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y la
Alimentación

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PREPARATION OF THE SECOND REPORT ON THE STATE OF THE WORLD'S PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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The Second Report on the State of the World's PGRFA

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PREPARATION OF THE SECOND REPORT ON THE STATE OF THE WORLD'S PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

I. INTRODUCTION

1. Following the recommendations of the Commission on Genetic Resources for Food and Agriculture, the Twenty-sixth Session of the FAO Conference in 1991, and Agenda 21 of the United Nations Conference on Environment and Development (UNCED) in 1992, called for the development of the State of the World's Plant Genetic Resources for Food and Agriculture (PGRFA), and the preparation of a rolling Global Plan of Action for the Conservation and Sustainable Utilization of PGRFA. These elements of the FAO Global System for the Conservation and Sustainable Utilization of PGRFA were developed through the country-driven preparatory process for the Fourth International Technical Conference, under the guidance of the Commission on Genetic Resources for Food and Agriculture.
2. The First Report on the State of the World's PGRFA was prepared for the International Technical Conference (Leipzig, 1996) which welcomed the Report as the first comprehensive world-wide assessment of the state of plant genetic resources. The outcome of the International Technical Conference was endorsed by FAO Conference, and welcomed by the Conference of the Parties to the Convention on Biological Diversity (CBD). An extended version of "The State of the World's PGRFA" was made available to the International Technical Conference as background material, and subsequently was peer-reviewed, edited and published by FAO in 1998.
3. The Commission, at its Eighth Regular Session, reaffirmed that FAO should periodically assess the State of the World's PGRFA to facilitate the analysis of changing needs and gaps and contribute to the adjustment of the rolling Global Plan of Action. It was agreed that the preparation of a second report of the State of the World's PGRFA and the amendment of the Global Plan of Action would be considered by the Commission after the completion of the negotiations for the revision of the International Undertaking, and that in the longer-term, a report on the State of the World's Agricultural Biodiversity might be envisaged.
4. The Intergovernmental Technical Working Group on Plant Genetic Resources, at its first session in July 2001, made recommendations concerning the updating of the Report.
5. The negotiations for the revision of the International Undertaking were completed with the adoption of the International Treaty on Plant Genetic Resources for Food and Agriculture by FAO Conference, on 3 November 2001. The need for periodic reports on the state of the world's plant genetic resources is reaffirmed in the Treaty. On its entry into force, the Treaty will require that "Contracting Parties shall cooperate with the Commission on Genetic Resources for Food and Agriculture of the FAO in its periodic reassessment of the state of the world's plant genetic resources for food and agriculture in order to facilitate the updating of the rolling Global Plan of Action" (Article 17.3).
6. In this document, proposals for the scope of the Second Report, and steps for its preparation, are set out in light of the recommendations of the Intergovernmental Technical Working Group, earlier guidance of the Commission, and the adoption by FAO Conference of the International Treaty on PGRFA.

II. PROPOSALS FOR THE PREPARATION OF THE SECOND REPORT

7. A summary Report on the State of the World's PGRFA (of similar size to the summary version of the first report; *viz*: 50 – 100 pages, including annexes) will be prepared and presented to the Commission for approval. This report will then be finalized following a review of a complete draft of the report by the Commission, and/or its Working Group.

8. The scope and structure of the Report will be similar to the First Report on the State of the World's PGRFA. However, in line with the recommendations of the Working Group, the report will:

- Include a comparison of the status of Plant Genetic Resources for Food and Agriculture, its conservation and use, and related knowledge, with the status at the time of the first Report, allowing trends to be identified;
- Address the role of plant genetic resources in progress toward sustainable development; and
- Take into account the context of the framework provided by the International Treaty.

In addition, compared to the First Report, it is anticipated that the Second Report would contain more information on certain topics such as the capacities of countries in plant breeding and seed sector development, as well as the impacts of agricultural policies on PGRFA and their management.

9. An indicative outline of the report is provided in Annex 1. More detailed and updated information will be provided to the Commission and its Working Group as this outline is further developed and refined in the light of experience gained in the course of the preparatory process. It is proposed that each Chapter of the report include the following:

- Updating of the information from the corresponding chapter of the First Report;
- New and emerging issues (with cross-references to thematic studies, as appropriate);
- Highlights of progress in the implementation of GPA activities;
- Analysis of trends (and comparison with baselines), as feasible;
- Challenges and new opportunities; and
- A summary and conclusions.

10. To provide the necessary background material, information in the extended version of the State of the World's PGRFA will be updated as necessary. Additionally, a number of thematic studies will be carried out. While this background information will be made available to the Commission and its Working Group for review and comments, it will not be presented for formal endorsement. A list of possible topics for updating and thematic review is provided in Annex 2. The extent to which they can all be addressed will depend on the availability of resources, bearing in mind that, in line with the Working Group's recommendations, priority will be accorded to updating topics covered in the existing report, as well as addressing linkages among topics.

11. As with the first report, the main source of information will be that provided by countries, supplemented by inputs from technical experts. Countries will be invited to update their Country Reports that they provided to the International Technical Conference. This process will be integrated with the third survey of GPA implementation. Information provided to WIEWS will also be used, and, as recommended by the Working Group, full use will be made of other existing information.

12. Guidelines for the updating of Country Reports are under preparation. Countries will be encouraged to hold national workshops and/or other consultations with stakeholders in updating their Country Reports. Subject to the availability of extra-budgetary resources, limited financial assistance will be made available to support such workshops and consultations in developing countries, as well as

to provide some technical assistance for the report preparation. Regional meetings will be held to review Country Reports and discuss common issues, if resources are available. As with the preparatory process for the First Report, close collaboration is envisaged with other relevant organizations, in particular the International Plant Genetic Resources Institute (IPGRI).

13. A mechanism will be put in place to facilitate review of the draft chapters of the Second Report, and as appropriate, background materials by (i) technical experts; (ii) countries; (iii) stakeholders; and (iv) the Commission and/or its Working Group.

14. Preparation of the second Report will be integrated with monitoring of the implementation of the Global Plan of Action, and the further development of WIEWS. Linkages with reporting mechanisms under the Convention on Biological Diversity and other processes, such as the Millennium Ecosystem Assessment, will be ensured, and efforts made to develop and use common indicators.

15. The Second Report will be presented for endorsement by the Commission in 2006. Extended outlines and/or draft reports will be reviewed by the Commission and/or its Working Group in 2004 and 2005. In line with the recommendations of its Eighth Session, the Commission may also wish to review the Global Plan of Action, and in the light of the Second Report, make any necessary refinements to the Plan. A full tentative timetable for the preparatory process is provided in Annex 3.

III. EXTRA-BUDGETARY RESOURCE REQUIREMENTS

16. The minimum essential cost of the core preparatory process will be covered by the Regular Programme. However, extra-budgetary resources will be needed to support the full participation of developing countries in the process, through: *inter alia* assistance in Country Report preparation; support to national workshops, and participation in regional meetings. Extra-budgetary resources will also be required for multi-country consultations to assess national capacities and the future needs of their plant breeding programmes. Cost estimates of the minimum resources required are provided in Annex 4.

IV. GUIDANCE BEING SOUGHT FROM THE COMMISSION

17. The Commission is invited to:

- (i) Consider for endorsement the preparation of a second Report on the state of the world's PGRFA according to the process and timeline provided in section II of this document;
- (ii) Encourage Member states and other countries and relevant international organizations to participate in the preparatory process; and
- (iii) Encourage donors to provide the necessary extra-budgetary resources to allow the full participation of developing countries in the preparatory process.

Annex 1: The Second Report on the State of the World's PGRFA – Outline by Chapter and Annex

<i>Chapter or Annex Title</i>	<i>Scope of Chapter or Annex</i>	<i>Summary of progress in implementation of GPA activities</i>	<i>New issues and elements to be included</i>
1 The State of Diversity	Diversity within and between plant species – value of PGRFA for food and agriculture – Genetic vulnerability and genetic diversity		Use of indicators for genetic diversity, genetic erosion and genetic vulnerability -- impact of climate change and other global change phenomena will be included – discussion of value of genetic resources will include consideration of the contribution of PGRFA to ecosystem goods and services
2 The State of <i>In Situ</i> Management	Inventories and surveys – conservation in protected areas and in production areas – on-farm management	Activities 1 –4	To be completely updated to encompass the substantial progress made in on-farm conservation, participatory plant breeding, and local seed system development – Information on the management of crop-associated biodiversity to be included, where relevant
3 The State of <i>Ex Situ</i> Conservation	Collecting – types of collections (genebanks, botanic gardens) – security of materials – documentation and characterization – germplasm movement	Activities 5 - 8	To be updated with the latest data on <i>ex situ</i> holdings
4 The State of Use	Evaluation – genetic enhancement and base broadening – plant breeding – seed systems – marketing and processing – deployment of genetic resources in production systems	Activities 9 –14	This chapter will be expanded to provide substantially more information on the capacity of national plant breeding and seed provision systems
5 The State of National Programmes, Training Needs and Legislation	National programmes – role of public, private and informal sectors – training and capacity-building – national policies – national legislation	Activity 15, and relevant aspects of activities 17 - 20	The chapter will include information on relevant agricultural policies, and biosafety/biosecurity measures
6 The State of Regional and International Collaboration	Regional and subregional networks – crop-specific and thematic networks – international programmes – international agreements	Activities 16, and relevant aspects of activities 17 - 20	The chapter will be updated in light of the adoption of the International Treaty on PGRFA, the Cartagena Protocol, and other relevant international agreements
7 Access to Plant Genetic Resources, Sharing of Benefits Derived from their Use, and Farmers' Rights	Legal and policy framework – access – benefit-sharing – financing – implementation of Farmers' Rights		To be updated in the light of the adoption of the International Treaty on PGRFA, and the development of national legislation
8 The contribution of PGRFA management to food security and sustainable development	New Chapter		Concluding chapter to place the management of PGRFA in the context of the objectives of contributing to agricultural sustainability, food security, economic development and poverty alleviation
A1 The State of the Art: Methodologies and Technologies for the Identification, Conservation and Use of PGRFA	Assessing and analysing genetic diversity – applications of biotechnologies – conservation methodologies – <i>in situ</i> management methodologies – breeding methodologies – legal and economic tools		Expanded coverage of the application of new biotechnologies and methodologies for base-broadening, information dissemination, research policy design and for <i>in situ</i> management
A2 The State of Diversity of Major Crops and other PGRFA	Summary of conservation and use of PGRFA for major crops and selected minor crops		To be fully updated and extended to cover major forage / pasture species and other PGRFA
T1 Status by Country of National Legislation, Programmes and Activities for PGRFA	Table: status of national programmes – legislation – adherence to international agreements – Summary of capacities		To be fully updated

Annex 2: The Second Report on the State of the World's PGRFA – Indicative list of thematic background studies

Study	Rationale	Scope	Sources & Linkages
A Plant genetic resources of forage crops, pasture and rangelands	Coverage of forage crops, pasture and rangeland species was very limited in the first Report. This study will seek to address this imbalance, and thereby improve the relevance of the report to agricultural systems dominated by livestock production, mixed farming and pastoralism. It will also provide information needed to update Annex 2 of the Report.	Value and role of forage crops, pasture and rangeland species. Special issues related to the management of plant genetic resources in pastures and rangelands.	Material assembled by the Crop and Grassland Service; Country Reports.
B The conservation of crop wild relatives	Crop wild relatives require specific approaches to conservation.	Value and role of crop wild relatives; Conservation status in protected areas and elsewhere; Country capacities for conservation (with detailed case studies in nine countries).	This study will build upon work carried out in the framework of the proposed GEF-UNEP-IPGRI project: "Conservation of wild crop relatives"
C Indicators of genetic diversity, genetic erosion and genetic vulnerability	Indicators are useful tools to identify and monitor trends, and to convey summary information to policy makers and the public opinion. They are needed for application at global, national and local levels.	The "state of the art" of indicator development and use for genetic diversity, genetic erosion and genetic vulnerability, at various scales, including an evaluation of the feasibility of assessing genetic diversity/erosion at the national level, including through modern molecular techniques.	The study will build upon work carried out in the frameworks of the CBD, CSD, and OECD.
D Methodologies and capacities for crop improvement; the use of PGRFA in base-broadening and crop improvement, including new approaches to plant breeding and new biotechnologies	There has been significant advancement in the available technologies and methodologies since the preparation of the first Report, but the application of these technologies and methodologies may be limited by plant breeding capacity in developing countries.	Applications of biotechnologies (including marker-assisted selection, and transformation) and genomics to the identification, conservation and use of PGRFA; Participatory and decentralized approaches to plant breeding; Population management.	Crop and Grassland Service and other FAO services; IPGRI and other IARCS.
E Seed security for food security: the management of plant genetic resources in seed systems	Seeds are the physical embodiment of PGRFA, and the main vehicle by which farmer management of PGRFA can be improved.	Analysis of formal and informal seed systems; ways of strengthening links between public, private and informal sectors; strengthening seed security through relief, rehabilitation, development and information services.	Country Reports; FAO's regional seed consultations and seed security networks..
F The contribution of plant genetic resources to health and dietary diversity	While just three crops dominate human energy intake, many more are required for a healthy diet. Some plants are especially important sources of nutrition for the poor. Yet they are often overlooked.	Plants important for human health and nutrition at global, national and sub-national scales. Inter- and Intra- species variation in nutrient content. Value of "minor" crops and other plants for vulnerable groups. Role of home and school gardens.	FAO Nutrition Division; IPGRI; Country Reports.
G Managing plant genetic resources in the agro-ecosystem; global change, crop-associated biodiversity and ecosystem services	PGRFA and associated biodiversity may provide multiple goods and services; they may need to be managed together to maximize these goods and services.	Ecosystem goods and services provided by PGRFA. Deployment of genetic resources in production systems; interactions with crop-associated biodiversity (pest and disease organisms; pollinators etc.).	FAO Interdepartmental Working Group on Biodiversity. The study will contribute to the CBD programme of work on agricultural biodiversity.

<p>H Interactions between plant and animal genetic resources, and opportunities for synergy in their management</p>	<p>While FAO has established programmes for both plant and domestic animal genetic resources, there has been little attention to date given to the interactions between these sets of resources. Yet at the level of the production system, crops and livestock are managed together, and the required characteristics of particular breeds or varieties are strongly determined by other components on the farming system.</p>	<p>Interactions between the management of plant and livestock genetic resources in farming system – interactions of the plant and animal genetic resources with other components of the farming system – dependence of the required traits of plant varieties by the presence/absence, type of domestic animal genetic resources and dependence of the required traits of animal breeds by the available plant genetic resources –comparison of approaches of managing crop and livestock genetic resources; lessons learned from one, applicable to the other; opportunities for common institutions, etc.</p>	<p>This study will also be prepared jointly with the preparatory process for the first Report on the State of the World's Animal Genetic Resources.</p>
<p>I The impact of national, regional and global agricultural policies and agreements on conservation and use of PGRFA</p>	<p>Agricultural policies and the incentive structures they create have major impacts on the conservation and use of PGRFA. Understanding of such impacts is necessary in order to improve policies.</p>	<p>Survey of national, regional and global policies. Analysis of incentive structures and possible impacts on PGRFA conservation and use.</p>	<p>Country Reports; Various services in FAO. Could be linked with CBD study on impacts of trade liberalization on agricultural biodiversity.</p>
<p>J Biosafety and biosecurity issues related to the conservation and sustainable utilization of PGRFA</p>	<p>The use of genetically modified organisms raises issues for the management of PGRFA. At the same time restrictions on transboundary movement of plants may impact on PGRFA conservation and use.</p>	<p>Genetic contamination in centres of origin and diversity; plant protection and quarantine issues.</p>	<p>Country Reports, IPPC and FAO Services.</p>

**Annex 3: The Second Report on the State of the World's PGRFA –
Indicative Timetable for the preparatory process**

January 2001 – December 2002	<ul style="list-style-type: none"> • Update list of focal points
June – October 2001	<ul style="list-style-type: none"> • Development of guidelines for preparation of SOW-2
October 2002	CGRFA-9: Approval of Proposals for SOW-2
January 2002 – December 2003	<ul style="list-style-type: none"> • Update information in WIEWS • Preparation of thematic studies
December 2002	<ul style="list-style-type: none"> • Letters to Focal Points inviting updating of Country Reports and third report on GPA implementation
January – October 2003	<ul style="list-style-type: none"> • Updating of Country Reports and completion of third reports on GPA implementation • Pilot programmes on national PGR information systems
October 2003 (provisional)	WG-PGR-2: Review of progress
September – December 2003	<ul style="list-style-type: none"> • Review of Country Reports and selected Thematic Reports by Regional Meetings (subject to availability of resources)
January – June 2004	<ul style="list-style-type: none"> • Analysis and compilation of the report
June 2004	<ul style="list-style-type: none"> • Preparation of extended outline and report on main findings emerging from the preparatory process.
July – September 2004	<ul style="list-style-type: none"> • Finalization of the First Draft Report
October 2004 (provisional)	CGRFA-10: Review of the extended outline of the Report, and of emerging findings
November 2004 – February 2005	<ul style="list-style-type: none"> • Review of the Report by Technical Experts
March – May 2005	<ul style="list-style-type: none"> • Finalization of the Final Draft Report
June 2005	<ul style="list-style-type: none"> • Distribution of the final Draft Report
August – October 2005	<ul style="list-style-type: none"> • Review of the Report by Governments
December 2005 (provisional)	WG-PGR-3: Detailed review of the Final Draft Report. Development of recommendations for the refinement of the rolling Global Plan of Action
January – April 2006	<ul style="list-style-type: none"> • Finalization of the Report
October 2006 (provisional)	CGRFA-11: Endorsement of the Report. Consideration of recommendations for the refinement of the rolling Global Plan of Action
	<ul style="list-style-type: none"> • Publication of the Report

Annex 4: The Second Report on the State of the World's PGRFA – Cost estimates for extra-budgetary resources required in support of the preparatory process

Item	Cost (US\$)	Calculation	Purpose and notes
Staff costs	135 000	16 months General Service; plus 6 months P2/P3 level	To assist secretariat in contacting focal points and co-ordinating assistance to countries
Subregional consultants	270 000	9 subregions @ 30 000/subregion; each 2 – 3 months honorarium, plus travel	To provide advice and assistance to countries on the preparation of country reports, including identification and involvement of stakeholders
Support to national workshops and stakeholder consultations	200 000	c. 50 countries @ 4 000/country	To provide partial support to the convening of national workshops or consultations with stakeholders. Grants would be provided on request, with priority to (a) least developed and other low-income countries; (b) countries with demonstrated commitment to the process; (c) clear proposals for the workshop or consultation
Support for the development of national plant breeding strategies	200.000	c:50 countries @ 4 000/country	To support consultations with individual countries to assess national capacities and needs, and help develop national plant breeding strategies and programmes
Regional meetings	320 000	4 regions (Africa, CWANA, AP, LAC) @ 80 000 / region. For participation of developing countries and general organizational expenses	To review Country Reports; discuss regional issues related to the State of the World's PGRFA, and identify common needs for implementation and/or refinement of the Global Plan of Action.
Expert meetings	120 000	Three expert meetings @ 40 000 /meeting	To support the development of Thematic studies and other necessary background material for the Report.
Sub total	1 245 000		
Project Servicing Costs	161 850	@ 13%	
Grand Total	1 406 850		