

**Updating the Global Plan of Action for the Conservation and Sustainable  
Use of Plant Genetic Resources for Food and Agriculture**

**Report of the Asian Regional Consultation  
7–8 September 2010  
Chiang Mai, Thailand**

**September 2010**

## Contents

	Paragraph
I. Introduction	1 – 3
II. Introductory presentations	4 – 6
III. Summary of results	7
A. Review of the Leipzig Declaration and Introduction	8 – 9
B. Review of the Rationale of the Global Plan of Action	10
C. Review of the Aims and Strategies of the Global Plan of Action	11
D. Review of the Structure and Organization of the Global Plan of Action	12
E. Review of the Priority Activity Areas of the Global Plan of Action	
<i>In Situ</i> Conservation and Development	13 – 19
<i>Ex Situ</i> Conservation	20 – 35
Utilization of Plant Genetic Resources	36 – 50
Institutions and Capacity Building	51 – 66
F. Implementation and Financing of the Global Plan of Action	67 – 68

## I. INTRODUCTION

1. The updating of the Global Plan of Action (GPA) for the conservation and sustainable use of plant genetic resources for food and agriculture (PGRFA) was agreed by the Commission on Genetic Resources for Food and Agriculture (Commission) during its Twelfth Regular Session in October 2009. The Commission requested the Food and Agriculture Organization of the United Nations (FAO) to prepare the updated GPA based primarily on the Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture (SOW-2), and in particular, on the identified gaps and needs, taking into account further contributions from Governments as well as inputs received from regional consultations. The updated GPA would be considered during the Thirteenth Regular Session of the Commission in 2011.
2. In line with the above, the Asian Regional Consultation for the Updating of the GPA was conducted in Chiang Mai, Thailand, on September 7-8, 2010. It was organized by FAO and was conducted back-to-back with the Second National Focal Point Meeting of Project GCP/RAS/240/JPN *Capacity Building and Regional Collaboration for Enhancing the Conservation and Sustainable Use of Plant Genetic Resources in Asia* and with a workshop on the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). The consultation was attended by representatives of 18 countries from the region, namely Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Japan, Republic of Korea, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Viet Nam. International experts from FAO, Bioversity International, and the Global Crop Diversity Trust also attended the consultation as observers and facilitators. For the list of participants see Annex A.
3. The consultation was organized in plenary and working group sessions and was conducted in English. A working document on the Updating of the GPA including gaps and needs identified in the SOW-2 and a synthetic analysis of gaps and needs for the Asia Region were distributed to the participants one month before the regional consultation. These documents were used as major reference during the working group sessions. The agenda of the consultation is attached as Annex B.

## II. INTRODUCTORY PRESENTATIONS

4. The meeting was opened with remarks by Mr. Dan Leskien, Senior Liaison Officer of the Commission's Secretariat, who outlined the international context under which the GPA is being updated and in particular the Multi Year Programme of Work of the Commission. He emphasized the importance and urgency of updating the GPA, one of the essential elements of the FAO global system on PGRFA conservation and sustainable use, in the light of socio-economic and environmental changes that have occurred since its adoption in 1996. In this regard he also noted the need to strengthen cooperation between the Commission and the ITPGRFA.
5. A presentation on the GPA updating process was subsequently given by Mr. Stefano Diulgheroff, FAO, who informed that the Asian consultation is the fourth out of seven regional consultations scheduled in 2010. Based on inputs received from the regions and on the gaps and needs identified in the SOW-2, a first draft of the updated GPA will then be prepared by FAO. This first draft will be presented for review to the joint meeting of the Bureaus of the Commission and ITPGRFA and to the Fifth Session of the Inter-Governmental Technical Working Group on PGRFA, in March and April 2011, respectively. The revised updated GPA will finally be considered by the Commission at its Thirteenth Regular Session

in July 2011. In a second presentation the FAO Officer briefly highlighted the changes that occurred to the conservation and sustainable use of PGRFA since the adoption of the GPA in 1996. He also stressed the fact that evolving and challenging issues will contribute to making food security a major global priority for at least the next 20 years. These issues include population increase, accelerating urbanization rates, growing income disparities, global temperature changes, higher demand for biofuel and demand for more efficient and sustainable agricultural production practices. In this context the conservation and sustainable use of PGRFA is an essential component of a successful global food security strategy. The updating of the GPA offers an opportunity to:

- i. further promote complementary and integrated *in situ* and *ex situ* conservation efforts;
  - ii. foster use of PGRFA including through enhanced plant breeding activities and strengthened local seed systems;
  - iii. take advantage of opportunities raised by newly-developed technologies of molecular biology, informatics and communication;
  - iv. strengthen local capacity and institutions.
6. Results from a regional analysis of gaps and need in the implementation of the 20 GPA priority activity areas for the conservation and sustainable use of PGRFA were presented by Mr. Percy Sajise, FAO Consultant. The analysis was prepared based on country reports from Asian countries as part of the process for preparing the SOW-2. It was noted that gaps and needs identified in SOW-2 were sufficiently inclusive to reflect those from the region. Finally, Mr. Duncan Vaughan, CTA, GCP/RAS/240/JPN explained the mechanics of the working group sessions which have been designed to ensure that all country representatives revise all the different sections of the GPA, namely its introductory parts, the priority activity areas under the In situ Conservation and Development, Ex Situ Conservation, Use of PGRFA, and Institutions and Capacity Building. Together with the above mentioned regional analysis (i) a document titled "Updating the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture", which verbatim, included the current GPA as well as sections of the SOW-2 that identified changes, gaps and needs; and (ii) a document containing all sections of the existing GPA except the Priorities Activity areas was also available to assist participants, in particular, to review and comment on the Introduction, Rationale, Aims and Strategies, Structure and Organizations, and Implementation and Financing sections of the current GPA. During the working group sessions, participants were divided into two groups; each of them were assisted by a facilitator and a rapporteur, who in plenary presented the group's results for the final discussion.

### **III. SUMMARY OF RESULTS**

7. The regional consultation overall considered that the GPA is an important framework and that to a large extent its 20 priority activity areas (PAA) remain a valid guide for national programmes, as well as regional and international collaboration. Detailed suggestions for updating it were provided and are described in the following paragraphs. In general terms the region unanimously agreed on the need to improve and keep as clear and concise as possible the editorial style of the document. This was a particular matter of concern to all the countries whose official language differs from the six UN languages in which the GPA will be translated. In line with the approach to make the updated GPA accessible and understandable to a wide audience, it was proposed to add a glossary of terms that are commonly referred to in the GPA. Participants also stressed the importance of the GPA that retain its capacity to serve different realities, including national programmes in different developmental stages as they occur in the Asian region. They noted that new opportunities exist as a result of the rapid development in communications technology such as the internet and in data storage and processing which should be reflected in relevant activities of the GPA. They also expressed

the desire to see the cross-cutting role of the established National Information Sharing Mechanism (NISM) highlighted where it is most appropriate.

#### **A. Review of the Leipzig Declaration and Introduction**

8. The general sentiment of the Asian group is that the general principles of the Leipzig Declaration are still valid but there may be a need to develop a new declaration produced jointly by the Commission and the Governing Body of the Treaty which considers, in addition, the new imperatives of climate change and the various key international agreements and mechanisms such as the Treaty and the Global Crop Diversity Trust, among others.
9. The regional consultation suggested improvements in the introduction by including a more complete narrative up to 2010 and relevant statements from other international groups such as the G8, and emphasis on the climate change and the importance of nutritional aspects while addressing food security. There was also a suggestion on the need to indicate the major progress made since the GPA was implemented and the rationale for updating the GPA which may require a new section. There was also a discussion on the relevance of forestry to GPA implementation especially, as it relates to *in situ* conservation of PGRFA in Protected Areas which are in the administrative jurisdiction of the forestry sector.

#### **B. Review of the Rationale of the Global Plan of Action**

10. The regional consultation suggested that a further elaboration of the rationale section is needed to include the current role of PGRFA in food security; the role of GPA for Treaty implementation and also the on-going threats to loss of PGRFA diversity.

#### **C. Review of the Aims and Strategies of the Global Plan of Action**

11. Concerning the aims, participants suggested that, for consistency, the wordings of the Treaty should be used in the third aim of the GPA concerning the benefit-sharing. The aims should also capture the spirit of the Treaty, particularly the principle of facilitating access to PGRFA materials and information taking advantage of the development in information technology. The Asian consultation also suggested that the strategies should be reviewed in the light of the entry into force of the Treaty and the establishment of the Global Crop Diversity Trust.

#### **D. Review of the Structure and Organization of the Global Plan of Action**

12. The Asian group consultation affirmed that the 4 main groups of the GPA are still valid. As per the sections on Long Term and Intermediate Objectives in each PAA it was suggested to reorganize them into a “Goal” and an “Objectives” section. Participants agreed that the section which describes how a particular activity is related to other activities in the GPA can be deleted.

#### **E. Review of the Priority Activity Areas of the Global Plan of Action**

##### ***In Situ* Conservation and Development**

13. There was a general consensus in the Asian group that *in situ* conservation, especially on-farm conservation involving small farmers, is very important in the region considering the backdrop of poverty and livelihood requirements on one hand, and abundance of PGRFA on the other hand, where these small farmers have been the custodian all along. However, on-farm conservation has just gained scientific attention and is at various stages of implementation in several countries in the region.

### **PAA 1. Surveying and inventorying PGRFA**

14. The Asian regional consultation affirmed that this activity is still of high importance and the long term objective remains valid and relevant. The group, however, suggested that the intermediate objective should state that methodologies be developed and existing methodologies should also be applied and further refined.
15. The regional consultation highlighted the importance of the use of participatory methods and approaches which have been developed to ensure the participation of farmers and resource users in on-farm and other forms of *in situ* conservation. It also reiterated the importance of giving high priority to PGRFA surveying, inventorying and collecting in remote and “disturbed” areas, which due to a combination of factors including area accessibility, topography and security have not been adequately covered, in particular as far as CWR and under-utilized crops are concerned.

### **PAA 2. Supporting on-farm management and improvement of PGRFA**

16. The group suggested the title of the activity should be changed by replacing “supporting” by “promoting”. This is because supporting implies providing something to initiate or strengthen on-farm management and improvement of PGRFA, whereas promoting offers a wider range of leverages and interventions to bring about on-farm management and improvement of PGRFA. The consultation also suggested including the need for enhancing resilience to stresses of farming systems at the end of the first sentence. There is also the need to update reference to the International Undertaking (IU) to reflect Treaty provisions on Farmer’s Rights.
17. The consultation highlighted the following needs in the Asian context: (a) policies which should facilitate on-farm management and improvement of PGRFA through marketing of products thereof; (b) need to apply grass roots knowledge in the on-farm management and improvement of PGRFA; and (c) need to mention private sector as possible supporter of research and promotion of on-farm management and improvement of PGRFA (Paragraph 31). The participants also pointed out the importance of the community-based approach in promoting *in situ* and on-farm conservation and sustainable use of PGRFA in response to the dominant constraints of poverty, the need to strengthen livelihoods options of local communities. The successful application of community based approaches in other areas of natural resource management should be recognized.

### **PAA 3. Assisting farmer’s in disaster situation to restore agricultural systems**

18. There was a suggestion from the Asian group to replace “agricultural systems” by “agricultural plant diversity” in the title of this PAA, though no consensus was reached on this proposal. The group affirmed the validity and relevance of the long term and intermediate objectives of this activity while highlighting the role of community seed banks in restoring agricultural systems. Participants indicated that there are now several countries in the region which are promoting the establishment of community seed banks to serve both as community bioregisters as well as source of materials for agricultural systems restoration after natural disasters. There was also the recommendation to include “local varieties and populations that are adapted...” in the last extract from the SOW-2 after para. 50.

### **PAA 4. Promoting *in situ* conservation of wild crop relatives and wild plants for food production**

19. The group recommended to insert in the title “and management” after “conservation” to indicate the need to manage properly the wild crop relatives and wild plants which are mostly in Protected Areas. The term “wild crop relatives” also needs to be changed throughout the

document to “crop wild relatives”. The long term objective remains valid and relevant. The Asian consultation suggested to insert “or further develop” after “initiate” in the first sentence of para. 67 in the intermediate objectives section. The group also indicated the need to highlight the vulnerability of CWR and wild plants for food production to climate change’s effects. In Line 701, the suggestion was to change to “recognize that women are active participants and ...”.

### ***Ex Situ Conservation***

20. The consultation noted that the definition and delineation of what constitutes *ex situ* conservation has evolved considerably since the mid-1990. Hence it was suggested that the present reality is carefully elaborated to explain, for example, DNA banks, bio-banks and others. This could be included in the list of common definitions as earlier suggested.
21. It was also recommended to merge PAA 8 “Expanding *ex situ* conservation” with PAA 5 “Sustaining *ex situ* conservation activities”.

#### **PAA 5. Sustaining existing *ex situ* collections**

22. It was suggested that this activity should consider the issue of duplication and safety back-up and these two aspects of duplication could be treated separately in the context of new developments such as the Svalbard Global Seed Vault. The participants also recommended that this activity needed to highlight the fact that PGRFA collections in National Programs often have different emphasis from major collections found in the CGIAR Centers and their importance should not be under-appreciated in the updated GPA. A case in point is the collection of native forages in Mongolia.
23. The group recommended that the long term objective is out of date and needed careful revision. One comment was whether the word “develop” is still relevant.
24. There were recommendations by the group referring to specific areas of the document. Paragraph 80 needs updating in relation to the Multilateral System of the Treaty and in Paragraph 81, exchange of information is more relevant than “Use of PGRFA”. Gaps and needs from SOW–2 as indicated under lines 978-996 (after para. 84) are relevant; however, the group consensus is that the word “additional” in Line 989 is not needed. Gap from SOW–2 in lines 1018-1024 (after para. 87) is considered relevant though the group strongly felt that this point should address more the need for building up and conserving collections. In lines 1049-1053 (after para. 92), the group stressed the importance of the “national” dimension too.

#### **PAA 6. Regenerating threatened *ex situ* collections**

25. The delegates recognized the very high importance of this aspect of *ex situ* conservation. However, this “un glamorous” aspect of *ex situ* conservation has difficulty attracting funding except for some limited support from the Global Crop Diversity Trust. However, it should also be recognized that there might be important national collections which are not attracting funding from the Trust which will, therefore, require long term funding.
26. Following the above premise, the Asian group suggested that the long term objective should emphasize regeneration of all PGRFA since many crops of national importance have not been studied in relation to regeneration protocols. The delegates also suggested the following:
  - a. Extract from the SOW-2 in lines 1106-1108 emphasizes that maintaining viability of materials in the hot humid tropics, which many countries in the region experience, is a major challenge and there is lack of scientific work for developing conservation technologies for this kind of situation. The lack of “green technologies” for

genebanks was also indicated by participants in this regional consultation. In addition, the importance of developing research and development technologies for maintaining viability of accessions was emphasized by participants. The contrast between easy and rapid genotyping compared with the laborious and unchanging methods of viability testing was considered an issue which must be addressed *urgently*. In this regard, a re-examination of regeneration guidelines and ways of reducing the tedium of regeneration was suggested.

- b. Last sentence in par. 97 was deemed by the group as requiring review in the light of the developments since the supposed “first world wide regeneration”.

#### **PAA 7. Supporting planned and targeted collecting of PGRFA**

27. The delegates suggested that this activity should have an expanded section to reflect the need for all relevant information to be included during collecting such as indigenous knowledge and environmental factors. It was also suggested that there might be a need to update guidelines for collecting germplasm especially in relation to information that should be included with the use of new collecting tools and methods. For example, Global Positioning System (GPS)-aided collecting can leverage more information from a collecting site.
28. The value of repeated collecting in areas which have been previously collected was suggested as a useful means of understanding the real situation regarding genetic erosion for germplasm of national and international importance. This point is also relevant to paragraph 120. It was suggested that there is a need for emphasis in collecting broadly to include under-utilized crops and wild plants used for food, medicinal food and others.
29. The high importance of a wide range of crop wild relatives (CWR) in countries and regions where animals are central to agriculture was also raised by the group. In such situations, there are a range of issues needing attention, i.e., from knowing species identity to lack of knowledge on how best to conserve these rangeland germplasm materials closely associated with animal production.
30. The long term objectives should reflect the importance of CWR and under-utilized crops.
31. The group recommended that intermediate objectives should be recast to reflect that some countries do not have or have just recently established germplasm collections. This is more than just gaps.
32. Delegates mentioned the need to leverage partnership both within and across countries with experts in PGRFA, such as taxonomists, to help correctly identify germplasm. In order to promote inter-country partnership, it was recommended to regularly update expert directories.
33. Second gap in the extract from SOW-2 (lines 1325-1326) seems to belong more appropriately to *in situ* conservation.

#### **PAA 8. Expanding *ex situ* conservation activities**

**(suggested by the group to merge with PAA 5. Sustaining existing *ex situ* collections)**

34. The delegates felt that the wording for long term objectives was too general. It should focus on integration of new developments in *ex situ* collection, e.g., DNA banks and bio-banks.
35. The group also suggested recasting the intermediate objectives to reflect the development of strategies for non-orthodox germplasm because current wording is too narrow and may exclude some intended germplasm. In addition, it was felt that the intermediate objectives

need to reflect the increasing demand many genebanks are facing to conserve the products of research such as mutants, RII populations, GMOs and others.

### **Utilization of Plant Genetic Resources**

36. The delegates emphasized the importance of establishing the linkages between germplasm conservation, plant breeding and seed delivery as a key guideline for enhancing the use of PGRFA. The consultation also recommended merging PAA 12 and PAA 14 as they have a lot of common elements and relationships. This integration will require reformulation of objectives and the whole write up while retaining the basic elements in the original separate PAAs.
37. It was also noted that “Plant Breeding” which is a very important vehicle for use of germplasm is not explicitly mentioned in any one of the PAA’s titles. The consultation considered the title of PAA 10 and suggested to replace it by “Enhancing plant breeding and related activities”.

#### **PAA 9. Expanding the characterization, evaluation and number of core collections to facilitate use**

38. There was considerable discussion of the title by the Asian delegates and two points were finally agreed: a). “and number of core collections” could be dropped from the title; and b) the current definition of core collection should be reconsidered. The core collection concept has evolved and now includes “special germplasm sets” “mini” and “micro”-core collections. The updated GPA should reflect what genebanks are currently doing to facilitate use of germplasm. The definition of these special germplasm sets should be included in the glossary of basic terms earlier suggested.
39. The delegates also suggested the need to highlight the importance of collaboration between genebank curators and other scientists in order to include data arising from other specialized types of characterization beyond the usual passport data.
40. This additional data can help direct germplasm evaluation as a result, for example, of soil type where germplasm was collected. In some cases, this is referred to as “satellite data”. It should reflect, in very clear terms, that the key to the use of PGRFA is greatly enhanced by the ability to access relevant information and there is a need to leverage current information technology to serve this purpose. As a consequence, the current guideline for evaluating and characterizing germplasm must be updated to reflect current technologies that have become available.
41. The delegates expressed the need for the wordings of the long term objectives to be succinct and simple.
42. The group suggested that paras. 148-152 need recasting. Base broadening should not be used as its meaning is open to conjecture (before Paragraph 155).

#### **PAA 10. Increasing genetic enhancement and base-broadening efforts**

43. The Asian group is in agreement on the importance of increasing the capacity of plant breeding in the public sector in order to address the dwindling number of plant breeders. The delegates then suggested incorporating the following statement in this activity: “there is now a dearth of conventional plant breeders in the public sector due to increased demand in the private sector and declining enrolment in conventional plant breeding in schools and universities. Also, there is aggressive promotion of modern methods of molecular breeding

programs with more lucrative work offers”. The group also took notice that the term “base broadening” needs to be defined or included in the glossary of terms.

44. The delegates noted that Asia and other regions are prone to several kinds of natural disasters that effect agricultural lands. They therefore recommended that in addition to climate change (as it is mentioned in the changes reported from the SOW-2 after para. 168), also effects of natural disasters such as salt affected lands from tsunami’s, ash deposits from volcanoes, etc. should be addressed by breeders. In this connection, there should be a narrative added to emphasize this point.
45. It was also suggested to recast the objectives to emphasize aspects related to plant breeding by using terms such as “To reduce genetic uniformity” can easily be misconstrued. The recommendation of the group was to be positive and call, for instance, increasing genetic diversity. Objectives should also emphasize the vital roles of participatory plant breeding and molecular techniques. It should also reflect the current understanding and strategies of addressing climate change and variations.
46. Some specific recommendations were as follows: recast para. 172 to reflect that the need is to make genetic variation available to the breeder using several strategies; the need extracted from SOW-2 in lines 1850-4 (before paragraph 173) emphasizes clearly that efforts must be invested to ensure access to the widest possible variation in order to have the tools for breeding crops adapted to extreme weather conditions and novel biotypes of pests and diseases.

#### **PAA 11. Promoting sustainable agriculture through diversification of crop production and broader diversity of crops**

47. The title of this activity needs to be changed since diversification and diversity are in the same sentence but being used in different contexts. The Asian group suggested the change in title such as “Reducing the vulnerability of agricultural systems by diversification”. The importance of the title of this activity is well recognized but the objectives do not seem to match the current trends. Mongolia, for example, is introducing new crops in order to address the consequence of increasing temperatures.
48. Specific comments of the group are the following: Paragraphs 179-80 – the suggestion is to change “reduce genetic erosion and possible genetic vulnerability” into “promote agrosystem diversity to enhance productivity and reduce threats that may be posed by pests and diseases”. The meaning of para. 181 is not clear at all and needs to be recast.

#### **PAA 12. Promoting development and commercialization of under-utilized crops and species (suggestion is to merge with Activity 14)**

#### **PAA 13. Supporting seed production and distribution**

49. The Asian group suggested to change the title of this activity to “Supporting local seed production and distribution” to emphasize the relevance and importance of this activity at the local level. It was also noted that there is a need to emphasize enhancing local capacity for producing seeds as large enterprises will not cater to small volume of seed requirements by small farmers especially in situations where farmers save seeds. The consultation also recognized the reality that there exist considerable variations among the countries in Asia in terms of level of development of the seed sector. Country to country variations in terms of seed production and distribution were elaborated by some delegates including varying degrees of involvement of the private sector. In some countries the increasing role of the private sector was mentioned while in others the government has to respond to this need.

50. Specific comments and recommendations of the group are the following: delete Line 2355 as it does not belong here; recast Paragraph 200 as meaning is not clear.

**PAA 14. Developing new markets for local varieties and “diversity rich” products (suggestion is to merge it with Activity 12)**

**Institutions and Capacity Building**

**PAA 15. Building strong national programmes**

51. The suggestion of the Asian group is to change the title by adding “strengthening” to read “Building and strengthening national programmes”.
52. The delegates noted that, in the long term objectives under para. 222, the term equitable and, under para. 223, the phrase “share in the benefits” need further clarification.
53. The Asian group affirmed that the intermediate objectives remain valid and relevant. The group further emphasized the need to link *in situ* and *ex situ* strategies for PGRFA conservation especially in the Asian context where the two are often not well integrated. During the discussions in the plenary session, the group highlighted the importance of the NISM in the context of strengthening national programmes, not only to bring together scattered information on PGRFA within the country, but also as a national platform for promoting collaboration and partnerships among various PGRFA stakeholders. They strongly recommended the inclusion of a reference to NISM in the updated PAA.

**PAA 16. Promoting networks for plant genetic resources for food and agriculture**

54. The Asian group suggested a change in the PAA title to read “Strengthening the Multilateral System and promoting networks for plant genetic resources for food and agriculture”.
55. The delegates suggested to revise the long term objectives under para 243 (*in situ* oriented networks) and under para. 244 to clarify the scope of the “scientific exchange”. They also emphasized the need under this PAA to promote compatibility among information systems; to address and promote the Multilateral System of Access and Benefit Sharing, as well as networks for underutilized and neglected crops.

**PAA 17. Constructing comprehensive information systems for plant genetic resources for food and agriculture**

56. The Asian group suggested changing the title to read “Constructing and strengthening comprehensive information systems for plant genetic resources for food and agriculture”.
57. The delegates suggested to have an introduction mentioning the various existing information systems on PGRFA such as EURISCO and others.
58. The delegates affirmed that the long term objectives remain valid and relevant, though the concept of “useful information” expressed in para. 260 may need some elaboration. As per the intermediate objectives, the group suggested to highlight the importance for ensuring compatibility among information systems, and to emphasize the importance of strengthening NISMs and the need for linkages of NISMs with accession level information systems.

### **PAA 18. Developing monitoring and early warning systems for loss of plant genetic resources for food and agriculture**

59. The Asian group suggested changing the title to read “Developing and strengthening monitoring and early warning system for loss of plant genetic resources for food and agriculture”.
60. The delegates affirmed the validity and relevance of the long term objectives. With regard to the intermediate objectives, the group had the following suggestions for improvement: monitor and report genetic erosion in *ex situ* collections; monitor and report genetic erosion of *in situ* plant genetic resources for food and agriculture and develop indicators for genetic erosion of *in situ* and *ex situ* plant genetic resources for food and agriculture.
61. The group also suggested highlighting the following areas:
  - Contamination of PGRFA either by gene flow from genetically modified plants or wild relatives needs to be considered as genetic erosion;
  - Climate change and other factors should be considered for monitoring and in developing an early warning system;
  - Information dissemination should be a two-way process to and from germplasm users.

### **PAA 19. Expanding and improving education and training**

62. The Asian group recommended changing the title to “Building up human resource capacity”.
63. The delegates affirmed the validity and relevance of the long term objectives.
64. The group suggested to address the “brain drain” in the intermediate objectives considering that countries in the region experienced not only lack of human resources in some basic areas of PGRFA such as taxonomy and molecular biology but also the on-going recruitment of human resources in these areas by countries which can pay higher salaries and offer better benefits. In consideration of this brain drain phenomenon coupled with the basic lack of human resources in taxonomy and molecular biology, the delegates recommended assistance in training their staff in these two critical areas, as well as other needed areas.

### **PAA 20. Promoting public awareness of the value of plant genetic resources for food and agriculture**

65. Asian group suggested changing the title into “Promoting public awareness on the importance of plant genetic resources for food and agriculture for sustainability and food security”.
66. “Final” objective should be changed to “long term objectives”. The group affirmed the validity and importance of both the long term and intermediate objectives.

## **F. Implementation and Financing of the Global Plan of Action**

67. The Asian delegates considered financing as very important in the implementation of the GPA in the region which must be addressed in the updated GPA. In addition, there are now new internationally-based financing mechanisms which need to be included such as the Global Crop Diversity Trust, Benefit-Sharing Fund of the Treaty, and others which need to be mentioned in the updating of the GPA.
68. The group also felt that more detail is needed regarding implementation arrangements such as what kind of mechanisms can be used to implement GPA, how will GPA activities be

coordinated at the international level such as by FAO, and involvement of regional networks at regional and national levels.

**Annex A.**  
**Asian Consultation on GPA Updating**  
**Chiang Mai, Thailand**  
**6-10 September 2010**

**List of participants**

**BANGLADESH**

Mr. Md. Khalequzzaman Akanda Chowdhury  
Member-Director (Crop)  
Crops Division,  
Bangladesh Agricultural Research Council (BARC)  
New Airport Road, Farmgate, Dhaka  
Tel: 811 8275  
Email: md-crops@barc.gov.bd or  
kzamancho55@yahoo.com

**BHUTAN**

Mrs. Asta Maya Tamang  
Deputy Chief Biodiversity Officer  
Ministry of Agriculture  
Serbithang, Thimphu  
Bhutan  
Tel: 975-2351417  
Fax: 975-2351219  
Email: astapgrfa@yahoo.com

**CAMBODIA**

Mr Ty Channa  
Deputy Director  
Cambodian Agricultural Research and Development Institute  
(CARDI)  
Cambodia  
Mobile: (855-11) 818 798  
Email: Tchanna@cardi.org.kh

**CHINA**

Mr. Zongwen Zhang  
Bioersity Office for East Asia  
Chinese Academy of Agricultural Sciences  
12 Zhongguancun Nandajie  
Beijing 100081, China  
Tel: 86-10-82105686  
Fax: 86-10-82105684  
Email: z.zhang@cgiar.org

## **INDIA**

Mr. Dalpat Chand Bhandari  
Acting Director of NBPGR  
NBPGR  
Pusa Campus  
New Delhi 110 012, India  
Email: director@nbpgr.ernet.in  
bhandaridc@nbpgr.ernet.in

## **INDONESIA**

Mr. Karden Mulya  
Indonesian Center for Agricultural Biotechnology  
and Genetic Resources Research and Development (ICABIOGRAD)  
Jl. Tentara Pelajar 3A, Cimanggu, Bogor 16111  
West Java, Indonesia  
Tel: 62-251-8333440  
Fax: 62-251-8338820

Ms. Andari Risliawati  
Indonesian Centre for Agricultural Biotechnology and Genetic Resources Research  
And Development (ICABIOGRRAD)  
Ministry of Agriculture  
Tentara Pelajar No 3A  
Bogor 16111  
Indonesia  
Tel: 62 858 5462 6513  
Fax: (0251) 833 8820  
Email: boendar@yahoo.co.id

## **JAPAN**

Mr. Makoto Kawase  
Director of the Genebank  
National Institute of Agrobiological Sciences  
Kannondai 2-1-2  
Tsukuba 305-8602, Ibaraki  
Japan  
Email: kawase@affrc.go.jp

Ms. Fumiko Yagihashi  
Technical Official, Research Promotion Division  
Agriculture, Forestry and Fisheries Research Council,  
Ministry of Agriculture Forestry and Fisheries of JAPAN  
1-2-1 Kasumigaseki, Chiyoda-ku,  
Tokyo, 100-8952  
Japan  
Tel: +81-3-3502-8111(ex. 86388)  
Mobile: +(81) 090-9808-9398  
Fax: +81-3-3593-2209  
Email: yagihashi@affrc.go.jp (or fumiko\_yagihashi@nm.maff.go.jp)

## **LAO PDR**

Mr. Vayaphat Thattamanivong  
Agriculture and Forestry Information Centre, NAFRI  
P.O. Box 7170, Vientiane, Lao PDR  
Tel/Fax: 856-21 770892  
Mobile: 856-20 2211593  
Email: duckcanard@yahoo.com (or vayaphat.t@nafri.org.la)

## **MALAYSIA**

Ms. Tosiah Sadi  
Research Officer  
Strategic Resource Research Centre  
Malaysian Agricultural Research Institute (MARDI)  
P.O.Box 12301, G.P.O. 50774  
Kuala Lumpur, Malaysia  
Tel: 603-89438078/7391  
Fax: 603-89437677  
Email: tosiah@mardi.gov.my

Mr. Lim Eng Siang  
Malaysia  
Email: eslim\_choi@yahoo.com

## **MONGOLIA**

Mr. Noov Bayarsukh  
Deputy Director  
Plant Science and Agricultural Research Training Institute  
Darkhan-Uul  
Mongolia  
Tel: 976-1372-28831  
Mobile: 976-9901-4174  
Fax: 976-1372-28826 or 24132  
Email: bayar67@yahoo.com

## **MYANMAR**

U Aung Myint  
Department of Agricultural Research (DAR)  
Yezin, Nay Pyi Taw  
Myanmar  
Tel: 067-416531  
Email: myint.aung74@gmail.com

## **NEPAL**

Mr Hari Dahal

Joint Secretary  
Government of Nepal  
Ministry of Agriculture and Cooperatives  
Kathmandu, Nepal  
Tel: 977-1-6631649 (home)  
Mobile: 977-1-9841609595  
Email: drdahal\_h@yahoo.com

### **PAKISTAN**

Mr M. Shahid Masood  
CSO/Senior Director (IABGR)  
National Agricultural Research Centre (NARC)  
Park Road, Islamabad-45500  
Pakistan  
Tel: +92-51-9255203  
Mobile:+92-314-5330782  
Fax: +92-51-9255201  
Email: shahid617@yahoo.com

### **PHILIPPINES**

Ms Solita R. Sicat  
Senior Agriculturist  
Head, Computer Unit  
Bureau of Plant Industry  
692 San Andres Street  
Malate, Manila, Philippines 1004  
Tel: 63-2 524-8191  
Mobile: (0927) 275-4263  
Fax: 63-2 521-7650  
Email: letsicat@yahoo.com

### **REPUBLIC OF KOREA**

Mr. Man-Jung Kang  
Research Scientist  
National Agrobiodiversity Center  
Rural Development Administration  
250 Suwon, Republic of Korea  
Email: mj kang@korea.kr

Mr. Taek-Ryoun Kwon  
Seconded Senior Scientist  
Bioversity International / Regional Office for APO  
PO Box 236  
UPM Post Office, Serdang,  
43400 Selangor Darul Ehsan  
Malaysia  
Tel: (603) 8942 3891 (ext) 218  
Fax: (603) 8948 7655

Email: t.kwon@cgiar.org (or trkwon@korea.kr)

### **SRI LANKA**

Mr. P.M. Wijeratne  
Deputy Director  
Plant Genetic Resources Centre  
P.O. Box 59, Gannoruwa, Peradeniya  
Sri Lanka  
Tel: 94-081 2388494  
Fax: 94-081 2388490  
E.mail: pgrc@slt.lk

### **THAILAND**

Mrs. Chutima Ratanasatien  
Senior Agricultural Scientist  
Plant Varieties Protection Division  
Department of Agriculture  
50 Phaholyothin Road, Ladyao Chatuchak, Bangkok 10900  
Thailand  
Tel: 662- 940 7214  
Fax: 662 561 4665  
Email: chutima\_ratanasatien@yahoo.com

Ms. Veerana Sinsawat Forrer  
Senior Agricultural Researcher  
Field Crops Research Institute  
Department of Agriculture  
Chatuchak, Bangkok 10900  
Thailand  
Tel : 662 579 3930  
Fax: 662 561 3486  
Email: veeranalein@yahoo.com

Mrs. Sumana Ngampongsai  
Senior Agricultural Research Officer  
Chai Nat Field Crops Research Centre  
Department of Agriculture  
Muang, Chai Nat, 17000  
Thailand  
Tel.: 665 640 5080  
Fax: 665 640 5083  
Email: sumana56@hotmail.com

Ms. Rungthiwa Thanumthat  
Plant Varieties Protection Division  
Department of Agriculture  
50 Phaholyothin Road, Ladyao Chatuchak, Bangkok 10900  
Thailand  
Tel: 662- 940 7214  
Fax: 662 561 4665  
Email: rungthiwa\_pvp@yahoo.com

Ms. Thidakoon Saenudom  
Plant Varieties Protection Division  
Department of Agriculture  
50 Phaholyothin Road, Ladyao Chatuchak, Bangkok 10900  
Thailand  
Tel: 662- 940 7214  
Fax: 662 561 4665  
Email: thidakuns@hotmail.com

### **VIET NAM**

Mr. Tran Danh Suu  
Deputy-Director  
Plant Resources Center,  
Vietnamese Academy of Agricultural Sciences  
Ankhanh, Hoaiduc, Hanoi,  
Vietnam  
Tel: 844 336 54965;  
Fax: 844 336 50625  
Email: trandanh\_suu@yahoo.com

### **CGIAR**

Mr. Leocadio S. Sebastian  
Bioersity International  
Regional Office for  
Asia, the Pacific and Oceania  
POBox 236, UPM Post Office  
43400 Serdang  
Selangor, Malaysia  
Tel: 60-3-89423891  
Fax: 60-3-89487655  
Email: l.sebastian@cgiar.org

### **Global Crop Diversity Trust**

Mr. Godfrey Mwila  
Global Crop Diversity Trust  
c/o FAO  
Viale delle Terme di Caracalla  
00153 Rome, Italy  
Tel: (39) 06 570 56315  
Fax: (39) 06 570 55634  
Email: Godfrey.Mwila@croptrust.org

### **FAO HQ**

Mr. Stefano Diulgheroff  
GPA Updating Coordinator  
Plant Production and Protection Division

FAO  
Viale delle Terme di Caracalla  
00153 Rome, Italy  
Tel: (+39) 06 570 55544  
Email: Stefano.Diulgheroff@fao.org

Mr. Dan Leskien  
Senior Liaison Officer  
Secretariat of the Commission on  
Genetic Resources for Food and Agriculture  
Natural Resources Management and Environment Department  
FAO  
Via delle Terme di Caracalla  
00153 Rome, Italy  
Tel: (+39) 06 570 54666  
Fax: (+39) 06 570 53057  
Mobile: (+39) 348 5490 823  
E-mail: [Dan.Leskien@fao.org](mailto:Dan.Leskien@fao.org)

Mr. Mario Marino  
Treaty Support Officer  
Secretariat of the International Treaty on PGRFA  
FAO  
Viale delle Terme di Caracalla  
00153 Rome, Italy  
Tel. (0039) 06 57055084  
Fax: (0039) 06 57053854  
E-mail: [mario.marino@fao.org](mailto:mario.marino@fao.org)

Mr. Mba Chikelu  
GIPB Coordinator  
Plant Production and Protection Division  
FAO Headquarters  
Viale delle Terme di Caracalla  
00100 Rome, Italy  
Email: Chikelu.Mba@fao.org

## **FAO RAP**

Mr. Duncan Vaughan  
Chief Technical Adviser, GCP/RAS/240/JPN  
FAO RAP  
39 Maliwan Mansion, Phra Athit Road  
Bangkok 10200  
Thailand  
Tel: (66-2) 697-4142  
Fax: (66-2) 697-4445  
Email: [Duncan.Vaughan@fao.org](mailto:Duncan.Vaughan@fao.org)

Mr. Percy Eres Sajise  
Consultant  
Via Virginia 28, 00181  
Rome, Italy

Tel: +39 06 787924  
Email: P.Sajise@cgiar.org

Ms. Wandee Jangkanipakul  
Secretary, GCP/RAS/240/JPN  
FAORAP  
39 Maliwan Mansion, Phra Athit Road  
Bangkok 10200  
Thailand  
Tel: (66-2) 697-4133  
Fax: (66-2) 697-4445  
E-mail: Wandee.Jangkanipakul@fao.org

**Annex B**  
**Agenda and schedule for the regional consultation and working group sessions for the Asian region**

Overall facilitator Stefano Diulgheroff

Faciliator for In Situ Conservation and Development – Percy Sajise

Rapporteurs for In Situ Conservation and Development – Dan Leskien and Godfrey Mwila

Facilitator for Ex situ conservation – Duncan Vaughan

Rapporteur for Ex situ conservation – Chikelu Mba

Facilitator for Utilization of Plant Genetic Resources – Duncan Vaughan

Rapporteur for Utilization of Plant Genetic Resources – Chikelu Mba

Faciliator for Institutions and Capacity Building – Percy Sajise

Rapporteurs for Institutions and Capacity Building – Dan Leskien and Godfrey Mwila

**Tuesday 7th September – GPA consultation**

8:30-9:20	GPA revision process Changes and challenges for GPA	Stefano Diulgheroff (FAO)	<b>Plenary</b>
9:20-9:50	<i>The Synthesis</i>	Percy Sajise (FAO consultant)	<b>Plenary</b>
9:50 -10:00	Dynamics of Working Groups	Duncan Vaughan (FAO)	<b>Plenary</b>
10:00 -10:20	Coffee		
10:20 -12:00	Working Group 1*		In-situ/Ex-situ
12:00 -13:00	Lunch		
13:00 -14:40	Working Group 2*		Ex-situ/In-situ
14:40 -15:00	Coffee		
15:00 -16:40	Working Group 3*		Use/Capacity Building/Introduction
<b>18:30</b>	<b>Reception</b>		

**Wednesday 8th September 2010 – GPA**

9:00-10:40	Working Group 4*	Use/Capacity Building/Introduction	
10:40-11:00	Coffee		
11:00-12:40	Working Group 5*	Use/Capacity Building/Introduction	
12:40-14:40	Lunch		
14:40-15:40	Discussion – In-situ and Ex-situ		<b>Plenary</b>
15:40-16:00	Coffee		
16:00-17:00	Discussion - Synthesis Sections, Use Capacity Building and Introduction		<b>Plenary</b>
<b>Evening free</b>			