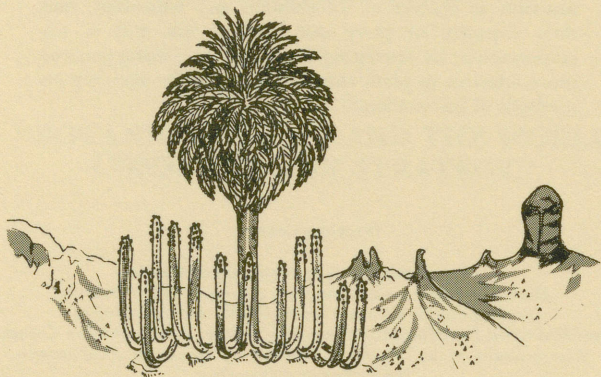


# BOTANIC GARDENS

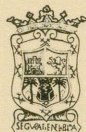


# AND THE WORLD CONSERVATION STRATEGY

Las Palmas de Gran Canaria

## RECOMMENDATIONS

IUCN  
1987  
031  
Recs.



The aim of this conference was to review the involvement of Botanic Gardens in implementing the World Conservation Strategy; in particular by considering their function as centres of information and education, and their capacity to carry out both *ex situ* and *in situ* conservation; by discussing how to make existing gardens more effective in plant conservation; and by agreeing on methods of international collaboration.

#### *Organizing Committee*

Vice President, Autonomous Government  
Director General for Environment, Autonomous Government  
President of the Excmo. Cabildo Insular de Gran Canaria  
President of the Environment Commission, Cabildo Insular de Gran Canaria  
Representative of the Canarian Parliamentary Environment Committee  
IUCN Regional Councillor  
Director of the Jardín Botánico "Viera y Clavijo"  
Representative of the Council of the Jardín Botánico "Viera y Clavijo"  
The Head of Protocol of the Excmo. Cabildo Insular de Gran Canaria  
Secretary Co-ordinator of the Organizing Committee

#### *Recommendations Committee*

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S. Sastrapradja (Bogor)

#### *Secretarial Staff:*

M. Lear, F. Parker, D. Reich

#### *Programme Committee*

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V.H. Heywood (Reading)  
P. Raven (Missouri)  
H. Synge (IUCN)

Prepared by the IUCN Conservation Monitoring Centre, Kew, U.K.

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1UCN  
1987  
031  
Recs.

## RECOMMENDATIONS

Passed at

### **“BOTANIC GARDENS AND THE WORLD CONSERVATION STRATEGY”**

AN INTERNATIONAL CONFERENCE

26 - 30 NOVEMBER 1985

LAS PALMAS DE GRAN CANARIA

organized by

The International Union for Conservation of Nature and Natural Resources  
(IUCN)

Gobierno de las Canarias  
Cabildo Insular de Gran Canaria

Sponsored by

The World Wildlife Fund (WWF)

under the Patronage of

The Food and Agriculture Organization of the United Nations (FAO)

prepared in co-operation with

The United Nations Educational, Scientific and Cultural Organization  
(Unesco)

and with the support of

The United Nations Environment Programme (UNEP)

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## INTRODUCTION

Between 26 and 30 November 1985, 175 delegates from Botanic Gardens in 39 countries met in Las Palmas, Canary Islands. They came together to discuss how Botanic Gardens can be most effective in implementing the World Conservation Strategy, a global plan that firmly links conservation with development.

Specifically, the conference considered the function of Botanic Gardens as centres of information, education and training, and their capacity to carry out both *ex situ* and *in situ* conservation. A major target was to agree on methods of international collaboration.

The conference formed part of the IUCN/WWF Plant Conservation Programme, a global set of activities designed by IUCN and funded by WWF. The aim of the programme is to "assert the fundamental importance of plants in all conservation activities". This is being done through two sets of activities: strategic projects outlining the basic concepts and principles of plant conservation, and model field projects, in which these concepts are implemented and tested on the ground. Together these activities aim at achieving catalytic, long-term results.

One of the broad objectives of the programme was to help Botanic Gardens become much more strongly involved in plant conservation and to link them more firmly with the conservation network. The present conference was designed to set the stage for a full discussion on how the Botanic Gardens can contribute to conservation and be more effective as agencies of conservation.

The main business document of the meeting was a draft Botanic Gardens Conservation Strategy, ably prepared by Professor Vernon H. Heywood. Following a lengthy and productive debate on the draft at the conference, the Strategy will be further developed and refined during 1986 and then published by IUCN and WWF.

The conference also approved a Declaration and 13 Recommendations, which are reproduced here. The Declaration of Gran Canaria, as it has become known, provides a statement to the public on the importance of Botanic Gardens and on the contribution they can make to conservation. It is not a plan of action, more a symbol of the commitment of Gardens to their new conservation strategy and their promise to work together for a common goal.

The recommendations are more technical and are directed at the Gardens themselves, at collaborating agencies like IUCN and at funding organizations. They will be distributed to all Botanic Gardens in the world and to the other institutions mentioned in them.

Several of the recommendations request the involvement of IUCN. The most fundamental of these, Number 2, asks IUCN "to assist Botanic Gardens in setting up a Secretariat to co-ordinate and promote the implementation of the [Botanic Gardens Conservation] Strategy, incorporating the activities of the IUCN Botanic Gardens Conservation Co-ordinating Body, with the aim of making this Secretariat self-supporting". It is assumed that this Secretariat would also undertake the other tasks assigned to IUCN (in recommendations 1, 4 and 12). IUCN is presently studying these most closely and intends to reply shortly to all 1294 Botanic Gardens presently on the IUCN computer (and to whom this booklet is being sent.)

In his introduction to the conference programme booklet, Kenton R. Miller, Director General of IUCN, wrote:

"The Botanic Gardens of the world could, and should, develop into a major, new global force for conservation. To achieve this ambitious goal, the gardens ought to link together in a functioning network with each other and with the conservation movement. The capacity of the IUCN Conservation Monitoring Centre to monitor and analyse plants data worldwide should be applied to the needs of those Botanic Gardens wishing to collaborate. And finally, to promote conservation linkages between Botanic Gardens, national parks, *ex situ* and *in situ* conservation activities, and new efforts in environmental education vis-à-vis Botanic Gardens, a coordinating mechanism needs to be established.

"Within this context, the Conference on Botanic Gardens and the World Conservation Strategy and the rôle of IUCN in fostering conservation of living natural resources assume particular importance. A successful conference will be the first step forward in developing a new global force for conservation."

We trust that these recommendations will help make this a reality.

IUCN  
February 1986



## THE DECLARATION OF GRAN CANARIA

For centuries, Botanic Gardens have been major centres for the scientific study of plant diversity, providing a mechanism for introduction and assessment of plants for agriculture, horticulture, forestry and medicine.

They attract more than 100 million visitors a year, affording havens of beauty and tranquillity for an increasingly urban society, and a spiritual link with the plant world on which we all depend.

They inform and educate; they are showcases for the living world, places where science and people meet.

For historical reasons, most Botanic Gardens are in the cooler, more industrialised countries of the world, but two thirds of all plant species occur in the tropics and subtropics. More than 60,000 species risk extinction within our lifetimes because of the destruction and degradation of the earth's vegetation, which is the basis of human survival. Recently, many of the world's Botanic Gardens have mobilised their resources for conservation action to avert this threat. They are conserving plants in the wild, cultivating them in the gardens themselves, and preserving them in gene banks.

Recognising that they can only succeed in achieving these objectives if they work together, Botanic Gardens throughout the world are uniting to apply the *World Conservation Strategy* to the special predicament of plants. Basing their efforts on this global plan for sustainable development and conservation of living resources, they will produce, adopt and implement a *Botanic Gardens Conservation Strategy*.

This declaration is the result of the 1985 Las Palmas Conference on Botanic Gardens and the World Conservation Strategy, involving more than 200 leading specialists from countries throughout the world.

They as a body assert their determination to work together to defend plant life for the benefit of all people now and in the future. They call upon Governments to provide the necessary support and resources, in accordance with their responsibilities.

## RECOMMENDATION 1

### THE BOTANIC GARDENS CONSERVATION CONGRESS

Aware of the value of the deliberations of this Conference;

Appreciative of the most welcome support for this Conference from sponsors;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Proposes that a Botanic Gardens Conservation Congress meet every three years;

Recommends participating gardens and institutions to support the IUCN Botanic Gardens Conservation Co-ordinating Body and to provide the necessary financial support for the Body, and that this Body provides the Secretariat for the Congress;

Invites international and national agencies to help sponsor the Congress.

## RECOMMENDATION 2

### THE BOTANIC GARDENS CONSERVATION STRATEGY

Aware of the fundamental need that utilization of species and ecosystems be sustainable;

Appreciating that Botanic Gardens have a rôle in the conservation of living resources as a basis for sustainable development;

Recognising that Botanic Gardens need to identify and agree on the objectives and priority tasks they can undertake in implementing the World Conservation Strategy;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Considers that a Botanic Gardens Conservation Strategy is essential;

Calls on IUCN to complete the draft of the Botanic Gardens Conservation Strategy in the light of the deliberations of the Conference, to publish it and to make it as widely available as possible;

Invites the individual Botanic Gardens of the world to pledge their support for the Botanic Gardens Conservation Strategy, to identify their missions and to define the tasks that they will undertake for its implementation;

Invites IUCN to assist Botanic Gardens in setting up a Secretariat to co-ordinate and promote the implementation of the Strategy, incorporating the activities of the IUCN Botanic Gardens Conservation Co-ordinating Body, with the aim of making this Secretariat self-supporting.



### RECOMMENDATION 3

#### WORLDWIDE NETWORK OF BOTANIC GARDENS

Acknowledging that Botanic Gardens and Arboreta are essential instruments in the conservation of plant genetic resources throughout the world;

Noting the serious imbalance between the location of Botanic Gardens and the floristic richness of the areas in which they occur;

Further Noting the small number of active Botanic Gardens in tropical countries compared with the great richness of tropical floras;

Welcoming the initiative of IUCN and IABG to collaborate on the next International Directory of Botanic Gardens;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Calls on those responsible for existing Botanic Gardens to acknowledge their Gardens' actual or potential rôle in genetic resource conservation, to strengthen their existing conservation activities and to take steps to guarantee the long-term survival of their Gardens;

Recommends governments and states, in association with international agencies, to review the distribution of Botanic Gardens and to recommend, where appropriate, the creation and funding of new Gardens with a major conservation mission, the emphasis being on regions with rich endemic floras, such as tropical forests and islands;

Urges the Botanic Gardens of the world to unite forces and organise themselves in such a way as to provide effective channels of communication and means of cooperation at national, regional and international levels by creating a Botanic Gardens worldwide network, in association with the International Association of Botanic Gardens (IABG).

## RECOMMENDATION 4

### EX SITU CONSERVATION

Recognising that no single approach to the conservation of endangered species can be relied upon;

Appreciating that *ex situ* conservation is a necessary adjunct to *in situ* conservation;

Acknowledging the importance of seed banks in the long-term conservation of genetic resources;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Urges Botanic Gardens to recognise their responsibility to maintain, propagate and make available stock of critically threatened species for scientific and horticultural research, for reintroduction (where appropriate) and to provide suitable stock for horticulture;

Recommends that exploration and collection of species be based on concepts of infra-specific diversity so that ecogeographical diversity and diversity between and within populations be sampled in such a way that a maximum of genetic diversity be captured and stored;

Urges Botanic Gardens to become involved with seed conservation and recommends that the International Board for Plant Genetic Resources (IBPGR) be approached so as to establish closer collaboration on the conservation of threatened species;

Recommends that every effort be made to maintain minimal international standards for seed storage and rejuvenation;

Recommends IUCN to continue and expand the monitoring and co-ordination of *ex situ* conservation, presently carried out by the Botanic Gardens Conservation Co-ordinating Body, as an integral part of the implementation of the Botanic Gardens Conservation Strategy;

Recommends Botanic Gardens and other relevant institutions to support this essential work and to provide the necessary finance for it.

Note: The term 'Seed' is used here to include spores of pteridophytes and lower plants.



## RECOMMENDATION 5

### BOTANIC GARDENS IN THE TROPICS AND SUBTROPICS

Recognising that two thirds of the world flora (some 170,000 species) are in the tropics and the subtropics;

Realising that recent calculations show that at least 60,000 plant species are at risk of extinction in the next 30-40 years;

Recognising that these constitute nearly a quarter of the world's total plant species diversity;

Acknowledging that Botanic Gardens in the tropics and subtropics can help study and provide some of the vital solutions to this horrifying threat;

Convinced that Botanic Gardens can play a very important part in the conservation of the flora and the vegetation of those regions and are essential in furthering the maintenance of national plant genetic resources, both *ex situ* and *in situ*;

Being aware that many tropical and subtropical countries have Botanic Gardens that are moribund or barely function;

Realising that a further range of tropical and subtropical countries do not have a single Botanic Garden;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Urges institutions of higher learning, Governments, aid agencies and financial institutions to put more resources into existing Botanic Gardens and where necessary to establish new Botanic Gardens in the tropics and the subtropics;

Invites Botanic Gardens both in these countries and elsewhere to provide all possible training facilities and support in kind, particularly by enabling their staff to work with colleagues in the tropics and subtropics, and vice versa;

Calls upon educational and scientific institutions, Governments, bilateral and multilateral aid agencies to provide sufficient funding to facilitate this interchange of staff and technology.

## RECOMMENDATION 6

### PROTECTED AREAS

Aware that deforestation and destruction of ecosystems adversely affect the lives of millions of people by causing periodic flooding, scarcity of fuelwood, degradation of soil and water and reduction of agricultural productivity;

Recognising the importance of protecting a worldwide network of representative ecosystems for maintaining biological stability and diversity;

Recognising that the benefits of protecting representative ecosystems will accrue to all mankind and not just to those nations in which the ecosystems occur;

Noting that many of the Botanic Gardens of the world are caretakers of nature reserves to conserve local floras *in situ*, individual species or particularly important plants;

Realising that global frameworks exist in the form of Unesco's Action Plan for Biosphere Reserves and IUCN's Bali Action Plan, and a regional framework in IUCN's Corbett Action Plan for Protected Areas of the Indomalayan Realm;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Recommends Botanic Gardens to take active steps to cooperate with national and international agencies responsible for protected areas so as to ensure the conservation of plants in the wild by the establishment of networks of reserves within and across national boundaries;

Urges the Botanic Gardens of the world to take an active part in aiding the conservation *in situ* of the floras and plants of the regions in which they are situated;

Calls upon the Botanic Gardens to cooperate with land-use agencies to provide data and to train staff in those aspects of the conservation and monitoring of flora that will aid the management of plants in protected areas.



## RECOMMENDATION 7

### CRITICALLY THREATENED ENVIRONMENTS

Recognising the threat confronting many fragile ecosystems consisting of highly specialised and endemic floras;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Calls upon Governments, conservation organizations and aid agencies to support Botanic Gardens and related institutions involved with the most critically threatened plant ecosystems, particularly rain forests, wetlands, Mediterranean-type vegetation like the Cape Fynbos, and island ecosystems.

## RECOMMENDATION 8

### PLANT RECORDS

Acknowledging that Botanic Gardens have kept plant records in various forms for centuries;

Being aware that the needs of conservation have placed even greater emphasis on full and accurate records, especially on the origins of wild source plants;

Recognising that computerisation can bring benefits of up-to-date retrieval and data exchange;

Recognising the need for the international exchange of data between gardens and between gardens and IUCN;

Appreciative of the experience of those Gardens which have computerised their plant records, for example the Botanic Garden network in the Netherlands;

Realising that many more gardens are about to computerise their records;

Considering that now is an ideal time to agree minimal data standards for the storage and exchange of plant data;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Recommends Botanic Gardens to computerise their plant records so as to aid management of their collections and to permit data exchange both between gardens and with international organisations;

Requests the IUCN Conservation Monitoring Centre to continue its work on the conceptual basis for computer record schemes and on the International Transfer Format (ITF) by further collaboration with Botanic Gardens.

## RECOMMENDATION 9

### AVAILABILITY OF GERM PLASM

Aware that the world community has a responsibility to conserve wild plants and their genetic diversity;

Recognising that a very wide spectrum of plant resources is necessary to combat desertification, stop erosion, restore the vegetation of degraded lands and to provide the basic materials necessary to ensure present and future supplies of food, timber, fuelwood, fibre, medicines as well as a host of other products;

Realising that plants do not recognize political frontiers and that many plants are extremely well suited for cultivation in places far from their native localities;

Certain that the success of conservation efforts to preserve useful or potentially useful plants, especially those threatened by the destruction of ecosystems, may depend upon the free exchange of germ plasm;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Recommends Governments and international organizations to facilitate the full availability of plant material of threatened species, under adequate quarantine and related measures.



## RECOMMENDATION 10

### CONSERVATION RESEARCH

Recognising that a sound information base, well managed and accessible, is of critical importance for effective conservation;

Further recognising the lack of available information about plants and the central rôle of taxonomy in organising this information and making it available, and that insufficient is known about the chemistry, cytology, physiology (including seed physiology), autecology, reproductive biology, methods of cultivation and propagation, which are essential for plant conservation both *in situ* and *ex situ*;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Calls upon Botanic Gardens to incorporate conservation-oriented research into their programmes as a matter of urgency, including taxonomy, chemistry, cytology, physiology (with seed physiology), autecology, reproductive biology and methods of cultivation and propagation;

Strongly endorses and reiterates to Governments, aid agencies and non-governmental organizations the calls for increased support for taxonomic and systematic research in the tropics and subtropics;

Recommends that as a matter of urgency relevant taxonomic and associated data should be made available for Botanic Gardens and other botanic institutions, using computerised data-bases wherever possible; —

Urges that Botanic Gardens and local herbaria should forge effective working links where these do not already exist.

## RECOMMENDATION 11

### EDUCATION AND PUBLIC AWARENESS

Recognising the vital importance of community understanding and awareness in achieving conservation of biological resources;

Acknowledging that Botanic Gardens of the world are visited by over 100 million people each year;

Aware of the increasing inadequacy of courses in many aspects of whole plant biology and systematics in schools and universities;

Accepting that Botanic Gardens are a unique resource for increasing the understanding of plants and plant conservation;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Calls on Governments, conservation organizations, schools and colleges, industry and concerned people to support educational programmes in Botanic Gardens by funding, moral support and direct involvement;

Urges Botanic Gardens to:

develop education programmes for people of different ages, backgrounds and interests;

engage people with professional training in education and botany to develop and implement programmes;

promote conservation education both within gardens and in the broader community;

engage in cooperative education programmes with conservation agencies, zoos, museums, societies and clubs;

Also calls upon Botanic Gardens and all media agencies, particularly television, to work together to generate a fuller understanding of how the plant kingdom is essential for the survival and well-being of all people on earth.



## RECOMMENDATION 12

### LIAISON AND TRAINING

Aware of the urgent need and desire of Botanic Gardens to develop long-term liaison through national, regional and twinning relationships leading to the North-South and South-South transfer of botanical science and technology;

Recognising the existence of training programmes offered by Botanic Gardens and their willingness to provide more opportunities for training;

The International Conference on Botanic Gardens and the World Conservation Strategy:

Recommends IUCN to validate formal agreements on long-term conservation action between two or more Botanic Gardens;

Recommends Botanic Gardens to provide suitable biological and horticultural training for staff responsible for critically threatened species;

Requests Botanic Gardens and other organisations to make known the existence of current training programmes and to encourage the provision of IUCN-validated conservation training.

## RECOMMENDATION 13

The members of the International Conference on Botanic Gardens and the World Conservation Strategy:

Wish to Express their profound gratitude to the Excmo. Gobierno de Canarias and to the Excmo. Cabildo Insular de Gran Canaria for their invitation to hold their meeting in Las Palmas de Gran Canaria, famed throughout the world for the beauty and rarity of its extraordinary plant life;

Congratulates the Excmo. Cabildo Insular on its foresight and commitment in establishing and maintaining the Jardín Canario Viera y Clavijo which is widely admired as a model, and in implementing their campaign to "Make Gran Canaria Green Again";

Welcomes the Declaration of Gran Canaria, which will be seen as a major contribution to the world conservation movement;

Wishes to thank all the sponsoring and supporting institutions for their generous financial support and all the individuals, especially the Director and Staff of the Jardín Canario Viera y Clavijo, for their work in making this conference possible.

# THE HISTORY OF THE

## REPUBLIC OF THE UNITED STATES

The history of the Republic of the United States is a story of the growth of a great nation from a small colony of English settlers. The first settlers came to the New World in 1607, seeking a new home for themselves and their families. They found a land of vast resources and potential, but also one of great challenges. The early years were marked by hardship and struggle, as the settlers fought to survive in a hostile environment. Despite these difficulties, they persevered and built a new society based on the principles of freedom and democracy. Over the centuries, the United States has grown from a small colony to a great power, playing a leading role in the world. The history of the Republic is a testament to the resilience and spirit of the American people, who have overcome countless obstacles to build a nation of unparalleled greatness.



## IUCN

The International Union for Conservation of Nature and Natural Resources (IUCN) is a network of governments, non-governmental organizations (NGOs), scientists and other conservation experts, joined together to promote the protection and sustainable use of living resources.

Founded in 1948, IUCN has more than 500 member organizations from 116 countries, including 58 State Members. Its six Commissions consist of more than 2000 experts on threatened species, protected areas, ecology, environmental planning, environmental policy, law and administration, and environmental education. IUCN

- \* monitors the status of ecosystems and species throughout the world;
- \* plans conservation action, both at strategic level through the World Conservation Strategy and at the programme level through its programme of conservation for sustainable development;
- \* promotes such action by governments, inter-governmental bodies and non-governmental organizations;
- \* provides the assistance and advice necessary to achieve such action.

From 1984 IUCN and the WWF have been implementing a Plant Conservation Programme, designed "to assert the fundamental importance of plants in all conservation activities". The production of this booklet is a part of this programme.

