

March 2001



منظمة الأغذية  
والزراعة  
للأمم المتحدة

联合国  
粮食及  
农业组织

Food  
and  
Agriculture  
Organization  
of  
the  
United  
Nations

Organisation  
des  
Nations  
Unies  
pour  
l'alimentation  
et  
l'agriculture

Organización  
de las  
Naciones  
Unidas  
para la  
Agricultura  
y la  
Alimentación

### Item 3 of the Draft Provisional Agenda

#### COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

#### WORKING GROUP ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

First Session

Rome, 2 - 4 July 2001

#### MONITORING THE IMPLEMENTATION OF THE *GLOBAL PLAN OF ACTION* FOR THE CONSERVATION AND SUSTAINABLE UTILIZATION OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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**MONITORING THE IMPLEMENTATION OF THE  
GLOBAL PLAN OF ACTION  
FOR THE CONSERVATION AND SUSTAINABLE UTILIZATION OF PLANT GENETIC  
RESOURCES FOR FOOD AND AGRICULTURE**

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**1. INTRODUCTION**

1. One hundred and fifty countries adopted the *Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture* at the Fourth International Technical Conference on Plant Genetic Resources (Leipzig, June 1996). The Conference agreed that “overall progress in the implementation of the *Global Plan of Action* and of the related follow-up processes would be monitored and guided by the national governments and other members of FAO, through the Commission on Genetic Resources for Food and Agriculture”.<sup>1</sup> This was subsequently endorsed by Council Resolution 1/111 (October 1996). The Conference also asked the Commission to “set the formats for receiving progress reports from all the parties concerned and establish criteria and indicators to assess progress” in the implementation of the *Plan*.<sup>2</sup>

2. At its Seventh Regular Session, the Commission considered follow-up and requested “that FAO play a proactive and creative role in facilitating and monitoring implementation of the *Global Plan of Action*”.<sup>3</sup> It agreed to develop a transparent and efficient monitoring process and recommended that within the framework of the priority activity areas of the *Plan* a core set of indicators should be established to facilitate such a process.

3. At its Eighth Regular Session, the “Commission noted (...) that monitoring the implementation of the *Global Plan of Action* was important for efficient resource-utilization”, and it “underlined the need for FAO to allocate adequate resources from its Regular Budget, to support the tasks of monitoring and facilitating the implementation of the *Global Plan of Action*”.<sup>4</sup> In addition, the “Commission stressed the importance of FAO’s continued collaboration with relevant international organizations and institutions, including the Convention on Biological Diversity, and the CGIAR System, and agreed that FAO should continue to strengthen collaboration among relevant international organizations in monitoring and preparing reports on genetic resources for food and agriculture”.<sup>5</sup>

4. The Commission agreed that, subject to the availability of resources, the Working Group on Plant Genetic Resources for Food and Agriculture should meet during the present biennium to guide the implementation and review of the *Plan*, in particular: (i) defining the reporting format and indicators for monitoring the implementation of the *Plan*; (ii) guiding the development of the second *Report on the State of the World’s Plant Genetic Resources for Food and Agriculture* (once the negotiations for the revised International Undertaking have been completed); and (iii) guiding the further development of the *World Information and Early Warning System on Plant Genetic Resources*.

5. A report on the implementation of the *Plan* is presented in document CGRFA/WG-PGR-1/01/2. The present document has been prepared following consultations with the International Plant Genetic Resources Institute (IPGRI). It addresses the processes by which effective

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<sup>1</sup> ITCPGR/96/REP para. 21.

<sup>2</sup> ITCPGR/96/REP para. 22.

<sup>3</sup> CGRFA-7/97/REP para. 19.

<sup>4</sup> CGRFA-8/99/REP para. 17.

<sup>5</sup> CGRFA-8/99/REP para. 25.

monitoring can best be attained, and a long-term monitoring system established. In section 2, the monitoring activities undertaken in the years 1998 and 2000 are reviewed. Considerations for the further development of the monitoring process, including lessons learnt from previous experiences, are discussed in Section 3. Section 4 presents future plans for monitoring activities. The guidance of the Working Group for the further development of the monitoring process is sought in section 5. A proposed set of indicators and a reporting format incorporating these indicators have been developed, as requested by the International Technical Conference and the Commission at its Seventh Regular Session; these are at disposal of the Working Group in the Annex to this document and in document CGRFA/WG-PGR-1/01/Inf.1, respectively.

## 2. REVIEW OF THE MONITORING PROCESS DURING 1996-2000

### *The 1998 Survey*

6. The first survey on the implementation of the *Plan* was carried out in 1998. Country implementation reports were prepared by National Focal Points, who were nominated during the preparatory process of the Fourth International Technical Conference on Plant Genetic Resources, or afterwards. Reports were prepared in the context of Regional Meetings held to promote the implementation of the *Plan*.<sup>6</sup> The survey was based on a simple questionnaire reflecting the twenty priority activity areas of the *Plan*.<sup>7</sup> For each of these, information was requested on:

- actions undertaken since mid-1995, and funding sources;
- the countries' prioritized main needs and the main constraints;
- the opportunities for further action, in the near future, at national and sub-regional level; and
- the support required from regional or international organizations.

7. As a trial of a methodology for a more comprehensive survey, and as a test of the availability of relevant information, the Activity Area 15, "Building Strong National Programmes" was selected, in the light of the importance accorded to it by the *Plan* and reaffirmed by the Commission at its Seventh Session. The results showed that detailed information on national programmes was available in most countries, and that such information was, in fact, easier to analyse than in the case of the other priority activity areas.

8. The questionnaire was completed by over 100 countries. The results were presented at the Eighth Regular Session of the Commission, in the Progress Report on the implementation of the *Plan*.<sup>8</sup>

### *The 2000 Survey*

9. The *Plan* requests Governments to designate or re-confirm Focal Points for periodic reporting on plant genetic resources for food and agriculture to FAO, the Conference of the Parties to the Convention on Biological Diversity (COP/CBD), and other appropriate bodies.<sup>9</sup> At its Eighth Regular Session, the Commission urged countries that had not already done so, to appoint National Focal Points.

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<sup>6</sup> Five Regional Meetings were organized jointly by FAO, IPGRI, the *System-wide Genetic Resources Programme* (SGRP) of the Consultative Group on International Agricultural Research (CGIAR), and the regional and sub-regional networks for agricultural research.

<sup>7</sup> For Europe, a more elaborate survey was prepared by IPGRI's Regional Office, on behalf of the European Cooperative Programme for Plant Genetic Resources.

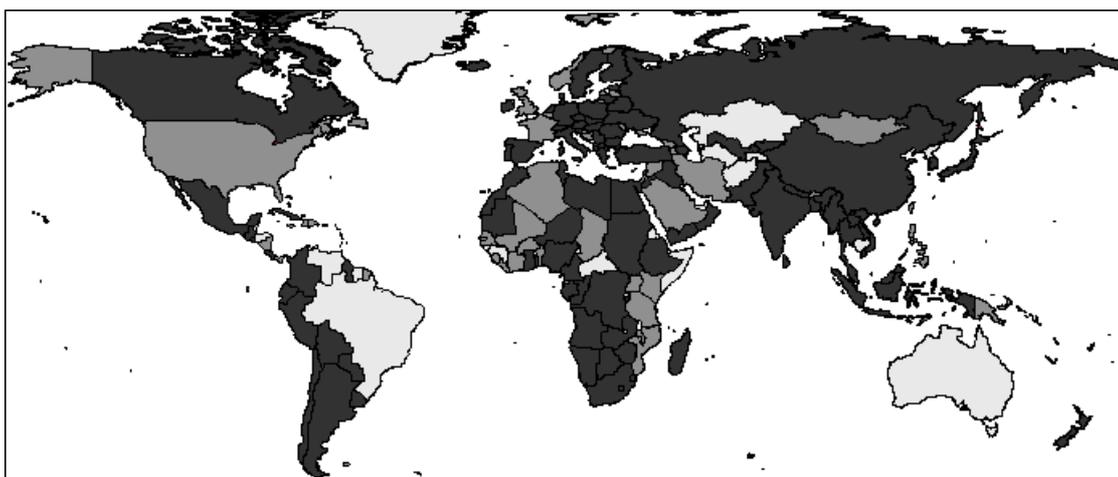
<sup>8</sup> CGRFA-8/99/3.

<sup>9</sup> *Global Plan of Action*, para. 283; see also CGRFA-Ex2/96/3.3, para. 33 - 35; Chapter 5 of the *State of the World's Plant Genetic Resources for Food and Agriculture*; UNEP/CBD/COP/3/REP, COP/CBD Decision III/11; and Priority Activity Area 15 of the *Plan*.

10. In 2000, four years after the Fourth International Technical Conference, FAO officially requested member countries to re-confirm or, if they had not yet done so, to designate National Focal Points for the implementation of the *Plan*. Official replies appointing 177 National Focal Points were received from 151 countries.<sup>10</sup> Such a large response confirms the continuing importance given to the *Plan* by FAO member countries.

11. A few months after their nomination, a further survey was conducted through these National Focal Points, who were requested either to complete a questionnaire or, alternatively, to provide a brief summary report on the implementation of the *Plan* during the last biennium. The topics addressed by the 2000 questionnaire were basically the same as in the former survey conducted in 1998 (see para. 6). The main methodological refinement consisted in the introduction, for all the activity areas of the *Plan*, of a standardized approach, conceptually similar to that tested for Activity Area 15 during the 1998 survey (see para. 7). In order to facilitate data analysis and synthesis, yes/no and multiple choice questions were extensively used, and the average number of questions per priority activity area was less than four.

12. Countries appear to appreciate the standardized approach, since only six countries out of 109 chose to provide a general summary report instead of responding through the standardized questionnaire.<sup>11</sup> Document CGRFA/WG-PGR-1/01/2 “*Progress Report on the Implementation of the Global Plan of Action*” is based on the analysis of the 109 responses.



**Figure 1.** Member countries that: (i) nominated a National Focal Point for the implementation of the *Global Plan of Action* and participated actively in the 2000 survey (dark grey); (ii) nominated a National Focal Point, but did not participate in the 2000 survey (medium grey); (iii) neither appointed a National Focal Point nor participated in the 2000 survey (light grey).

<sup>10</sup> The full list of appointed National Focal Points can be found under WIEWS at the following Internet address: [http://apps3.fao.org/wiews/contacts\\_rep13.jsp?query\\_OFFICES=13](http://apps3.fao.org/wiews/contacts_rep13.jsp?query_OFFICES=13). Note that some countries appointed more than one National Focal Point for the implementation of the *Plan*.

<sup>11</sup> The following countries participated actively in the 2000 survey: *Albania; Angola; Antigua and Barbuda; Argentina; Armenia; Austria; Azerbaijan; Bangladesh; Barbados; Belarus; Benin; Bolivia; Botswana; Bulgaria; Burundi; Cameroon; Canada; Cape Verde; Chile; China; Colombia; Congo; Congo, Democratic Republic of; Costa Rica; Cuba; Cyprus; Czech Republic; Denmark; Ecuador; Egypt; El Salvador; Estonia; Ethiopia; Finland; Germany; Ghana; Greece; Grenada; Guatemala; Guyana; Hungary; Iceland; India; Indonesia; Iraq; Ireland; Italy; Japan; Jordan; Kiribati; Korea, Republic of; Kyrgyzstan; Laos People's Democratic Republic; Lebanon; Lesotho; Libyan Arab Jamahiriya; Lithuania; Madagascar; Malaysia; Mauritania; Mauritius; Mexico; Morocco; Myanmar; Namibia; Nepal; Netherlands, the; New Zealand; Niger; Nigeria; Oman; Pakistan; Palau; Paraguay; Peru; Poland; Portugal; Romania; Russian Federation; Rwanda; Saint Lucia; Seychelles; Sierra Leone; Singapore; Slovak Republic; Slovenia; South Africa; Spain; Sri Lanka; Sudan; Swaziland; Sweden; Switzerland; Syrian Arab Republic; Thailand; The Former Yugoslav Republic of Macedonia; Togo; Tonga; Trinidad and Tobago; Tunisia; Turkey; Ukraine; Uruguay; Uzbekistan; Vietnam; Yemen, Republic of; Yugoslavia; Zambia; Zimbabwe.*

*Lessons from the 1998 and 2000 Surveys*

13. Both the 1998 and the 2000 surveys relied on a deliberately simple questionnaire in order to minimize the reporting burden on countries. This approach inevitably imposed serious limits to the scope and depth of the analysis, since very little quantitative and only general information was collected. More detailed information would require a more comprehensive survey, which, in turn, would imply the allocation of larger resources.

14. While many countries did not follow the guidelines provided for in the 1998 survey, making synthesis of information difficult, response to the 2000 survey was better, indicating an improvement in the presentation of guidelines and in the ability and willingness of countries to follow the adopted standardized approach.

15. National stakeholders' involvement during both surveys was rather limited in most countries. A wider participation of all national stakeholders would ensure more comprehensive and reliable coverage of the activities undertaken for the implementation of the *Plan*.

### 3. CONSIDERATIONS FOR FUTURE MONITORING EFFORTS

16. Experience derived from both the preparatory process of the International Technical Conference and the *Global Plan of Action* monitoring process in 1998 and 2000, laid the basis for the development of the list of indicators for monitoring the implementation of all priority activity areas of the *Plan*, given in the Annex to this document, and the corresponding reporting format, given in document CGRFA/WG-PGR-1/01/Inf.1, which were drafted in cooperation with IPGRI. Both the indicators and the reporting format were developed in view of the following considerations, which need to be taken into account in developing the monitoring process further.

17. *Scale and complexity of the monitoring process.* The more detailed the monitoring process, the more time and effort will be needed from both countries and the Secretariat, with inevitable cost implications. Precise, quantifiable information on the implementation status of the *Plan*, including data on expenditures,<sup>12</sup> is however indispensable for prioritizing actions and the efficient use of available financial resources, particularly when these are limited. For these reasons, a balanced monitoring programme should be based on standardized data-collection, analysis and management tools and strengthened national programmes.

18. *Use of a standardized tabular approach in the reporting format associated with the establishment of a database.* A standardized tabular approach for managing the information: (i) simplifies the analysis of comparable data both spatially (among countries, sub-regions, regions, etc.) and temporally (by year) through the use of common indicators; (ii) reduces the burden of recording the information in future surveys by allowing updating of previous reporting; and (iii) sets the basis for the development of a structured information system on the implementation of the *Plan*. This approach has been extensively used in the proposed reporting format in document CGRFA/WG-PGR-1/01/Inf.1.

19. *Capacity-building.* National capacity-building will be a necessary component for the long-term success of the monitoring programme. Indeed, any additional monitoring requirement should be linked to capacity-building efforts to ensure that national programmes benefit directly from the monitoring effort. Initially, this would consist of developing capacity within national programmes for data-collection, management and analysis and, ultimately, for the development

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<sup>12</sup> At its Seventh Regular Session, the Commission requested that the survey of expenditures on activities on plant genetic resources be updated, in the framework of the *Plan's* priority activity areas. With time and resource limitations, a full new survey on expenditures was not attempted and a limited set of questions on expenditures was included in the 1998 and 2000 surveys.

of national, regional and international action plans, able to ensure resources for the areas of greatest priority and need. Allowance will need to be made for capacity-building in any comprehensive reporting programme, and this should be built into relevant budgets and timetables.

20. *The role of National Focal Points and stakeholders.* The decentralization of reporting is a means of building awareness among national programmes, as the basis for action planning and the allocation of resources in support of national PGRFA programmes. In this regard, the role of National Focal Points is crucial for the entire implementation and monitoring process of the *Plan*, particularly in coordinating and facilitating activities and information-exchange, including reporting at national, regional and international level. The involvement of stakeholders in the monitoring process of the *Plan*'s implementation is implicit throughout the reporting format proposed in document CGRFA/WG-PGR-1/01/Inf.1. However, their contribution becomes direct and essential in, for example, the case of genebanks for Activity Areas 5 - "Sustaining *ex situ* collections", 6 - "Regenerating threatened *ex situ* accessions", 7 - "Supporting planned and targeted collecting of plant genetic resources for food and agriculture", 8 - "Expanding *ex situ* conservation activities", and 9 - "Expanding the characterization, evaluation and number of core collections to facilitate use"; farmers' communities for Activity Area 2 - "Supporting on-farm management and improvement of plant genetic resources for food and agriculture"; and seed certification agencies for Activity Area 13 - "Supporting seed production and distribution". National Focal Points should coordinate the distribution among stakeholders of such specific parts of overall national reporting, and collect the information accordingly.

21. *Use of electronic mail and the Internet.* Rapidly developing information technologies can greatly facilitate communication and information-flow for a monitoring mechanism. Electronic mail and the Internet are becoming more and more accessible in developing countries. National Focal Points in 139 out of 151 countries were contacted via electronic mail in the 2000 survey. Applications running on Internet servers (such as the *World Information and Early Warning System on PGRFA, WIEWS*<sup>13</sup>) can provide a platform for National Focal Points and stakeholders to input information directly, allowing remote management and the sharing of information among the various groups of stakeholders in PGRFA programmes. However, it is also important that National Focal Points without access to such facilities be given the possibility to contribute in providing and receiving data through conventional means.

22. *National clearing-house mechanism.* In-country stakeholder consultations, and a data-collection and management system, would provide a basis for the establishment of a national clearing-house mechanism in each member country. This mechanism, to carry out continuing monitoring of the implementation of the *Plan*, would facilitate capacity-building, ensure transparency in the *Plan*'s implementation, and contribute to the sustainability of the monitoring process. As the information repository of the National Programme, it would become the stakeholders' reference point, and shared knowledge base at national level, thus facilitating the dynamic flow of information within the country and from the country to the Commission, and, ultimately, would contribute to the periodic assessment of, and report on, the *State of the World's Plant Genetic Resources for Food and Agriculture*,<sup>14</sup> as well as to the updating of the rolling *Plan*. An information system, built on the reporting format for monitoring the *Plan* implementation proposed in document CGRFA/WG-PGR-1/01/Inf.1, might be at the base of such a mechanism, and be linked to the Commission through the *WIEWS*.<sup>15</sup>

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<sup>13</sup> <http://apps3.fao.org/wiews/>.

<sup>14</sup> CGRFA/WG-PGR-1/01/4, *Updating the Report on the State of the World's Plant Genetic Resources for Food and Agriculture*, para. 5.

<sup>15</sup> CGRFA/WG-PGR-1/01/6, *Progress Report on the World Information and Early Warning System on Plant Genetic Resources for Food and Agriculture*, para. 18-23.

23. *Linkage with other reporting requirements.* To limit the burden on countries, the Commission has also recommended that reporting to FAO on agricultural biodiversity be consistent with reporting to the CBD, the Commission on Sustainable Development (CSD) and other relevant inter-governmental bodies, as well as with the follow-up to the *World Food Summit Plan of Action*. The Working Group may therefore wish to advise the Commission as to how reporting on implementation of the *Plan* may partially satisfy countries' reporting on agrobiodiversity to the CBD, pursuant to Decision III/11 of the COP. If the Commission so wished, the Secretariat could initiate discussions with the Secretariats of the CBD and CSD to seek common reporting formats. Moreover, at its regular sessions, the Commission has reviewed reports from many international organizations (United Nations and other intergovernmental organizations, Centres of the Consultative Group on International Agricultural Research, and international non-governmental organizations) on their programmes, policies and activities, in all fields of agricultural biological diversity.<sup>16</sup> Such reports have also been made available to the COP/CBD.<sup>17</sup> The Working Group may wish to consider inviting such organizations to participate in the monitoring process, through providing specific information on their contribution to the implementation of the *Plan* in future reports, which may then be handled more systematically. Such a partnership approach to the monitoring process, which implicitly provides for data-sharing, would reduce duplication of efforts in data-gathering, data-entry and training.

#### **4. FUTURE MONITORING OF THE IMPLEMENTATION OF THE *GLOBAL PLAN OF ACTION***

24. The full and effective implementation of a monitoring programme will require further work in terms of:

- promoting understanding of the indicators and reporting format, through wide stakeholders' participation at national, regional and international levels;
- increasing the involvement of national stakeholders, and establishing a comprehensive monitoring system at the national level;
- developing capacity in national programmes to manage, collect and analyse data, and ensuring long-term institutional commitment; and
- securing external funding to support the effort.

25. This work could be promoted through pilot activities, which would test the monitoring framework of the reporting format provided in document CGRFA/WG-PGR-1/01/Inf.1, initiate the necessary capacity-building and set the basis for the establishment, at national level, of a clearing-house mechanism for monitoring the *Plan's* implementation. Consultations with other stakeholders, as referred to in para. 23, would be included as part of these pilot activities. The pilot activities would be undertaken by FAO, in collaboration with IPGRI, in selected, representative countries during the 2001/2002 biennium.

26. Based upon the results of these pilot activities, the indicators and the reporting format would be refined and adjusted, and the monitoring process extended to all member countries between 2004 and 2006, in preparation of the Twelfth Regular Session of the Commission and its Working Group. Such an extended monitoring may also be timely, with the expected implementation of the International Undertaking on Plant Genetic Resources, in which the *Plan* plays a key role, in order to provide base-line data to the Governing Body, and set the basis for systematic monitoring and follow-up.

27. The surveys to be carried out in 2002 and 2004, for the preparation of the progress reports on the implementation of the *Plan*, to be submitted at the Tenth and the Eleventh Regular Sessions of the Commission, respectively, would be based on the methodology currently in use,

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<sup>16</sup> In the Eighth session, CGRFA-8/99/11.

<sup>17</sup> See CGRFA-8/99/12.

integrating lessons as they are learned from the pilot activities and from the extended monitoring process.

28. The limited human and financial resources, available through the Regular Programme, have to date been used for the process leading to the proposed reporting format; donors are being approached for funds to allow the initiation of the pilot monitoring phase. However, both the pilot and the extended monitoring process would require the redirection of Regular Programme resources for the data system, as well as the mobilization of extra-budgetary resources for complementary capacity-building activities and for the establishment of national clearing-house mechanisms.

29. An average per country estimation of the extra-budgetary resources required for the implementation of the pilot monitoring phase, including in-country stakeholders' meeting, the establishment of a National Clearing House Mechanism on *Global Plan of Action Implementation*, complementary capacity-building activities and personnel services (FAO/IPGRI) is US\$20 000. It is proposed that between six and ten countries be covered within the remainder of the 2001/2002 biennium, implying an immediate need for US\$120 000 - US\$180 000. A roll-out of the programme between 2004 and 2006 would require similar funds for between 80 and 120 countries, in the context of the comprehensive monitoring and capacity-building. Once established, the periodical monitoring process will be covered by Regular Programme resources, and provide a "real-time" picture of the increased activities of the *Plan*, that are expected with the completion and entry into force of the International Undertaking.

## **5. GUIDANCE REQUESTED FROM THE WORKING GROUP ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

30. The Working Group may wish to provide guidance on action to be taken by the Secretariat, *inter alia*, in relation to:

- (a) the proposed indicators (Annex) and reporting format (document CGRFA/WG-PGR-1/01/Inf.1) for monitoring the implementation of the *Plan*, including, in particular:
  - i. pilot activities to be carried out by FAO, in collaboration with IPGRI in selected, representative countries during 2001-2002, to evaluate the proposed indicators and reporting format for monitoring the implementation of the *Plan* (para. 25);
  - ii. capacity-building needs, including for the establishment of a clearing-house or similar mechanism for strengthening the national PGR programme, the continuing role of the National Focal Points, and stakeholders' involvement (para. 19, 20, 22 and 24);
  - iii. consultations with international and regional organizations, as stakeholders, concerning the indicators and reporting format (para. 23 and 24);
- (b) the mobilization of the necessary extra-budgetary funds (para. 28 and 29);
- (c) the nature and scale of the proposed surveys in 2002 and 2004 (para. 27), and between 2004 and 2006 (para. 25 - 29).

## ANNEX

**INDICATORS for MONITORING the IMPLEMENTATION of the GLOBAL PLAN of ACTION for the CONSERVATION and SUSTAINABLE USE of PLANT GENETIC RESOURCES for FOOD and AGRICULTURE (PGRFA)**

- (i) Completed, on-going and proposed programmes/projects addressing priority activity areas of the *Global Plan of Action*.

*In Situ Conservation and Development*

Activity Area 1. Surveying and Inventorying Plant Genetic Resources for Food and Agriculture

- (i) Surveys/inventories of plant genetic resources for food and agriculture carried out.
- (ii) Threatened species, relevant to food and agriculture, identified.
- (iii) Priority areas to survey/inventory identified.
- (iv) Surveying/inventorying activities integrated within the national strategy and policy on PGRFA conservation and use.
- (v) Methodologies developed for surveying and inventorying intra- and inter-specific diversity in agro-ecological systems.
- (vi) Geographical Information Systems (GIS) to support genetic resources surveys used.
- (vii) Training and capacity-building in taxonomy, population biology, ethnobotany, and eco-regional or agro-ecological surveying carried out.

Activity Area 2. Supporting On-farm Management and Improvement of Plant Genetic Resources for Food and Agriculture

- (i) Farmers and local farmer communities, national genebanks and research institutes involved in PGRFA on-farm management and improvement programmes/projects.
- (ii) Socio-cultural factors incorporated into design and implementation of agricultural research and plant genetic resources activities.
- (iii) Incentives and policies to facilitate and encourage on-farm management and improvement of PGRFA in place.
- (iv) Support to community-based institutions for on-farm management.
- (v) Multidisciplinary scientific research carried out in ethnobotany and socio-economics of plant genetic resources, population and conservation biology, crop improvement, little known crops.
- (vi) Interdisciplinary training carried out in facilitating, improving and catalysing on-farm plant genetic resources activities.

Activity Area 3. Assisting Farmers in Disaster Situations to Restore Agricultural Systems

- Existence and/or implementation of:
- (i) Plan(s) for assisting farmers in disaster situations to recover/restore adapted local varieties.
  - (ii) Information systems to identify appropriate germplasm for re-introduction, after disasters.
  - (iii) Mechanisms to facilitate rapid acquisition, multiplication, restoration and provision of materials, within the country, and from/to other countries.

Activity Area 4. Promoting *In Situ* Conservation of Wild Crop Relatives and Wild Plants for Food Production

- (i) Strategies for *in situ* conservation and use of wild crop relatives and species gathered for food developed and implemented.

- (ii) Wild food plants and wild relatives of crop plants identified for conservation *in situ*.
- (iii) Measures taken to support local communities in sustainably managing relevant wild plants.
- (iv) Wild crop relatives included in protected area plans.
- (v) Wild crop relatives included in biodiversity action plans.
- (vi) New protected areas designed for the conservation of wild crop relatives.

### Ex Situ Conservation

#### Activity Area 5. Sustaining Existing Ex Situ Collections

- (i) Budget, staff, number of species and accessions of *ex situ* holding collection.
- (ii) Agreements to facilitate/secure storage in other countries implemented.
- (iii) Training in genebank management carried out.

#### Activity Area 6. Regenerating Threatened Ex Situ Accessions

- (i) Regeneration plan for priority species developed and implemented.
- (ii) Number of accessions regenerated according to agreed international standards.
- (iii) Training and research to improve effectiveness and efficiency of regeneration carried out.
- (iv) Research in genetic diversity changes during regeneration carried out.

#### Activity Area 7. Supporting Planned and Targeted Collecting of Plant Genetic Resources for Food and Agriculture

- (i) Number of accessions collected.
- (ii) Number of accessions for which long-term conservation has been secured.
- (iii) Training in germplasm collecting methodologies and practices carried out.

#### Activity Area 8. Expanding Ex Situ Conservation Activities

- (i) Number of institutions involved in *ex situ* conservation.
- (ii) Low-cost botanic gardens, arboreta, and field genebanks established in universities, schools, *etc.*
- (iii) Innovative management strategies and/or improved methodologies for *ex situ* conservation of vegetatively propagated and recalcitrant seeded plants, as well as for species neglected in current conservation activities, developed and published.
- (iv) Training organized in innovative management strategies and/or improved methodologies for *ex situ* conservation of vegetatively propagated and recalcitrant seeded plants, as well as for species neglected in current conservation activities.
- (v) PGRFA storage facilities upgraded.

### Utilization of Plant Genetic Resources

#### Activity Area 9. Expanding the Characterization, Evaluation and Number of Core Collections to Facilitate Use

- (i) Number of accessions characterized, and evaluated.
- (ii) Number of institutions involved in PGRFA characterization and evaluation.
- (iii) Training in characterization and evaluation carried out for national programme staff, and on-farm evaluation for farmers.
- (iv) Number of core collections identified.

Activity Area 10. Increasing Genetic Enhancement and Base-broadening Efforts

- (i) Genetic enhancement and base-broadening needs and opportunities identified.
- (ii) Genetic enhancement and pre-breeding programmes established.

Activity Area 11. Promoting Sustainable Agriculture through Diversification of Crop Production and Broader Diversity in Crops

- (i) Programmes of genetic uniformity monitoring and/or vulnerability assessment established.
- (ii) Measures taken to increase the use of mixtures, and/or a range of varieties.

Activity Area 12. Promoting Development and Commercialization of Under-utilized Crops and Species

- (i) Under-utilized species with potential for broader utilization identified.
- (ii) Sustainable management practices for under-utilized species developed and implemented.
- (iii) Post-harvest processing and marketing methods for under-utilized species developed.
- (iv) Training of farmers, scientists, extension workers carried out.
- (v) Planting material of selected under-utilized crops and species available for use.

Activity Area 13. Supporting Seed Production and Distribution

- (i) Number of crop varieties released.
- (ii) National seed policies to develop and expand viable local-level seed production and distribution mechanisms for varieties and crops important to small-scale farmers implemented.
- (iii) Incentives for quality seed production of under-utilized crops provided.
- (iv) Farmer organizations supported.

Activity Area 14. Developing New Markets for Local Varieties and “Diversity-rich” Products

- (i) Range of local crop varieties available in the market increased.
- (ii) Markets for local varieties and “diversity-rich” products developed or expanded.

Institutions and Capacity-buildingActivity Area 15. Building Strong National Programmes

- (i) National committee or equivalent entity responsible for the coordination of PGRFA conservation and use at national level established or strengthened.
- (ii) Farmers, plant breeders, private sector, NGOs, and Universities involved in the national committee or programme.
- (iii) National Strategy, Plan or Programme on Conservation and Sustainable Use of PGRFA addressing GPA's priority activity areas established/strengthened and mechanism for evaluation and updating in place.
- (iv) Priority objectives established within the National Strategy/Plan/Programme on Conservation and Sustainable Use of PGRFA in relation to the GPA's priority activity areas.
- (v) National Focal Point(s) for the implementation of the GPA appointed.
- (vi) Periodicity of National workshop(s) on conservation and use of PGRFA.
- (vii) Coordination of crop, forest and animal genetic resource programmes.
- (viii) National policy and legislation for biodiversity and genetic resources for food and agriculture developed and adopted.
- (ix) Ratification of international agreements related to PGRFA.

Activity Area 16. Promoting Networks for Plant Genetic Resources for Food and Agriculture

- (i) Level of involvement of the country in existing networks (i.e. participation; financial support)
- (ii) Network-related projects implemented.
- (iii) Publications developed in the context of network activities.

Activity Area 17. Constructing Comprehensive Information Systems for Plant Genetic Resources for Food and Agriculture

- (i) Status of development and use of national/institutional *in situ* and *ex situ* PGRFA and seed stocks information systems.
- (ii) International information systems accessed.
- (iii) Training in documentation methodologies and information management carried out.

Activity Area 18. Developing Monitoring and Early Warning Systems for Loss of Plant Genetic Resources for Food and Agriculture

- (i) Measures taken for continuing assessment of genetic erosion and its consequences.
- (ii) Number of persons trained in gathering and interpreting information on diversity and threats.
- (iii) National Focal Point(s) for gathering and reporting information on threats to genetic erosion appointed.

Activity Area 19. Expanding and Improving Education and Training

- (i) Number of national programme personnel and others trained.
- (ii) Participation in national, regional and/or international training courses.
- (iii) Existence of educational programmes incorporating plant genetic resources aspects.
- (iv) Educational and training strategy in line with GPA's priority activity areas established or re-oriented.

Activity Area 20. Promoting Public Awareness of the Value of Plant Genetic Resources for Food and Agriculture Conservation and Use

- (i) Number and kind of measures taken to promote awareness among priority target groups.
- (ii) Public awareness products produced.