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FAO GLOBAL SYSTEM FOR THE CONSERVATION AND UTILIZATION OF PLANT GENETIC RESOURCES PROGRESS REPORT AND MATTERS FOR DECISION BY THE CONFERENCE

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FAO GLOBAL SYSTEM FOR CONSERVATION AND UTILIZATION OF PLANT GENETIC RESOURCES

PROGRESS REPORT AND MATTERS FOR DECISION BY THE CONFERENCE

1. INTRODUCTION

1.1 Introduction

1. In recent years, due largely to the work of the Commission on Plant Genetic Resources (CPGR), a broad intergovernmental consensus on plant genetic ressources has emerged. The Third and Fourth Sessions of the CPGR have contributed to reinforce the structure so that the Global System on Plant Genetic Resources may come into full operation. This paper describes the evolution of the Global System, its component parts, and the state of their development, in the light of the conclusions and recommendations of the Fourth Session of the Commission (15-19 April 1991) that have been endorsed by the Ninety-ninth Session of the FAO Council (10-21 June 1991).

2. World interest in plant genetic resources has grown rapidly in recent years, because they represent both the raw material used in the production of new cultivars - either through traditional plant breeding or the use of biotechnology - and a reservoir of genetic adaptability that acts as a buffer gainst harmful environmental change. It has been recognized that the erosion of these resources severely threatens world food security. The urgent need to conserve and utilize plant genetic resources as a safeguard against an unpredictable future is clear, The advent of new biotechnologies, able to use a wider range of plant genetic resources, has also stimulated great interest in both public and private research institutions. The prospect of dwindling plant genetic diversity, coupled with dramatically increased demands on these resources, has propelled them into the centre of global discussions on the environment and sustainable development.

3. The last few years have seen a growing realization of the greatly increased value of plant germplasm, due to the fact that rapid genetic erosion has shown that it is not an unlimited or replenishable resource, and that the new biotechnologies have greatly expanded the frontiers of its utilization. This has already resulted in a number of formal or practical restrictions on the availability of germplasm. Since the relative value of plant genetic resources will continue to grow rapidly in the near future, it has become clear that plant germplasm needs to be protected for the use of future generations, and its availability for scientific purposes ensured through equitable agreements at an international level.

2. THE FAO GLOBAL SYSTEM ON PLANT GENETIC RESOURCES

2.1 Development and Components

4. As germplasm of major crops was collected and stored in genebanks, questions of the safety of the material, the ownership of collections, the development of national laws restricting the availability of germplasm, and intellectual property rights over new varieties, became the subject of continuing debate. Such discussions were already significant during the Twentieth Session of the FAO Conference, in 1979. As the number of

activities related to plant genetic resources increased, the need was recognized to establish ways of coordinating intergovernmental action at a global level, in order to avoid duplication, and foster complementarity among the national, regional and international organizations involved. It was also recognized that, to be successful, any system to be developed should benefit all participants, and fully take into account the rights of the donors of germplasm, funds and technology, and the obligations of the recipients. As a result of these discussions, FAO has, since 1983, developed a Global System on Plant Genetic Resources.

5. The objectives of the Global System are to ensure the safe conservation, and promote the unrestricted availability and sustainable utilization of plant genetic resources for present and future generations, by providing a flexible framework for sharing the benefits and burdens. The System covers the conservation (ex situ and in situ) and utilization of plant genetic resources - genes, genotypes and genepools - at molecular, population, species and ecosystem level.

6. The basic institutional components of the system are (i) a flexible framework, the International Undertaking; (ii) a unique intergovernmental forum, the Commission; and (iii) the beginning of a financial mechanism, the International Fund for Plant Genetic Resources.

7. To date, 128 countries are formally part of the Global System, by becoming members of the Commission, or adhering to the International Undertaking, or taking both steps (Appendix I).

2.1.1 The Commission on Plant Genetic Resources

8. The Commission on Plant Genetic Resources was established following Resolution 9/83 of the Twenty-second Session of the FAO Conference. It is a unique intergovernmental global forum, where countries that are donors or users of germplasm, information, technology and funds, can discuss, on an equal footing, matters related to plant genetic resources, and monitor the implementation of the principles contained in the International Undertaking. The Commission functions on the basis of "one country, one vote". As of July 1991, 111 countries had joined the Commission.

9. During the first two Sessions of the Commission, in March 1985 and 1987, the major reservations raised regarded: (i) the compatibility of the Undertaking with national laws related to Plant Breeders' Rights; (ii) the need to compensate the donors of germplasm; and (iii) the possible overlap between the Commission and other organizations dealing with plant genetic resources.

10. The Third Session of the Commission, in April 1989, greatly contributed to resolving such questions. It achieved an Agreed Interpretation of the International Undertaking that recognizes the rights of both donors of technology and donors of germplasm to be compensated for their contribution, through the simultaneous and parallel recognition of Plant Breeders' and Farmers' Rights. This was endorsed by the Twenty-fifth Session of the FAO Conference in two resolutions (Resolution 4/89 on the Agreed Interpretation and Resolution 5/89 on Farmers' Rights) which are now Annexes to the International Undertaking. The Third Session of the

Commission also clarified the unique intergovernmental role of the Commission in monitoring the implementation of the Undertaking, and in ensuring the comprehensiveness and efficiency of the Global System, in coordination with the various national, regional and international organizations dealing with plant genetic resources.

11. During this process, new questions have been raised resulting in the identification of problems regarding (i) the availability of plant breeder's lines; (ii) the implementation of Farmers' Rights; and (iii) the sovereign rights over plant genetic resources. The Fourth Session of CPGR has discussed these points and attempted to resolve the emerging problems through a draft Resolution (see paras 29, 30 and 43 and Appendix II) which may become a third Annex to the International Undertaking.

2.1.2 The International Undertaking on Plant Resources

12. The International Undertaking was established by Resolution 8/83 of the Twenty-second Session of the FAO Conference. It is a non-binding agreement, the objective of which is to ensure that plant genetic resources, especially species of present or future economic and social importance, are explored, collected, conserved, evaluated, utilized and made available, for plant breeding and other scientific purposes. It is based on the principle that plant genetic resources, as part of the heritage of mankind, should be conserved for future generations. This principle, which is subject to the overriding sovereign rights of nations over their genetic resources, has been qualified by FAO Conference Resolutions which are Annexes to the International Undertaking. These Resolutions have enabled a number of countries to remove their original reservations to the Undertaking. As of July 1991, 102 countries had adhered to the International Undertaking. The USSR adhered to it during the last Session of the Commission.

2.1.3 The International Fund for Plant Genetic Resources

13. The International Fund for Plant Genetic Resources was established by FAO in 1988 pursuant to Article 6 of the Undertaking. It provides a channel for countries, inter-governmental and non-governmental organizations, private industry, and individuals to support the conservation, and promote the use of plant genetic resources on a sustainable basis, at world level. Donors to the Fund may maintain their identity by earmarking their contributions for individual projects. The nature, scope and procedures of the Fund will evolve with the guidance of the Commission. It is expected to become a critical element in ensuring the equitability of the Global System, and the implementation of Farmers' Rights. The expenditure of funds, on a project and programme basis, might then be through national and regional institutions, or, where appropriate, through FAO Programmes or those of other institutions with technical competence in this field.

2.2 Other Components of the Global System Under Development

14. A number of other components of the Global System are being developed on the basis of decisions the Commission has taken in implementing the International Undertaking. These are described below. They are at varying stages of development. It must be noted that the financial constraints under which FAO has laboured in recent years have limited its ability to go forward with the range of activities necessary to put the Global System into full operation.

2.2.1 International Agreements and Arrangements

15. The Commission has considered one of its most important tasks to be the development of international agreements and arrangements to facilitate the conservation and use of plant genetic resources. Apart from the Annexes to the International Undertaking mentioned above, two codes of conduct are presently being developed: a code of conduct for collecting and transfer of plant germplasm and another on plant biotechnology. The codes were requested by the Third Session of the Commission. In order to prepare them, questionnaires were circulated to a large number of experts working in the field, seeking advice and recommendations on the objectives and contents of the codes. Experts from IBPGR and other relevant organizations were also consulted.

2.2.1.1 The International Code of Conduct for Plant Germplasm Collecting and Transfer

16. The Fourth Session of the Commission considered a draft Code of Conduct, prepared by the Secretariat in consultation with the Working Group of the CPGR, and endorsed in principle its provisions. The Commission, however, made a number of minor proposals, and suggested that member countries and observers send any further comments to the Secretariat before 1 July 1991.

17. The Code (see para. 43 and Appendix III), which is independent of the International Undertaking, will form an important tool in regulating the collection and transfer of plant genetic resources, with the aim of facilitating access to these resources, and promoting their utilization and development. The Code includes provisions for reporting, to enable the Commission to monitor its implementation.

2.2.1.2 Towards a Code of Conduct for Biotechnology, as it affects the conservation and use of plant genetic resources

18. The Fourth Session of the Commission generally agreed that the Code could address *inter alia* matters related to the promotion of the sustainable use of biotechnology in the conservation and utilization of plant genetic resources; the promotion of access to plant genetic resources; the promotion of biosafety so as to minimize environmental risks throughout the world; and the equitable sharing of the benefits of biotechnology between the developers of that technology and the donors of the germplasm it uses. The Commission recognized the need for expert consultations to elaborate the various aspects of the draft Code. The Council agreed that the draft Code of Conduct on Biotechnology should be prepared in a step-by-step manner, in close collaboration with the appropriate organizations.

2.2.2 Mechanisms to Facilitate the exchange of germplasm, information and technology

2.2.2.1 The network of ex situ base collections

19. The Fourth Session of the Commission considered a progress report, which includes the draft basic agreements between States and FAO for the establishment of a network of ex-situ base collections in gene banks under the auspicies and/or jurisdiction of FAO. The Council welcomed the offers made by a number of governments and instituions to contribute with their base collections or with space in their gene banks to the establishment of the network, including an offer of the Government of Norway for the establishment of an International Seedbank under permafrost conditions at Svalbard, Norway. It noted that progress has been made in this matter and supported the Commission's request that the Director-General initiate or continue negotiations with the governments and institutions involved.

20. The Fourth Session of the Commission endorsed the convening of a panel of technical experts, to work in collaboration with FAO and IBPGR in order to develop appropriate standards for gene banks operating within the international network. This joint exercise should lead to recommendations for seed storage and management standards that might then be endorsed by the Commission. In order to achieve maximum complementarity between the FAO network of base collections and the IBPGR register of base collections, efforts are under way to merge them to the extent possible (see para 41).

2.2.2.2 The network of in situ conservation

21. The Council recognized the complementarity of the in situ and ex situ strategies for the conservation of plant genetic resources. It noted the discussion of the Commission on the possible establishment of a network of in situ conservation areas and recognized the main responsibility of FAO in in situ conservation of wild relatives of cultivated plants, as well as in promoting "on farm" conservation and utilization of land races while recognizing the importance of cooperation with other relevant organizations. It welcomed the offer of Indonesia and the Islamic Republic of Iran in the establishment of well-focused pilot-scale activities on in situ conservation. Primary emphasis would be laid on intra-specific diversity of plant genetic resources of actual or potential socio-economic value for food and agriculture.

22. The Council also supported the Commission's recommendation that information on the needs for, and benefits of, in situ conservation be made available at policy-making, technical and grassroot levels, and that increased effort be made to help build up and strengthen the national and local institutes involved. An absolute priority was the training of national expert personnel, in the countries in which the resources to be conserved occurred. Management strategies should be flexible, and be able to incorporate new research and improved techniques.

2.2.2.3 The Global Information and Early Warning System on Plant Genetic Resources

23. The Fourth Session of the Commission agreed that the purpose of the global Information and Early Warning System on Plant Genetic Resources (PGR/GIS) will be to collect and disseminate data and facilitate the exchange of information on plant genetic resources and related technologies. A main component will be a constantly updated database of databases, covering economically important species. Another basic component of the system would be the information provided by periodic national reports, pursuant to Article 11 of the International Undertaking, through questionnaires prepared by the Secretariat. The cooperation of the countries in providing the national reports and filling in the questionnaires would be essential for the success of the System. The Commission also agreed that the PGR/GIS include an Early Warning System (PGR/EWS) to draw rapid attention to hazards threatening the operation of genebanks holding base collections, and to the danger of the extinction of plant species and the loss of genetic diversity throughout the world.

24. The Council noted the Commission's discussions on "mechanisms to facilitate the exchange of germplasm information and technology", including the Global Information and Early Warning System on PGR and endorsed the Commission's recommendation to reorganize the FAO Seed Laboratory as the Plant Information and Exchange Unit, and to expand the Seed Information System into the Global Information and Early Warning System on Plant Genetic Resources.

2.2.3 The State of the World's Plant Genetic Resources

25. The Commission discussed the preparation of a periodic report on the "State of the World's Plant Genetic Resources" (PGR/SW) and agreed that the report will describe the state of the art, and cover all aspects of the conservation and utilization of plant genetic resources, as well as activities and programmes being carried out by regional, international and non-governmental organizations, with the aim of identifying gaps, constraints, and emergency situations.

26. The Council agreed that PGR/SW should be an authoritative document that would guide international discussions regarding plant genetic resources. The document should concentrate on plant genetic resources of interest to agriculture and forestry, and agreed that a small independent experts group, with balanced regional representation, be established to assist in its preparation. It will be prepared in cooperation with IBPGR and other relevant organizations and it will provide the basis for the preparation of a Global Action Plan.

2.2.4 The Global Plan of Action on Plant Genetic Resources

27. The Fourth Session of the Commission agreed on the need to develop a Global Action Plan on Plant Genetic Resources aimed at rationalizing and coordinating efforts in this area. The Commission stressed that the major national and international agencies and institutions expected to be involved in the implementation and financing of the plan should be involved in its preparation in order to:

(i) promote the most adequate use of the available funds, whether provided bilaterally or multilaterally;

(ii) ensure coordination of the activities and programmes of the Global Plan of Action within a clear global framework; thereby avoiding duplication of effort;

(iii) discuss the division of responsibilities in the Plan of Action among prospective implementating institutions; and

(iv) identify priorities, emergency situations, and gaps in the work.

28. The Council stressed that the major parties to be involved in the implementation of the Plan, should also be involved in its preparation, thereby ensuring effective coordination, and avoiding duplication of activities and waste of resources. The Council recognized the importance of regional participation in the preparation of the PGR Global Plan of Action and the State of The World's PGR.

2.2.4.1 Financing the Global Plan of Action through the Implementation of Farmers' Rights

29. The Council agreed that the best way to implement Farmers' Rights could be through an international fund to finance a PGR Global Plan of Action. It also agreed that as conservation and sustainable use of PGR was a continuing need, the international fund should be sustainable and transparent.

30. Pursuant of this subject, the proposed third Annex to the International Undertaking presented as a draft Resolution (see paras 11 and 43 and Appendix II) states in its executive paragraphs that:

(i) Farmers' Rights will be implemented through an international fund on plant genetic resources which will support plant genetic conservation and utilization programmes;

(ii) the international fund as well as other funding mechanisms should be substantial, sustainable and based on the principles of equity and transparency; and

(iii) through the Commission on Plant Genetic Resources, the donors of genetic resources, funds and technology will determine and oversee the policies, programmes and priorities of the fund and other funding mechanisms, with the advice of the appropriate bodies.

2.3 The Fourth International Technical Conference

31. The Commission and the Council supported that FAO convene the Fourth International Technical Conference on Plant Genetic Resources (see para. 43 and Appendix IV) to follow on the three previous conferences convened by FAO in 1967, 1973 and 1981. It was also agreed that the proposed Conference be funded through extra-budgetary contributions by countries, preferably through the International Fund for Plant Genetic Resources, and that, the drafts of the first State of the World's Plant Genetic Resources, and the first Global Plan of Action for Plant Genetic

Resources should be prepared through preparatory technical meetings within the framework of this Technical Conference. The Commission also recommended that the Technical Conference be followed by a meeting to define the financial commitments needed for the implementation of the Global Plan of Action, and the terms and conditions of financing.

32. The Council noted that the cost of the International Technical Conference, including the technical meetings for the preparation of the first State of the World's PGR and the Plan of Action on PGR were estimated at about US$ three million. During the meeting, a number of countries expressed their willingness to explore supporting the costs of, and providing technical assistence for the Conference, and the Council joined the Commission in requesting the Director-General to initiate consultations with potential donor countries, so as to secure the necessary extra-budgetary funds.

3. OTHER MATTERS

3.1 Regionalization of the Work of the Commission

33. The Commission and the Council recommended that FAO, through its Regional Conferences, should promote and strengthen intergovernmental and regional cooperation and structures in this field, and that the matter should be an agenda item at FAO Regional Conferences as of 1992: the discussion would be of value in the preparation of the State of the World's PGR and Plan of Action on Plant Genetic Resources. The Commission considered that this might bring about a regionalization of its work, and facilitate global discussions in the CPGR sessions.

3.2 Relationship between the Commission and Relevant Organizations

34. The Commission and the Council expressed satisfaction that IBPGR reported its activities to the Commission. The Council welcomed the request of the Commission to invite other relevant organizations, in particular, the International Agricultural Research Centres of the CGIAR, IUCN and WWF, to report on their programmes and activities on the conservation and use of plant genetic resources. It was felt it would be of value both to the Commission and to those organizations which would thereby be able to better acquaint countries that are donors of germplasm and funds with their objectives and programmes, and benefit from their comments.

3.3 Working Group of the Commission

35. The procedures for selecting members of the Working Group, and its Chairman, were discussed by the last Session of the Commission, and the view was expressed that this should be done on the basis of a system of rotation.

3.4 Biodiversity and Plant Genetic Resources

36. The Commission and the Council emphasized the role of FAO on the conservation and sustainable use of biological and genetic diversity of interest to agriculture, forestry and fishery. In response to the Ninety-eighth Session of the Council request, FAO has made reports on the Global System available for UNEP and UNCED meetings related to biodiversity. The Ninety-ninth Session of the Council welcomed, with satisfaction, the

invitation of UNEP to include an FAO staff member in the Secretariat that will serve the Ad Hoc Working Group of Legal and Technical Experts on Biological Diversity, which has been recently renamed "Intergovernmental Negotiating Committee for a Convention on Biological Diversity" by the UNEP Governing Council.

37. The Commission and the Council agreed that it was premature to transform the International Undertaking on Plant Genetic Resources into a binding legal agreement. They did not, however, exclude the possibility that in due time the Undertaking may become a protocol of the proposed Convention on biological diversity, after appropriate modifications are made.

38. The Council agreed with the Commission that the introduction of new complex elements might make the Commission's task less manageable, and dilute its effectiveness. Therefore, at this stage it did not support the widening of its mandate. It considered that the matter might be reconsidered later by a group of experts.

3.5 Biotechnology and Plant Genetic Resources

39. The Fourth Session of the Commission recognized the great potential of biotechnology of the conservation and use of plant genetic resources (see para 18). The Council agreed with the Commission that particular emphasis should be put on training scientists and technicians of the developing countries in the use of appropiate technologies, especially biotechnologies, so as to ensure the effective transfer and utilization of such knowledge.

3.6 FAO Activities on Plant Genetic Resources

40. The Fourth Session of the Commission agreed that conservation will mainly benefit those countries that have the technical, economic and human capabilities to make use of plant genetic resources through plant breeding and seed production, including the use of biotechnologies, and that conservation might eventually even become a burden, especially to developing countries. The Commission recommended that FAO, particularly the departments of agriculture and forestry, strengthen its programmes and activities on the conservation and use of plant genetic resources in less developed Member Nations, in cooperation, when appropriate, with other relevant organizations.

3.7 FAO/IBPGR Cooperation

41. The Council noted with satisfaction that the cooperation agreed upon in the Memorandum of Understanding on Programme Cooperation between FAO and IBPGR included aspects related to the preparation of the State of the World's PGR, the development of the Global Information and Early Warning System and the merging, to the extent possible, of the "FAO network of base collection and the IBPGR registry of base collection". The Council expressed its appreciation to the IBPGR for reporting its activities to the Commission.

3.8 Eastern Europe

42. The Commission and the Council recognized that the changes in Eastern Europe may be affecting the safety of the area's plant genetic resources, and that there was a need to support national programmes to overcome possible difficulties.

4. MATTERS FOR DECISION BY THE CONFERENCE

43. The various institutional elements of the Global System are now in place. Many of the legal and political difficulties that existed in the field of plant genetic resources have been overcome through the work of the Commission. The Ninety-ninth Session of the Council discussed the report of the Fourth Session of the CPGR and endorsed its recommendations.

The Conference may wish:

(1) To consider and possibly adopt a draft Resolution that may become the third Annex to the International Undertaking on Plant Genetic Resources (see paras 11 and 29 and 30 and Appendix II).

The Council, at its Ninety-ninth Session, agreed to submit the text to the next Session of the Conference for its consideration and possible adoption (CL 99/REP para. 89).

The draft Resolution states that (i) plant breeder's lines and farmers' breeding material should only be available at the discretion of their developers; (ii) Farmers' Rights should be implemented through an International Fund to support conservation and utilization of plant genetic resources with policies, programmes and priorities to be determined by the Commission; and (iii) nations have sovereign rights over their plant genetic resources.

(2) To consider and possibly adopt the draft International Code of Conduct for Plant Germplasm Collecting and Transfer (see paras 16-17 and Appendix III).

The Council agreed that the Code should be of a voluntary nature and requested that the suggestions made by Commission and Council members be incorporated in a revised text (CL 99/REP para. 98). As the redrafting has not called for any substantive modification to the document already examined by the Council, the Secretariat is presenting the revised text for Conference endorsement.

(3) To give its guidance and approval on the convening, by FAO, of the Fourth International Technical Conference on Plant Genetic Resources, to be financed through extra-budgetary funds (see paras 31 and 32 and Appendix IV).

The Council strongly supported the convening of the Technical Conference and agreed that during the preparatory process for such a Conference, both the first State of the World's PGR and the Global Plan of Action on PGR would be prepared (CL 99/REP para. 90).

The Technical Conference could be scheduled for the end of 1993 or early 1994, and organized in cooperation with other relevant organizations, in particular the IBPGR and other CGIAR centres.

(4) To consider and endorse the Council's recommendation that urgent studies should be undertaken by FAO to identify any possible danger to the germplasm stored in genebanks and propose solutions.

Such studies should be undertaken in the countries of Central and Eastern Europe (see para 42, and CL 99/REP para. 102). Studies might also be undertaken in regard to some developing countries, where national plant genetic resources programmes for conservation are facing increasing difficulties.

Figure 1: FUNCTION OF THE GLOBAL SYSTEM

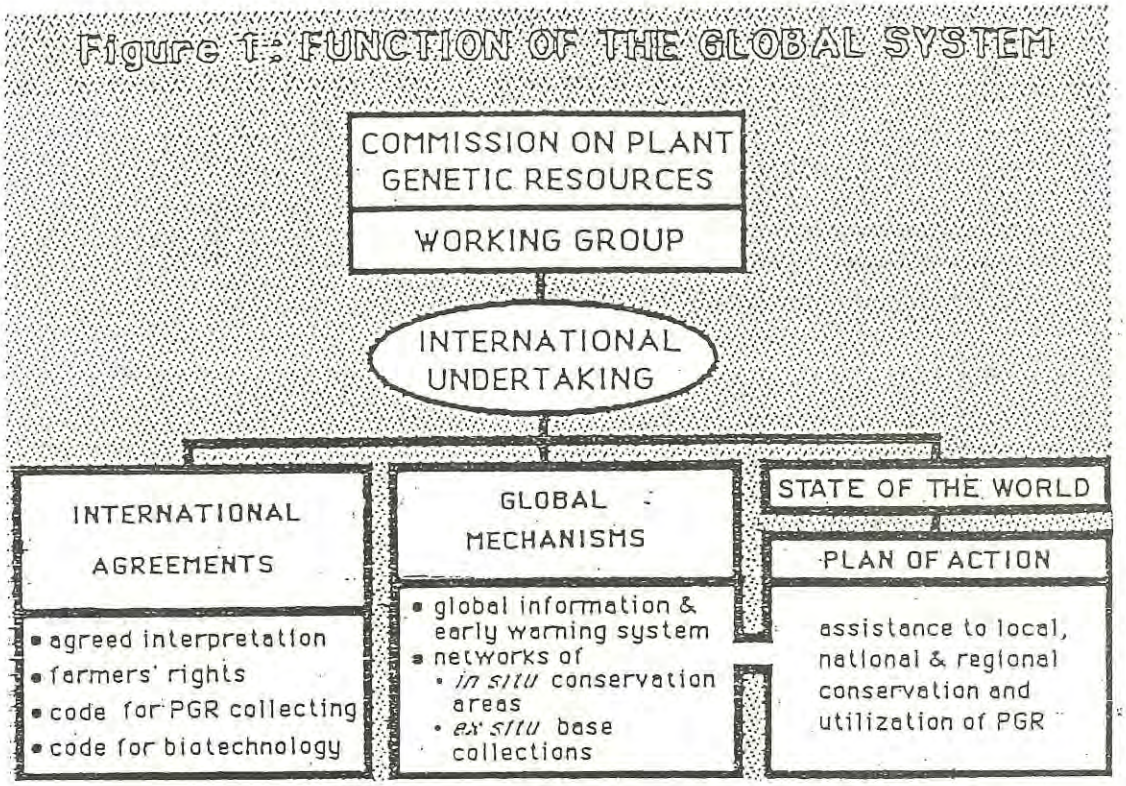
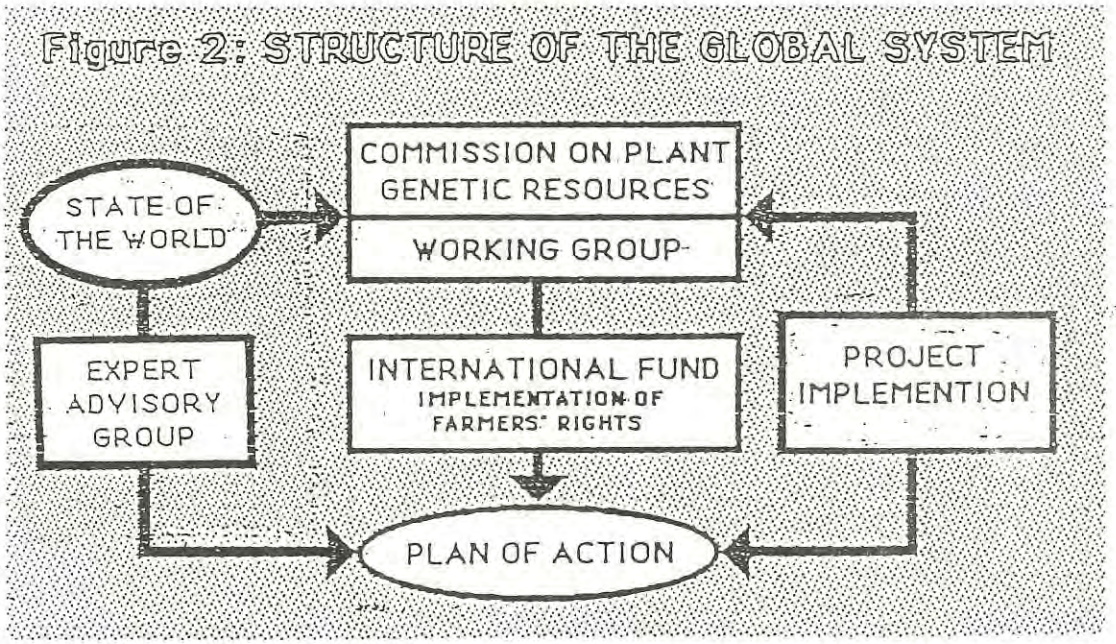


Figure 2: STRUCTURE OF THE GLOBAL SYSTEM



APPENDIX A

August 1991

MEMBERS OF THE FAO COMMISSION ON PLANT GENETIC RESOURCES AND/OR COUNTRIES WHICH HAVE ADHERED TO THE INTERNATIONAL UNDERTAKING ON PLANT GENETIC RESOURCES

AFRICA

BENIN 1/2/
BOTSWANA 1/
BURKINA FASO 1/2/
CAMEROON 1/2/
CAPE VERDE 1/2/
CENTRAL AFRICAN REP. 1/2/
CHAD 1/2/
CONGO 1/2/
COTE D'IVOIRE 2/
EQUATORIAL GUINEA 1/2/
ETHIOPIA 1/2/
GABON 2/
GAMBIA 1/
GHANA 1/2/
GUINEA 1/2/
GUINEA-BISSAU 1/
KENYA 1/2/
LIBERIA 1/2/
MADAGASCAR 1/2/
MALAWI 2/
MALI 1/2/
MAURITANIA 1/2/
MAURITIUS 1/2/
MOROCCO 1/2/
MOZAMBIQUE 2/
NIGER 1/2/
RWANDA 1/2/
SENEGAL 1/2/
SIERRA LEONE 1/2/
SUDAN 1/2/
TANZANIA 1/2/
TOGO 1/2/
UGANDA 1/
ZAIRE 1/
ZAMBIA 1/2/
ZIMBABWE 1/2/

ASIA AND THE SOUTH WEST PACIFIC

AUSTRALIA 1/
BANGLADESH 1/2/
DEMOCRATIC PEOPLES' REP. OF KOREA 1/2/
FIJI 2/
INDIA 1/2
INDONESIA 1/
JAPAN 1/
KOREA, REP. OF 1/2/
MYANMAR 1/
NEPAL 2/
NEW ZEALAND 2/
PAKISTAN 1/
PHILIPPINES 1/2/
SAMOA 1/2/
SOLOMON ISLANDS 2/
SRI LANKA 1/2/
THAILAND 1/
TONGA 2/
VANUATU 1/

EUROPE

AUSTRIA 1/2/
BELGIUM 1/2/
BULGARIA 1/2/
CYPRUS 1/2/
CZECHOSLOVAKIA 1/
DENMARK 1/2
FINLAND 1/2/
FRANCE 1/2/
GERMANY 1/2/
GREECE 1/2/
HUNGARY 1/2/
ICELAND 1/2/
IRELAND 1/2/
ISRAEL 1/2/
ITALY 1/2/
LIECHTENSTEIN 2/
NETHERLANDS 1/2/
NORWAY 1/2/
POLAND 1/2/
PORTUGAL 1/2/
SPAIN 1/2/
SWEDEN 1/2/
SWITZERLAND 1/2/
TURKEY 1/2/
UNITED KINGDOM 1/2/
USSR 2/
YUGOSLAVIA 1/2/

LATIN AMERICA AND THE CARIBBEAN

ANTIGUA & BARBUDA 2/
ARGENTINA 1/2/
BARBADOS 1/2/
BELIZE 1/2
BOLIVIA 1/2/
BRAZIL 1/
CHILE 1/2/
COLOMBIA 1/2/
COSTA RICA 1/2/
CUBA 1/2/
DOMINICA 1/2/
DOMINICAN REP. 1/2/
ECUADOR 1/2/
EL SALVADOR 1/2/
GRENADA 1/2/
GUATEMALA 1/
GUYANA 1/
HAITI 1/2/
HONDURAS 1/2/
JAMAICA 2/
MEXICO 1/2/
NICARAGUA 1/2/
PANAMA 1/2/
PARAGUAY 2/
PERU 1/2/
SAINT CHRISTOPHER AND NEVIS 1/
SAINT LUCIA 1/
SAINT VINCENT AND THE GRENADINES 1/
SURINAME 1/
URUGUAY 1/
VENEZUELA 1/

NEAR EAST

AFGHANISTAN 1/
BAHRAIN 2/
EGYPT 1/2/
IRAN, ISLAMIC REP. OF 1/2/
IRAQ 1/2/
JORDAN 1/
KUWAIT 2/
LEBANON 1/2/
LIBYA 1/2/
OMAN 2/
SYRIA 1/2/
TUNISIA 1/2/
YEMEN 1/2/

NORTH AMERICA

CANADA 1/
UNITED STATES OF AMERICA 1/

1/ Members of the Commission.
2/ Countries which have adhered to the Undertaking.

The above totals 128 countries which have become members of the Commission (111) or which have adhered to the Undertaking (102).

APPENDIX B

Extract from the Ninety-ninth Session of the Council

DRAFT CONFERENCE RESOLUTION ANNEX 3 TO THE INTERNATIONAL UNDERTAKING ON PLANT GENETIC RESOURCES

THE CONFERENCE

Recognizing that:

- the concept of mankind heritage, as applied in the International Undertaking on Plant Genetic Resources, is subject to the sovereignty of the states over their plant genetic resources;
- the availability of plant genetic resources and the information, technologies and funds necessary to conserve and utilize them, are complementary and of equal importance;
- all nations can be contributors and beneficiaries of plant genetic resources, information, technologies and funds;
- conditions of access to plant genetic resources need further clarification.

Considering that:

- the best way to guarantee the maintenance of plant genetic resources is to ensure their effective and beneficial utilization in all countries;
- the farmers of the world have, over the millennia, domesticated, conserved, nurtured, improved and made available plant genetic resources, and continue to do so today;
- advanced technologies and local rural technologies are both important and complementary in the conservation and utilization of plant genetic resources;
- in situ and ex situ conservation are important and complementary strategies for maintaining genetic diversity.

Endorses the following points:

1. that nations have sovereign rights over their plant genetic resources;
2. that breeders' lines and farmers' breeding material should only be available at the discretion of their developers during the period of development;

3. that farmers' rights will be implemented through an international fund on plant genetic resources which will support plant genetic conservation and utilization programmes, particularly, but not exclusively, in the Third World;

4. that the effective conservation and sustainable utilization of plant genetic resources is a pressing and permanent need and therefore the resources for the international fund as well as for other funding mechanisms should be substantial, sustainable and based on the principles of equity and transparency;

5. that through the Commission on Plant Genetic Resources, the donors of genetic resources, funds and technology will determine and oversee the policies, programmes and priorities of the fund and other funding mechanisms, with the advice of the appropriate bodies.

APPENDIX C

DRAFT INTERNATIONAL CODE OF CONDUCT FOR PLANT GERMPLASM COLLECTING AND TRANSFER

Table of Contents

INTRODUCTION

The Commission on Plant Genetic Resources (CPGR) considered the development of international agreements for the conservation and use of plant genetic resources to be an important task and recommended the preparation of a Code of Conduct for international collectors of germplasm "to also cover the conservation and use of plant genetic resources".

A primary function of the Code is to serve as a point of reference until such time as indicidual countries establish their own codes, or regulations for germplasm collection, conservation, exchange and use. It has drawn upon the example of the FAO Code of Conduct on the Distribution and Use of Pesticides, which was published in 1986, and has served as a model for regulations in more than twenty countries. The need for a code of conduct for international collectors of germplasm has been recognized by many countries, but has not yet been formally addressed, in technical and legal terms. Such an international agreement may also guide collecting missions to other countries, or those involving scientists or sponsors from other countries, in ways that individual national codes not adequately do.

Unlike other codes of conduct for plant collectors that have been developed and implemented by governments and professional bodies, this Code does not only provide standards of ethical field behaviour for collectors; it maintains that sponsors, curators and users have long-term responsibilities of the planning and approval of collecting missions, the management of germplasm collections, and the transfer, conservation and use of germplasm. Although the terms of this Code relate primarily to international collecting missions, as requested by the FAO Commission on Plant Genetic Resources, its ethical standards, and the principle of fully involving local communities, and caretakers of plant genetic resources, also apply to national collecting missions.

The Code of Conduct does not affect in any way the sovereign rights of nations over their plant genetic resources. It is intended as a set of standards to be observed by those who voluntarily adhere to the principles it embodies. It is intended that the Code should not put undue responsibilities, so as to protect both collectors and donors of germplasm.

DRAFT INTERNATIONAL CODE OF CONDUCT FOR PLANT GERMPLASM COLLECTING AND TRANSFER

The overriding purpose of this Code of Conduct is to contribute within the context of the FAO Global System on Plant Genetic Resources, to the conservation and rational use of biodiversity for sustainable development by providing broad guidelines for plant germplasm collection and transfer.

CHAPTER I

Objectives and Definitions

Article 1: Objectives

The standards set forth in this Code have the following objectives:

1.1 to promote the collection, conservation and use of plant genetic resources, in ways that respect the environment and the local traditions and cultures;

1.2 to foster the direct participation of farmers, scientists and organizations in countries where germplasm is collected, in programmes and actions aimed at the conservation and use of plant genetic resources;

1.3 to avoid genetic erosion and permanent loss of resources through the collection of germplasm;

1.4 to promote the safe exchange of plant genetic resources, as well as the exchange of related information and technologies;

1.5 to ensure that any collecting of germplasm is undertaken in full respect of national laws, local customs, rules and regulations, including the quarantine requirements of the country of origin and/or of destination;

1.6 to provide appropriate standards of conduct to define obligations of collectors;

1.7 to suggest ways for a better sharing of benefits and burdens between the users and donors of plant genetic resources, related information and technologies;

1.8 to recognize the rights and needs of communities of farmers, of caretakers of wild plant resources, and to promote mechanisms (i) to avoid that the benefits obtained from these resources are undermined by their transfer to and use by others, (ii) to facilitate mechanisms of compensation for their contribution;

1.9 to suggest ways in which the users of collected germplasm may subsequently pass on the benefits derived from it, including information regarding scientific studies, to caretakers, scientists and farming communities of the host country;

1.10 to serve as a set of general principles which governments may wish to use in developing their national regulations, or formulating agreements.

Article 2: Definitions

2.1 "Caretakers" means local communities and /or local farmers, who maintain genetic diversity in their environments and farming systems.

2.2 "Collector" means any legal entity or natural person that collects plant genetic resources and related information;

2.3 "Curator" means a person or organization, within the host country or elsewhere, that conserves and manages plant genetic resources and related information.

2.4 Ex situ conservation" means the maintenance of organisms or their genetic material away from their natural environment.

2.5 "Genetic erosion" means loss of genetic diversity;

2.6 "In situ conservation" means the maintenance of organisms in their natural environment, or, in the case of domesticated organisms in the area where they have developed their distinctive properties;

2.7 "Plant genetic resources" or "plant germplasm" - means the reproductive or vegetative propagating material of plants;

2.8 "Sponsor" means an organization/agency which sponsors, financially or otherwise, a plant collecting mission;

2.9 "Farmers' Rights" means rights arising from the past, present and future contributions of farmers in conserving, improving, and making available plant genetic resources, particularly those in the centres of origin/diversity. These rights are vested in the International Community, as trustee for present and future generations of farmers, for the purpose of ensuring full benefits to farmers, and supporting the continuation of their contributions, as well as the attainment of the overall purposes of the International Undertaking.1/

1/ This definition is extracted from the FAO Conference Resolution 5/89.

CHAPTER II

Nature and Scope of the Code

Article 3: Nature of the Code

3.1 The Code is voluntary.

3.2 The Code should be published and observed through collaborative action by governments, appropriate organizations and professional societies, field collectors and their sponsors, and curators and users of plant germplasm.

3.3 The Code is addressed primarly to governments. It also addresses explorers and plant collectors, agricultural and botanical scientists, specialists on endangered species or habitat conservation, research institutes, botanical gardens, local communities, farmers, harvesters of wild plant resources, rural development specialists, agro-industry and the seed trade, national and international organizations, non-governmental organizations, and public-sector organizations such as environmental protection, cultural, and consumer groups. All persons and institutions addressed by this Code, should observe and promote the principles and practices which it embodies.

3.4 FAO and other pertinent organizations, including the World Conservation Union (IUCN), the Worldwide Fund for Nature (WWF), the United Nations Environment Programme (UNEP), the United Nations Educational, Scientific and Cultural Organization (Unesco), the Consultative Group on International Agricultural Research (CGIAR), in particular IBPGR, and international and national agricultural research institutions, are invited to promote full observance of the Code.

Article 4: Scope

4.1 The Code describes the shared responsibilities of collectors, donors, curators and users of germplasm so as to ensure that the collection, transfer and use of plant germplasm is accomplished with the maximum benefit to the international community, and with minimal adverse effects on the evolution of crop plant diversity and the environment. While initial responsibility must rest with field collectors and their sponsors, other obligations should extend to parties who may be funding or authorizing collection, or donating or subsequently conserving and using the germplasm. The Code emphasizes the need for cooperation and a sense of reciprocity among donors, curators and users of plant genetic resources.

4.2 The Code should enable national authorities to permit collecting activities within its territories without delay, provided that the requirements contained in this Code will be satisfied; it entitles national authorities to desire the fulfilment of specific requirements by collectors and sponsors according to national

provisions and conditions and obliges collectors and sponsors to respect the relevant national laws as the principles of this Code; FAO and the Commission should be enabled to monitor and evaluate the Code and to settle differences that may arise to the satisfaction of all parties concerned.

Article 5: Relationship with other legal provisions

5.1 The Code is designed to be used in harmony with:

(a) international agreements protecting biological diversity, including provisions restricting the spread of pests and diseases;

(b) the national laws of the host or donor country; and

(c) any agreements between the collector, host country, sponsors, and the genebank storing the germplasm.

5.2 Because the collection and movement of germplasm can result in the simultaneous transfer of pests and diseases, the provisions of the International Plant Protection Convention in restricting the spread of pests should be recognized.

CHAPTER III

Terms and Conditions for Licensing of Collectors

Article 6: Authority for Licensing

6.1 National governments have the sovereign right, and accept the responsibility to establish and implement national policies for the conservation and use of biological diversity, and within this framework, to issue licenses to collect within their national boundaries, and to suggest suitable ways of establishing mutually beneficial collaboration.

6.2 National governments should identify the authority competent issuing licenses. This authority should inform proposed collectors, sponsors, and the other agencies of the government's rules and regulations in this matter, and of the approval process to be followed, and of follow-up action to be taken.

Article 7: Procedures for requesting a license

To enable the licensing authority to arrive at a decision to grant or to decline permission, prospective collectors and sponsors should address a notification to the competent national authority through which:

(a) undertake to respect the relevant national laws and regulations;

(b) demonstrate knowledge on and familiarity with the species to be collected, their distribution and collections;

(c) provide indicative plans for the field mission - including the types of material to be collected, species and quantities - and the subsequent evaluation, storage and use of the material collected; where possible, the sort of benefits the host country may expect to derive from the collection of this germplasm should be indicated; the collector should be willing to modify plans, after consultation with the national and international agencies, or national authorities involved; and the collector should also be willing to provide the host country with duplicate sets of all samples, and, when available information - including evaluation information - regarding these samples;

(d) notify the host country of the kind of assistance, that may be required to facilitate the success of the mission;

(e) indicate, if the host country so desires, a willingness to cooperate with national scholars, scientists, students, non-governmental organizations and others who may assist or benefit from participation in the field mission or its follow-up activities;

(f) present to the licensing authority the list of national and foreign curators to whom the germplasm and information is intended to be distributed on the completion of the mission; and

(g) supply passport details of the collectors, and information on their scientific backgrounds.

Article 8: Procedures for granting a license

The licensing authority of the country in which a field mission proposes collecting plant genetic resources should:

(a) acknowledge the request expeditiously, indicating the estimated time needed to examine it;

(b) communicate expeditiously to the collectors and sponsors of the proposed collecting mission its decision. In case of a positive decision, the license should be granted expeditiously, and conditions of collaboration be established before the mission arrives in the country, or begins field work. If the decision is to prohibit or restrict the mission, whenever possible, the reasons behind it should be given. In order to facilitate collecting missions in difficult circumstances and areas, at the request of the parties involved, FAO can use its good offices to seek solutions to problems that may arise.

(c) indicate, when applicable, what categories and quantities of germplasm may or may not be collected or exported, and those which are required for deposit within the country; indicate areas and species which are governed by special regulation;

(d) explicitly inform collectors and their sponsors of any restrictions on travel or any modification of plans desired by the host country;

(e) state any special arrangement or restriction placed on the distribution or use of the germplasm, or improved materials derived from it;

(f) if desired, designate a national counterpart for the field mission, and/or for subsequent collaboration;

(g) define any financial obligation of collectors and sponsors in support of possible national participation in the collecting team, and other services to be provided; and

(h) provide the prospective collectors with the relevant information regarding the country, its genetic resources policy, germplasm management system, quarantine procedures, and all relevant laws and regulations. Particular attention should be drawn to the culture and the society of the areas through which the collectors will be travelling.

CHAPTER IV

Procedures for Collecting, and Responsibilities of Collectors

Article 9: Pre-collection

9.1 Upon arrival in the host country, collectors should discuss with their counterparts and other national scientists the collection of field data that might be of value in a variety of related disciplines; they should also acquaint themselves with unpublished research, or work in progress in the country, that might have a bearing on the mission.

9.2 Before field work begins, collectors and their national collaborators should discuss, and to the extent possible, decide on pratical arrangements including: (i) collecting priorities and stategies, (ii) information to be gathered during collection, (iii) processing and conservation arrangements for samples, and (iv) financial arrangements for the mission.

Article 10: During collection

10.1 Collectors should respect local customs, traditions, and values, and should demontrate a sense of gratitude and reciprocity towards local communities. Collectors should respond to their requests for information, germplasm or assistance, to the extent feasible.

10.2 The aquisition of germplasm should not deplete the populations of the farmers' planting stocks or wild species, or remove significant genetic variation from the local genepool, so as to increase the risk of genetic erosion.

10.3 When collecting cultivated or wild genetic resources, it is desirable that farming communities and caretakers of such resources be informed about the purpose of the mission, and about how and where they could request and obtain samples of the collected germplasm. If requested, duplicate samples should be also left with them.

10.4 Whenever germplasm is collected, the collector should systematically record the passport data, and describe in detail the plant population, its diversity, habitat and ecology, so as to provide curators and users of germplasm with an understanding of its original context. For this purpose, as much as local knowledge about the resources (including observations on environmental adaptation and local methods and technologies of preparing and using the plant) should be also documented; photographs may be of special value.

Article 11: Post-collection

Upon the completion of the field mission, collectors and their sponsors have a number of responsibilities. They should:

(a) process, in a timely fashion, the plant samples, and any associated microbial symbiants, pests and pathogens that may have been collected for conservation; the relevant passport data above should be prepared at the same time;

(b) deposit duplicate sets of all collections and associated materials, and records of any pertinent information, with the host country and other agreed curators;

(c) make arrangements with quarantine officials, seed storage managers and curators to ensure that the samples are transferred as quickly as possible to conditions which optimize their viability;

(d) obtain, in accordance with the importing countries' requirements, the phyto-sanitary certificate(s) needed for transferring the material collected;

(e) alert the host country and the FAO Commission on Plant Genetic Resources about any impending threat to plant populations, or evidence of accelerated genetic erosion, and make recommendations for remedial action; and

(f) prepare a consolidated report on the collecting mission, including the localities visited, the confirmed identifications and passport data of plant samples collected, and the distribution, at the end of the mission, of the germplasm for curation. Copies of it should be submitted to the host country's licensing authority, to national counterparts and curators, and for informational purposes to the FAO Commission on Plant Genetic Resources.

CHAPTER V

Responsibilities of Sponsors, Curators and Users

Article 12: Sponsors, Curators and Users

12.1 Sponsors and the curators of the collected germplasm, should take practical steps to ensure that future enquiries from the caretakers who provided the original material, and the host country, are responded to, and the samples of the plant germplasm collected are supplied upon request.

12.2 In order to ensure the continued availability of germplasm to plant improvement programmes on an equitable basis, users of germplasm should endeavour to give practical expression to the principles of Farmers' Rights and of mutual help and cooperation for sustained collection.

12.3 Without prejudicing the concept of Farmers' Rights and in order that the caretakers and the host country may also benefit directly from such collecting, the users of the germplasm should consider providing:

(a) some form of compensation for the benefits derived from the use of its germplasm in the development of new, improved varieties and other products, on mutually agreed terms;

(b) support for research of relevance to conservation and utilization of plant genetic resources, including community-based, conventional and new technologies, as well as conservation strategies, for both ex situ and in situ conservation;

(c) training, at both the institutional and farmer levels, to enhance local skills in genetic resources conservation, evaluation, development, propagation and use;

(d) facilitate the transfer of appropriate technology for the conservation and use of plant genetic resources;

(e) support for programmes to evaluate and enhance local land races and other indigenous germplasm, so as to encourage the optimal use of plant genetic resources at national, sub-national, and farmer and community level;

(f) grants or other appropriate support for farmers and communities for conservation of indigenous germplasm of the type collected by the mission; and

(g) scientific and technical information derived from the use of germplasm.

12.4 Curators should ensure that the collectors' original identification numbers, or codes, continue to be associated with the samples to which they refer, should other identification numbers, or codes, be subsequently assigned to these samples.

CHAPTER VI

Reporting, Monitoring and Evaluating the Observance of the Code

Article 13: Reporting by Governments

13.1 Governments adhering to this Code should from time to time inform the FAO Commission on Plant Genetic Resources of actions taken with regard to the application of this Code. When appropriate, this may be effected in the context of the yearly reports provided under Article 11 of the International Undertaking on Plant Genetic Resources.

13.2 Governments adhering to this Code should inform the FAO Commission on Plant Genetic Resources of any decision to prohibit or restrict proposed collecting missions.

13.3 In cases of non-observance by a collector or sponsor of the rules and regulations of a host country regarding the collecting and transfer of plant genetic resources, or the principles of this Code, the government may wish to inform the FAO Commission on Plant Genetic Resources. The collector and sponsor should receive copies of this communication, and have the right to reply to the host country with copy to the FAO Commission, with the aim of settling any differences that may have arisen. At the request of collectors or their sponsors, FAO may provide a certificate stating that no unresolved complaints are outstanding about them.

Article 14: Reporting by Collectors and Sponsors

With a view to contributing to the exchange of information and technology, by the provision of up-to-date first-hand reports to the Global Information and Early Warning System on Plant Genetic Resources, collectors and sponsors should:

(a) submit to the FAO Commission on Plant Genetic Resources copies of their consolidated reports on collecting missions;

(b) promptly communicate to the FAO Commission on Plant Genetic Resources information on any threat to plant populations or germplasm observed during the mission.

Article 15: Monitoring and Evaluating

15.1 Appropriate national authorities and the FAO Commission on Plant Genetic Resources should periodically review the relevance and effectiveness of the Code. The Code should be considered a dynamic text that may be brought up to date as required, to take into account technical, economic, social, ethical and legal developments and constraints.

15.2 Professional associations and societies accepting the principles embodied in this Code may wish to establish peer review ethics committees to consider their members' compliance with the Code.

15.3 At a suitable time, it may be desirable to develop procedures for monitoring and evaluating the observance of the principles embodied in this Code, under the auspices of the FAO Commission on Plant Genetic Resources.

APPENDIX D

FOURTH INTERNATIONAL TECHNICAL CONFERENCE FOR THE CONSERVATION AND UTILIZATION OF PLANT GENETIC RESOURCES

1. INTRODUCTION

1. Although food production and food crop yields have steadily increased along the last decades, it is also a fact that the genetic base of the world's food supply is under growing stress. Plant genetic resources conservation and utilization for sustainable agriculture and food security is an imperative for society. It is of great relevance to create awareness among policy-makers of the role and importance of plant genetic resources for sustainable food production, and so to influence policy-making both at national as well as at international level.

2. The First International Technical Conference on Plant Genetic Resources was convened by FAO in 1967, following the recommendations of the Panel of Experts on Crop Germplasm Exploration and Introduction. The Conference was co-sponsored by FAO and the International Biological Programme (IBP). It played a vital role in stimulating interest and concern in the scientific community for the conservation of crop germplasm. As a result of the work of the Conference, a number of important resolutions on genetic resources, all wholly or partly addressed to FAO, were adopted by the 1972 UN Conference on the Human Environment, in Stockholm, Sweden. The Stockholm Conference drew much wider attention to the special problems of plant genetic resources and paved the way for the Second International Technical Conference, which was held in 1973 at FAO, again with the co-sponsorship of the IBP. It allowed the resolutions of the Stockholm Conference to be interpreted in the context of plant genetic resources. A Third International Technical Conference was hosted at FAO in 1981, with the co-sponsorship of IBPGR and UNEP, and was once again a catalyst in many new ideas on genetic resources conservation and utilization that developed during the 1980s.

3. The three International Technical Conferences that FAO sponsored between 1967 and 1981 played a vital role in advancing discussions on plant genetic resources within the scientific community, and in developing strategies for their optimal utilization. Ten years have already gone by since the last Conference. There have, in the meantime, been major changes in the state of the art. A whole new debate on the role of plant genetic diversity within the larger sphere of biodiversity has begun, and final conclusions have yet to be drawn. The application of informatic systems to plant genetic resources has dramatically increased the capacity of storing, processing and exchanging data and information in this field with a number of important new data bases and information systems being established. The rapid development of powerful new biotechnologies has contributed to increase the value of plant genetic resources, i.e. *in vitro* techniques, cyopreservation systems and genetic engineering and has greatly expanded the technological basis for its conservation and utilization. However, there is still much scientific and socio-economic uncertainty about the full implications of these developments.

4. The last decade has also seen greatly accelerated genetic erosion, and the development of new patterns of erosion in agricultural systems, managed ecosystems, and the wild. Much of the interest in collecting is shifting from landraces to the wild and weedy relatives of, in particular, the major food crops. New international efforts to develop networks for in situ and ex situ conservation are underway. International efforts are also being made for the establishment of information systems and early warning mechanisms. Since the last Technical Conference, a large number of plant genetic resources programmes have been launched, and trained manpower working in this field has expanded greatly. A global system for PGR has evolved in recent years through FAO, however it is a matter of fact that institutional gaps are frequent and the existing capacity is still largely insufficient to deal adequately with PGR conservation and utilization work. The need for much more work on the characterization, evaluation, and enhancement of collected material, especially for crops of local importance in developing countries, has now become very evident, as has the need for the better utilization of the germplasm, by promoting plant breeding and seed production programmes and structures in developing countries. It is urgent to build up scientific, technical and institutional capabilities for the adequate conservation and utilization of PGR, particularly in developing countries.

5. Following the resolutions of the Twenty-second Session of the FAO Conference in 1983 that adopted the International Undertaking and established the Commission on Plant Genetic Resources as part of the Global System, many of the legal and political difficulties that existed in the field of plant genetic resources have now been overcome. During this same period, IBPGR has also undergone important changes, and many other non-governmental organizations and scientific institutions have expanded their interest in plant genetic resources. The Global System for the Conservation and Utilization of Plant Genetic Resources that is now coming into full operation, will allow the full participation of all parties involved, and better coordination of efforts.

6. A number of technical, economic and legal questions regarding plant genetic resources will be raised in the context of UNCED, in June 1992. The environmental threats to these resources will be discussed as well as their place in the broader context of biological diversity and its fundamental role for sustainable food production. Following the broad policy framework expected from UNCED and the need to implement at national and international level the UNCED's "Agenda 21", there will be a need to draw the conclusions, and take a hard technical and scientific look at how plant genetic resources can be used still more effectively to support sustainable development in a time of rapid technological and environmental change.

7. The Fourth Session of the CPGR accordingly felt that the moment was opportune for a new International Technical Conference (ITC). The Commission also considered that the initiatives to prepare a report on the "State of the World's Plant Genetic Resources", and to establish a Global Action Plan for Plant Genetic Resources, would greatly benefit from the rigorous scientific background, and analysis of possibilities and priorities that the Conference would provide. Moreover, the holding of the

Conference after the UNCED would provide an opportunity to translate its proceedings and resolutions into technically well-founded programmes capable of providing substantial assistance to developing countries, and protect the world's environment, through ensuring the optimal conservation and utilization of plant genetic resources.

2. COVERAGE OF THE CONFERENCE

8. As requested by the Fourth Session of the CPGR "within the context of the preparation of the first State of the World's Plant Genetic Resources (report) and of the first Global Plan of Action for Plant Genetic Resources, the International Technical Conference should:

(i) "review the state of the art, or current knowledge and practice for the conservation and utilization of plant genetic resources, with particular attention to the new biotechnologies, and the use of information technology to manage relevant data;"

(ii) "assess, by region and by crop, the present state of genetic diversity and degree of genetic erosion, and the current coverage of collecting activities, in situ and ex situ conservation, germplasm characterization, evaluation and enhancement, and breeding and seed production programmes;"

(iii) "review national and regional technical capabilities for the conservation and utilization of plant genetic resources, in terms both of human resources and institutional structures;"

(iv) "consider the appropriateness of various technologies for the needs of developing countries, and the current patterns of technology transfer;"

(v) "identify major constraints to plant genetic resources conservation, utilization and exchange; and"

(vi) "propose measures which would further enhance the effectiveness of the Global System for Plant Genetic Resources"

9. The International Technical Conference will put major emphasis on species and regions more subjected to genetic diversity loss and of interest to food and agriculture and forestry.

10. The Conference will identify gaps, duplication, constraints and emergency situations; it will also make technical recommendations regarding activities, funding and coordination. This will provide the Commission with the technical basis on which to establish priorities and monitor the process.

3. PREPARATORY ACTIVITIES FOR THE CONFERENCE

11. The Conference will discuss two main documents: A State of the World's Plant Genetic Resources (PGR/SW), and a Global Plan of Action on Plant Genetic Resources (PGR/GPA). A basic principle for the preparation is that the preparation of the two documents are actually the components of the same effort. The PGR/SW constitutes a basis from which derives the

Plan of Action. The PGR/SW should be an authoritative, consolidate critical revision or diagnosis of the current situation. The Plan of Action should include a general budget as well as priority programmes and projects for local, national, regional and international activities.

12. The tasks to be implemented for the preparation of both documents will be carried out simultaneously, although it must be noted that at a certain point the elaboration of the Plan of Action will depend on the information provided by the State of the World document. The first and most immediate tasks concern the delimitation of the area and subjects to be covered as well as the identification of the elements of both documents. The elements of the World State of PGR have been already outlined and submitted to the consideration of the commission at its fourth session.

13. The time available for the preparation of the Conference and of the basic papers is very short. In order to have the Conference by the end of 1993, or early 1994 as requested by CPGR, it is necessary to initiate the preparation of the basic documents early in 1992 if possible in January 1992. For this purpose it has been estimated the need of 24 m/m conference officer, 20 m/m of a programme officer and 24 m/m for consultants. Besides, it has been estimated the need for secretarial services for the complete period of preparation of the Conference. The two long-term consultants should be on board as soon as the financial resources are available.

14. The preparation of documents for the Conference should make use of available sources of information and data bases in FAO (i.e. CARIS, SIS), IARCs, IBPGR in particular, and other relevant organizations. A questionnaire will be circulated to the member countries to complete and update this information.

15. The preparation of the Conference should consider that UNCED will take place by mid 1992 and that plant genetic conservation and utilization will be an important element of the overall biological diversity debate, and a likely integral component of "Agenda 21". Efforts will be made to have a preliminary progress report, including the definition of objectives, targets and strategies of the PGR/ITC before UNCED. The preparation and holding of the Fourth International Technical Conference on PGR will actually represent an important step in the follow-up of UNCED. An important task will be the incorporation of these results into the two main documents (PGR/SW and PGR/GPA) to be presented to the ITC. This should be done immediately after UNCED since it can help in the orientation (or reorientation) of the preparation of the Fourth International Technical Conference on PGR.

16. In order to implement this task it is recommended that a small ad hoc expet group be convened soon. The group should include experts serving in their personal capacities that can cover all aspects of the conservation and utilization of PGR and are aware of the international developments on the subject. A small introductory paper should be prepared for the meeting of the ad hoc group together with a specific agenda. The document has to summarize the purposes and the background of the Conference, and include suggestions about the main elements to be considered. The output of the meeting should be: a methodology for the preparation of the PGR/SW and of the Plan of Action on PGR; defined objectives and targets; priorities; strategic elements for the achievement

of targets and goals; a preliminary identification of the institutions to be reponsible for the preparation and implementation of the main actions of the Plan. Policies and strategies should be oriented to the conservation, evaluation and utilization of PGR. For each type of activity, the documents to be presented at the ITC (PGR/SW and PGR/GPA) should identify the institutional structures and resources that have to provide support for carrying out research work, filling existing gaps and therefore, the need for institutional and capability buildings, as well the mechanisms of communication, information, dissemination, training, etc. Moreover, the strategy should indicate the levels at which actions should be implemented: local, national, regional or global.

17. It seems convenient that a second ad hoc group can be convened soon after the UNCED in order to reassess the established objectives, targets, priorities and methodologies, as well as the progress on the preparation of the International Technical Conference. The composition of the second ad hoc group should not necessarily be exactly the same as the first one.

18. It will also be convenient to have, at that time, a meeting of relevant organizations dealing with the conservation and utilization of PGR in order to foster dialogue, harmonize reponsibilities and promote cooperation among them (para. 19 of the 4th Session on PGR report) in the preparation and follow-up of the PGR/ITC. In principle, each participating organization should bear the costs of its own participation. A progress report, plus an outline of future activities should constitute the basic document for discussion.

19. An important task, that should start as soon as resources will be made available, is the recruitment of consultants for the preparation of regional reports. It is important to keep in mind that regional reports are inputs to the two basic documents for the Fourth International Technical Conference on PGR, hence their final versions should be ready at least one year before the Conference. It would be convenient to discuss the regional documents at each respective FAO Regional Conference. This is an additional reason for having the resources needed for the Conference as soon as possible.

20. An important element of the Plan of Action should be the identification of financial resources needed for its implementation. This is a chapter that should be prepared in detail, both as part of the PGR/SW and the Plan of Action. It is recommended that before the Conference, but when the most substantive work has already been done, a third ad hoc group of experts be convened to discuss the financial implications of the Plan of Action. The meeting should be attended not only by specialists on PGR, but also experts familiar with and experienced in the managerial aspects of PGR conservation and utilization. This group should meet three months before the Fourth International Technical Conference on PGR and their considerations be included in the final documents to be submitted to the Conference. The group should also propose (or pave the road) for the intergovernmental meeting "to define the financial commitments needed for the implementation of the Global Plan of Action and the terms and conditions of financing" requested by the Commission, to follow the 4th International Technical Conference on PGR.

21. The experience of the ad hoc groups, together with the advances on the preparation of the International Technical Conference will permit the creation of the small independent group (10 to 15 experts) suggested at its Fourth Session (paras 18, 71 and 76 of its report).

4. BUDGET, CO-SPONSORSHIP AND DATE

22. It has been estimated that some US$ 3 million will be necessary for the preparation, translation into the official languages, distribution of documentation and running of the 4th International Technical Conference including the consultants and meetings outlined above, as well as the publication of the report.

23. As the International Technical Conference will provide a full and thorough evaluation of all the technical issues related to the conservation and utilization of plant genetic resources, it is expected that the Conference be co-sponsored by the CGIAR, and other appropriate organizations. Dates would be fixed in consultation with co-sponsoring institutions. In order to encourage a substantive discussion of all documents, FAO will prepare and disseminate them well before the Conference.