also working with other botanic gardens to develop, harmonise and spread best practice.

This policy is effective from 1 January 1998.

Director



On behalf of the Board of Trustees  
Royal Botanic Gardens, Kew

Date

27th Nov. 1997

**Policy of Royal Botanic Gardens, Kew on Benefit-sharing  
in Connection with Commercial Contracts  
for Pre-CBD Genetic Resources**

28/8/97

THIS DOCUMENT COMPRISES (1) THE POLICY AND  
(2) THE APPROPRIATE POLICY ANNEX FOR EACH COMMERCIAL USE

**I. GENERAL POLICY STATEMENT**

The mission of the Royal Botanic Gardens, Kew (RBG Kew) is:

**To enable better management of the earth's environment by increasing knowledge and understanding of the plant and fungal kingdoms - the basis of life on earth.**

To fulfil its mission within the spirit of the Convention on Biological Diversity, RBG Kew intends to make its best efforts to share fairly and equitably any benefits arising from the utilisation of genetic resources. This will include any genetic resources not falling within the reach of the access and benefit-sharing provisions of the Convention, such as collections obtained from non-party countries and collections obtained prior to the Convention's entry into force. RBG Kew is committed to providing such benefits in both monetary and non-monetary forms throughout the period of utilisation.

**II. SHARING OF BENEFITS ARISING OUT OF THE UTILISATION OF  
PRE-CBD GENETIC RESOURCES**

**Background**

As part of its mission, RBG Kew investigates plants and their constituents for taxonomic and research purposes. Some projects are sponsored by organisations with the aim of discovering and developing marketable products.

RBG Kew will make its best efforts to share fairly and equitably with Source Countries<sup>1</sup> any benefits<sup>2</sup> received by RBG, Kew arising from the utilisation of plant- and fungal-derived products for commercial purposes. Benefit-sharing will take place throughout the product development process.

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<sup>1</sup> A "Source Country" is the country from which a genetic resource was collected or received by RBG Kew.  
<sup>2</sup> 'Benefits' can include both monetary and non-monetary benefits.

## Policy

In order to balance the interests involved, RBG Kew has developed a policy that provides Source Countries with the opportunity to receive both monetary and appropriate non-monetary benefits received by RBG, Kew while protecting commercial partners from risks such as open-ended financial obligations, the danger of losing patent and other intellectual property protection through public disclosure and exposure to delays in the product development process caused by protracted negotiations.

The essential elements of RBG Kew's policy are:

- RBG Kew takes responsibility for the negotiation and co-ordination of appropriate benefit-sharing mechanisms with Source Countries, as outlined in individual contracts.
- Commercial partners will support benefit-sharing on a "milestone" basis.
- Source Countries are involved in consultations to determine appropriate benefit-sharing arrangements while at the same time ensuring confidentiality to enable commercial partners to obtain intellectual property protection.

This policy will be reflected in all commercial contracts entered into by RBG Kew involving utilisation of genetic resources.

## Framework for Benefit-sharing

In order to share any benefits arising out of the commercial development process fairly and equitably, RBG Kew has developed a policy by which it will work with commercial partners to share benefits on a "milestone" basis. Under this arrangement, benefit-sharing would occur at the following three stages of commercial development:



Short-term:

At the commencement of a commercial development project, RBG Kew will include a percentage in the overhead component of any up-front payments from commercial partners. This proportion will be deposited in the Kew Benefit-Sharing Fund to be used for the benefit of Source Countries<sup>3</sup>.

Medium-term:

- **RBG, Kew and commercial partner:** At an appropriate intermediate stage in the commercial development process, defined in agreement with the commercial partner, the commercial partner will:
  - EITHER: make a further payment to the Kew Benefit-Sharing Fund;
  - OR: share non-monetary benefits through direct training and capacity building with the Source Country.
- **RBG, Kew and Source Country:** Following consultation with the commercial partner, as described above, RBG Kew will consult with the Source Country of the genetic material under utilisation to design appropriate non-monetary benefit-sharing programmes.
- **Confidentiality:** In discussion with Source Countries, RBG, Kew will ensure confidentiality as agreed with commercial partners.

Long-term:

Fifty percent (50%) of net revenue from royalties received by RBG Kew which arise out of the utilisation of genetic resources supplied by RBG Kew will be paid to the Source Country. If genetic resources from more than one Source Country contribute to a product generating royalties, the net revenue will be shared equitably among the Source Countries concerned. If no Source Country is identifiable, then the monies will be deposited in the Kew Benefit-Sharing Fund to be used for the benefit of Source Countries.

**RBG Kew Benefit-sharing Fund**

RBG Kew will establish a Kew Benefit-Sharing Fund into which all monetary contributions from commercial partners will be paid. In consultation with Source Countries, RBG Kew will use this fund for the benefit of Source Countries, to support activities such as training and the exchange of information relevant to the conservation and sustainable use of biological diversity.

In addition, RBG Kew will make its best efforts to encourage its commercial partners to contribute voluntarily to the Kew benefit-sharing fund in order to support the benefit-sharing policy of RBG Kew.

**Policy Annexes**

The details necessary to implement this Policy will vary according to the use of the genetic resources involved. Consequently, appropriate details for each use will be included in an Annex to the Policy. This Annex will constitute an integral part of this Policy, and the Policy is not complete without the inclusion of the appropriate Annex.

Director

Date

28th August 1997

<sup>3</sup> The RBG Kew "Draft Policy on Access to Genetic Resources and Benefit-sharing" contains an indicative list of some of the non-monetary benefits which RBG Kew could provide.

Rio de Janeiro, 15<sup>th</sup>, January, 1999

To the Officer-In-Charge of the  
Secretariat of the  
Convention on Biological Diversity  
Hamdallah Zedan

Dear Sir

Thank you very much for the invitation to participate with informations for the inter-  
sessional meeting of the COP5 with a case study from Rio de Janeiro Botanic  
Garden, I hope it could be useful either to give an example for similar institutions  
and to represent relevant background document on the review of implementation of  
measures to promote benefit-sharing among the Botanic Gardens and other  
institutions world-wide.

is attached to this message, A hard copy and a disc with the text saved in a Word  
6.0 file is enclosed. If you have any problem to open the file in the disc and in the  
message I sent, please keep in contact to the e-mail [tpereira@jbri.gov.br](mailto:tpereira@jbri.gov.br) or  
[tsampaio@nitnet.com.br](mailto:tsampaio@nitnet.com.br) , or by fax number +55 021 294.8696.

Best wishes

Tânia Sampaio Pereira  
Conservation Program  
Rio de Janeiro Botanic Garden Research Institute

Laboratório de Sementes  
Jardim Botânico do Rio de Janeiro  
Rua Pacheco Leão, 915  
Rio de Janeiro – 22.460-030 - RJ  
Brazil

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## Botanic Garden's Collections and the CBD - Rio de Janeiro Botanic Garden case study.

Tânia Sampaio Pereira<sup>1</sup>

### Botanic Garden's state of art

Botanical gardens are very significant among the few forces which exist to fight against the catastrophic losses imposed on endangered habitats and have been instrumental in the plant conservation movement around the world (Hawksworth, 1995). They are strategically placed as a result of their historical collection strategies. The Plant Kingdom is, as well documented as it is, because of Botanic garden activity. They have contributed enormously to the knowledge of our plant biodiversity.

Botanical gardens collections represent one of the most powerful tools in the conservation of many threatened species from the world plant heritage. They are geared towards carrying out *ex-situ* conservation and they enable the accommodation and management of important genetic resources.

Botanic gardens historic acquisitions around the world represent a level of guarantee of conservation of some potential economic species. Native plant relatives from crops and other important economic species with potential for human survival may also be found in Botanic garden collections. They have the potential to facilitate the introduction of new resources for utilisation for the benefit of mankind.

Botanical gardens associations have developed conservation strategies and have formed a huge international network – Botanical Gardens Conservation International. Herbaria also have huge international network – the IAPT (International Association for Plant Taxonomy) and a long-standing code of conduct involving loan and exchange of genetic resources in the form of herbarium collections. Their exchange programs are well placed to lock into the world's conservation moves. Together with the International Code of Botanical Nomenclature, plant taxonomy, which is one of its attributions, is well regulated with internationally agreed practices.

In spite of a range of obstacles botanical gardens prioritise species representation in their collections based on genetic resources acquisition around the world. The gardens are updating their rules for enriching their collections by way of having responsible acquisition policies in the letter and spirit of the CBD.

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In the end, the exchange of such species between relevant institutions will facilitate public awareness and support for conservation. With this procedure, among others, botanical gardens can enhance community goodwill for conservation.

The Convention has a major influence upon the availability of access both to *in-situ* genetic resources as well as to genetic resources held by botanic gardens and other *ex-situ* collections. Botanic gardens will be increasingly affected by requirements that access should be on Mutually Agreed Terms (MAT) and that benefits arising from research and commercialisation should be shared with source countries (ten Kate, 1995b).

The CBD was set up in 1993 and, by default, set an artificial distinction between acquisitions made prior to 1993 and acquisitions made after 1993. This time frame, in addition to creating this distinction, has legal implications under the CBD. However, the timing of acquisition of botanic gardens collections has no significance on the ground conservation needs, with or without CBD.

Because of all the considerations above, we recognize that botanic gardens and Herbaria must treat all their acquisitions as if they are post 1993 acquisitions. The arguments for this approach are: the vast bulk of their acquisitions are pre 1993, reduced administrative procedures, uniform approach to benefit-sharing, uniform treatment under the "coverage" of the Convention and maintenance of the spirit of the CBD; botanic gardens have no power to make or break laws but do have a scientific and moral imperative to support responsible conservation of the world's biodiversity. The biggest argument against this approach could be the potential legal complications for the botanic gardens, once pre 1993 acquisitions have no legal coverage under the CBD.

### **A Botanic Gardens's Material Transfer Policy**

A harmonised, multilateral botanic gardens policy on access and benefit-sharing is needed and it will be very useful in order to increase transparency among botanic gardens. The main reason to build this policy is because botanic gardens who do not adhere to the letter and spirit of the CBD's access and benefit-sharing (Glowka *et al.*, 1994) could expose all botanic gardens to criticism and risk provoking future restrictions on access to source-country material.

With over 1700 botanic gardens world-wide (Heywood, 1990), a botanic garden policy could build trust with government access authorities and thereby facilitate access with less bureaucracy and lower transaction costs. It could also promote more efficient communication and exchange of genetic resources among botanic gardens through standardisation of exchange agreements and policies.

On this way, a team of 16 botanic gardens world-wide were grouped to discuss and formulate a policy in general terms, which will seek 'best practice' by operating in the spirit of the CBD.

Members of the group saw the link between *ex-situ* and *in-situ* conservation as crucial to defining a niche for botanic gardens within a CBD policy framework. In this context, the value of botanic gardens was noted in three principle contexts: re-introduction of certain species to *in-situ* environments, alongside habitat rehabilitation; preservation of species *ex-situ* where reintroduction is impossible; and capacity-building in source countries undertaking *in-situ* conservation of plant genetic resources.

### Conservation at Brazilian Botanic Gardens

Brazilian plant systems represent one of the richest systems of the world. Much of their environment is threatened; including the Brazilian Atlantic rain forest and the Brazilian savanna ("cerrado") (Brasil, 1998). However, the few number of Brazilian botanical gardens are not sufficient to represent and preserve Brazilian Plant Heritage in such a large country. There are 25 botanic gardens linked to the Brazilian Network of Botanic Gardens, and they don't have a clear collection's acquisition policy. They represent many species from other countries but their main live collections are regional, and their value increases as agricultural practices and urban growth are degrading their natural habitat.

The absence of a national law to govern plant material transfer<sup>2</sup> makes decision-making very difficult for all public institutions. For this reason it is time to create local procedures based on standard methods to regulate the main policies, based on codes of conduct and the best practice.

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<sup>2</sup> Silva, M., 1995 – Is the Brazilian Project Bill which is been analysed by Brazilian Government since the date of its creation.

## Rio de Janeiro Botanic Garden Research Institute

Rio de Janeiro Botanic Garden is the oldest Brazilian botanic garden, highly experienced in plant taxonomy and species conservation.

Sited near the biggest world urban forest, Rio Botanic Garden receive yearly a huge amount of visitors, and have one of the oldest and largest plant material exchange program of the whole country, including dry herbarium specimens and seeds. A very broad public search for services, they could be scientists or general public, looking for the right names of the plants, or for the checklist from someplace, or how to reproduce a certain species, which are the matter of research from taxonomists and ecologist.

Those products must to have current monetary value, but they are not easy to evaluate (Primack, 1993). Knowledge transfer must have other value than scientific publications for the Botanic Garden. Access and benefit-sharing need to be seen as an useful way to capacity-building and training to Botanic Gardens development. On this way of thinking, Rio de Janeiro Botanic Garden Institute receives sponsorship to maintain live collections and plant labels, lawns and visitors path. But knowledge must have high benefits institution reverting.

The staff has agreed on a policy for collecting and accessing genetic resources and knowledge transfer, which includes material transfer agreements for germplasm / exsicate exchange where the request institution must to agree formally with some compromises before the receiving of the material/knowledge.

In a broad sense those accomplishment insure the following: that the request shall be previously approved by the Permanent Commission of Germplasm Collection and Assessment; the material used shall be for the common good of conservation research, education purposes and Botanic Gardens collection representation; the plant material or any product, progeny, propagule or derivative genetic material shall not be transferred to others without written authorisation from the Rio de Janeiro Botanic Garden Research Institute; any publication proceeding from the use or study of the material granted shall include credits to the Research Institute; a copy of the publication shall be sent to the Rio de Janeiro Botanic Garden of up to one year after the publication. In case of acquiring the material for trading any of its parts or derivatives, or the thirds use of any associated information about genetic resources samples, it will be necessary to obtain a permission, which

will be a commitment term between the Rio de Janeiro Botanic Garden Research Institute and the seeker.

Beside this procedure the research team organises the scientific collections policy and an Exchange Germplasm Agreement (MTA) in order to adequate their collections to the new approach of the CBD (IPGRI, 1996) looking for access and benefit-sharing, as follow:

## RIO DE JANEIRO BOTANIC GARDEN RESEARCH INSTITUTE COLLECTION POLICY<sup>3</sup>

### I. On fundamental principles

#### *The Institutional Mission*

Rio de Janeiro Botanic Garden Research Institute, is a centenary institution, which history and importance are associated to the representation of the Brazilian flora and also from some acclimatised species of the world plant heritage; it's mission is to promote and spread research on Brazilian floristic resources aiming the knowledge and the conservation of it's biodiversity.

Rio de Janeiro Botanic Garden Research Institute, harmonised with its Institutional Mission, with the Convention on Biological Diversity - CBD, and also with "Botanic Gardens Conservation's Strategy ", decide to establish its Collection and Access to Genetic Resources Policy, join to the world effort for plant biodiversity conservation.

For the purposes of this document the terms bellow are defined as follow:

1 – *Genetic resources sample* - is the sample of genetic resources which represent a biological individual or more from one population, included in a scientific collection, with their basic information, which are: collection registration number, scientific epithet, provenance, the name and number of the collector and the date of the field collection.

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<sup>3</sup> Botanic Gardens Conservation International (1994), UNEP/CBD (1994), Botanic Gardens Conservation International (1995), Convention on Biological Diversity Secretariat (1995), World Conservation Monitoring Centre WCMC (1996) are the main literature used to build this Policy.

2 - *Access to genetic resources* - it is the collection of proceedings used to get, represent and transfer plant material.

3 - *Genetic Resources* - represent any plant material, which contain functional units of heredity of actual or potential value. This definition is likely to cover living and herbarium specimens as well as derivatives.

In order to implement the Collection and Access to Genetic Resources Policy, the Botanic Garden will use the follow instruments:

I - The Live Collection Curator (LCC);

II - The Herbarium Curator (HC);

III -The Permanent Commission on Collection and Access to Genetic Resources (CPRG).

## II. *The scientific collections*

The collection of plant material in the field to represent any taxa into Rio Botanic Garden collections must be harmonised to the CBD.

Any plant material incorporated into the collections must be represented with a voucher at RB (Rio de Janeiro Botanic Garden Herbarium); it could be admitted exceptions only if the material is from donation origin or exchange material.

Each specimen incorporated into the Rio Botanic Garden Collections must be mainly tied to the research institutional programs or originated from scientific expeditions bonded to the Collection's Policy. It could be admitted exceptions if the material is originated from scientific exchange.

### II a - *The Herbarium Collections*

Herbarium Collections are defined for purposes of this documents as the collection of individual samples representative from plant species, submitted to a special procedures of drying, cleaning, register and storage, setting up the heaps of the dried plant fragments, fruits, seeds, timber samples and plant pictures.



The specimens to be incorporated into Herbarium Collection (RB) must be obligated to have basic informations about provenance, name of the collector and the collection date. The registration number from the material on RB Herbarium must be registered in the tag of the other Live Collections; it could be admitted exceptions only if the material is from donation or from exchange origin.

#### II b - *The Live Collections*

Live Collections are defined for purposes of this document as the collection of alive individual samples representative from plant species, accurately registered, that could be under cultivation at the *Arboretum*, into the greenhouses or at the nursery, or it could be yet seed samples stored in the Seed Bank.

Any plant material to be represented into the Live Collections must be obligated to have basic informations, in order to be inserted in a registration system, preferably an electronic data base system, which could be linked to other collection's data base systems.

The national flora assessments must be harmonised to the management plan; the new incorporations of any specimen into the Live Collection must be an agreement between Research and Arboretum Departments.

#### III - *Access to genetic resources*

Access to the Brazilian genetic resources by the foreign institutions, with the help of Rio de Janeiro Botanic Garden Research Institute, must have the approval in advance from National Research and Biotechnology Council (CNPq), with respect to the Federal Law number 55, from March, 14<sup>th</sup>, 1990 from Science and Technology Ministry.

#### III a - *The Herbarium Collections*

It could be allowed the loan between botanic gardens or other institutions, only with identified plant material. The reception of plant material in charge to identification of plant species could only be admitted with the advanced agreement between the parties, when this represent the description of new

taxa It must be kept the rights of Rio Botanic Garden, as the owner of *typus* specimens and its duplicates, to storage and spread.

Typus collections could be loan or exchange, only by agreement and authorization from the Herbarium (RB) Curator.

It is only admitted loans of scientific collections by material of same scientific value.

### III b - *The Live Collection*

It must be adopted the minimum criteria<sup>4</sup> for plant genetic material collection, created by the research team, which is an annex of this document, in order to have genetic provenance representation of plant material into the scientific collections, for those field collections aiming reproductive purposes.

The CPRG must be notified about the assessment stock in the Seed Bank and Nursery, and also about the plant material which doesn't represent genetic resources sample in Rio Botanic Garden, for exchange and donation purposes.

The plant material transfer could only be made by the signature of the Germplasm exchange agreement (which will follow this policy as an annex) by the requesting institution. The reply with the plant material requested would only be send with the agreement of the CPRG.

Plant material transfer could be realized for private meanings (for example, plant trade), after the agreement from the CPGR, always if there are availability of plant material. In this case the benefits between parties must be clear up in a special Co-operation Agreement.

Cuttings and saplings, which don't represent a genetic resources sample from the Live Collections, could be sold by the Rio Botanic Garden.

By exception, cutting and saplings, which represent a genetic resources sample, could be sold, exclusively with the authorisation of the CPRG.

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<sup>4</sup> Vencovsky, R. 1987 – Brazilian author used to create minimum criteria for seed/cuttings field collection for Rio de Janeiro Live collections introductions.

It is not available for germplasm exchange the species listed on Official List of Endangered Species of CITES.

#### *IV - The instruments to implement the Policy*

##### *The Herbarium Curator*

The Herbarium Curator is defined for purposes of this document as the collection of technique-administrative procedures, to which the heap is submitted, aiming its organization, conservation and optimization.

It is an attribution of the Herbarium Curator to grant authorization to the use of herbarium materials from collections for taxonomic research.

It is an attribution of the Herbarium Curator to make and control exchange and loans of plant material, as such as to up to date the species nomenclature of the collection.

##### *The Live Collections Curator*

The Live Collections Curator is defined for purposes of this document as the collection of technique-administrative procedures to which the heap is submitted, aiming its organization, conservation and optimization.

It is an attribution of the Live Collections Curator to elaborate, implement and atualize the Live Collection Management Plan.

It is an attribution of the Live Collections Curator to put the tags of the sections, flowerbeds and individual plants in the Arboretum; as such as to realize sanitary inventory, edaphic and hidric diagnostic and to execute horticultural and tree cares to the collection, including high -pruning.

Is an attribution of the Live Collections Curator, joined to the research Department, to promote the collection's inventory, to realize exclusions, rescues and incorporations of exemplars to the collections, as such as the management of the data base system.

*The Permanent Commission on Collection and Access to Genetic Resources (CPRG)*

The Permanent Commission on Collection and Access on Genetic Resources (CPRG) is sovereign to decisions *ad referendum* the Rio Botanic Garden's Director to implement the Collection and Access to Genetic Resources Policy.

It is an attribution of the CPRG to analyse and to deliver concepts about the subjects related to the Management Plan for Live Collections and also about the Collection and Access to Genetic Resources Policy.

Are exclusive attributions of CPRG to ponder about the exchange from those reproductive plant material, which are elect to be genetic resources samples from scientific collections; it is also its attribution to decide about exclusions, rescue and incorporation of exemplars to the collections according to the Management Plan of the Live Collection.

It is an attribution of the CPRG to organize a list of institutional benefits to be used for exchange meanings.

It is an attribution of the CPRG to ponder about the requests of germplasm from privates, defining the benefit-sharing.

It is an attribution of the CPRG to keep a debtor's up to dated register from those institutions, which didn't fulfil the Germplasm exchange agreement.

It is an attribution of the CPRG to evaluate the interest of the Rio Botanic Garden to receive live plant material donations for the scientific collections.

It is an attribution of the CPRG to analyze and resolve about special cases or those omitted by this document.

The CPRG would have a mixed composition, with representatives belonging to: the Director (1), the Research Coordination (3), the Arboretum Coordination (2) and the Cultural Department (1); it must have total of 7 (seven) members, indicated by their straight leadership.

This Policy will be sign by Rio de Janeiro Botanic Garden Director to constitute a domestic rule to be implemented during 1999-2000. The whole rule text and annexes will follow the main exchange documents for foreign and Brazilian institutions.

As a basic rule, Rio de Janeiro Botanic Garden elect the follow for benefit-sharing: taxonomic/ecological data, collaborative research - inclusive of training and capacity building, transfer of equipment and/or the means to make such equipment; employment of source-country technicians, joint authorship/publication, or acknowledgement in papers, educational material, live and herbarium collection enrichment.

The follow Material Transfer Agreement was created for seed exchange, but have been used for live plant cuttings and saplings; it will be enclosed joint to the signed policy in the Index Seminum issue which have been usually sent for botanic gardens world-wide.



MINISTÉRIO DO MEIO AMBIENTE, DOS RECURSOS HÍDRICOS E DA AMAZÔNIA LEGAL  
INSTITUTO DE PESQUISAS JARDIM BOTÂNICO DO RIO DE JANEIRO  
**GERMPLASM EXCHANGE AGREEMENT**

Institution: \_\_\_\_\_

Address: \_\_\_\_\_

Representative's name: \_\_\_\_\_

Representative's position: \_\_\_\_\_

According to determinations established at convention on bio-diversity (Rio-92), the Rio de Janeiro Botanic Garden Research Institute will only furnish germplasm to public organs and similar institutions under the following conditions:

- this request shall be previously approved by the Permanent Commission of Germplasm Collection and Assessment;
- the service will be linked to the availability of material in storage, or to the seeds collection season;
- the material use shall aim for the common good with research, education conservation purposes and Botanic Gardens collection representation;
- in case of acquiring the material for trading any of its parts or derivatives, it will be necessary to obtain a permission, which will be a commitment term between the Research Institute of the Botanic Gardens of Rio de Janeiro and the seeker;
- the plant material or any product, progeny, propagule or derivative genetic material shall not be transferred to others without written authorisation from the Rio de Janeiro Botanic Garden Research Institute;
- any publication proceeding from the use or study of the material granted shall include credits to Rio de Janeiro Botanic Garden Research Institute. A copy of the publication shall be sent to the Rio de Janeiro Botanic Garden Research Institute up to one year after the publication.

Complete the chart below with the numbers of the species selected from the Index Seminun


I AGREE: \_\_\_\_\_

Signature and date

Please send this order to the following address:  
Instituto de Pesquisas Jardim Botânico do  
Rio de Janeiro  
Banco de Sementes  
Rua Pacheco Leão, 915 - Rio de  
Janeiro/RJ  
22.460-030 - Brasil

Reserved to the Research Institute of Botanic Gardens of Rio de Janeiro

Recebido em: \_\_\_\_\_

Encaminhe-se à Comissão Permanente de Acesso a Recursos

Genéticos: \_\_\_\_\_

Parecer da Comissão:

Data: \_\_\_\_\_

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