

**UPDATING OF THE GLOBAL PLAN OF ACTION  
FOR THE CONSERVATION AND SUSTAINABLE USE OF  
PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

**REPORT OF THE PACIFIC REGIONAL CONSULTATION**

**INTRODUCTION**

1. The Commission on Genetic Resources for Food and Agriculture (Commission), at its Twelfth Regular Session, in October 2009, agreed to update the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture (GPA), in accordance with its Strategic Plan 2010-2017 for the implementation of the Multi-Year Programme of Work. It requested the Food and Agriculture Organization of the United Nations (FAO) to prepare the updated GPA based primarily on the Second Report and, in particular, on the identified gaps and needs; taking into account further contributions from Governments and inputs received from regional meetings and consultations. The Commission decided that the updated GPA will be considered at its Thirteenth Regular Session in 2011.

2. The Pacific consultation on the updating of the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture (GPA) was held in Suva, Fiji on 9-10 December 2010 as part of the broader regional consultation on Strengthening Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture in the Pacific Island Countries. It was organized by FAO in collaboration with the Secretariat of the Pacific Community and the financial support of the Australian Government. Representatives from 14 countries participated and contributed to the discussions.

3. Introductory presentations were delivered by Mr. Diulgheroff, FAO, on the GPA and its updating process, as well as on relevant changes highlighted in the SOW-2 and challenges for the new GPA; by Dr. Taylor, SPC, on the regional status of PGRFA's conservation and use; and by Ms. Pick, FAO, who described the expected outputs and the dynamics of the working groups ahead. Country representatives were divided in five working groups; each group had the opportunity to review and make contributions over the GPA introductory parts and the main four thematic groups of the GPA, namely, *In Situ* Conservation and Development; *Ex Situ* Conservation; Utilization of Plant Genetic Resources; and Institutions and Capacity Building.

**SUMMARY OF RESULTS**

**PART ONE: INTRODUCTORY PARTS AND IMPLEMENTATION AND FINANCING OF THE GLOBAL PLAN OF ACTION**

4. The Pacific group suggested the Leipzig Declaration become an Annex to the updated GPA. An additional short section is proposed to describe the progress made in the implementation of the GPA.

5. A new Declaration is proposed to reflect new challenges such as the impacts of climate change (including the special vulnerabilities for small island states); food and nutritional security needs; population growth; the changing policy environment including the MDGs and other instruments; development and access to markets; under-utilized crops and wild species; transfer of new technologies; genetic erosion and habitat loss, and the need for capacity-building. The proposed new Declaration could be considered for adoption by the governing bodies of the ITPGRFA (March 2011) and CGRFA (July 2011) before being recommended by the CRGFA to the FAO Council.

6. The Introduction should explain the role of the GPA and the reason it was updated. Para 1 needs a message of urgency that is focused on small island states at risk from climate change. The Pacific group suggested using the language of the ITPGRFA where appropriate, such as in Para 2, for the 'International Undertaking on PGR'.

7. The Rationale section should be sharpened for more impact. The title could omit the word 'specifically', or, be reduced to 'Rationale'. Para 1 should be amended to include new global issues and the role of the GPA in the implementation of the ITPGRFA.

8. Para 7(b) should highlight the lack of technologies and human resources in developing countries. The last sentence in 7(c) needs to be more specific while 7(d) should mention the ITPGRFA and the CBD when it refers to 'sharing of benefits'. Para 7(f) could shift higher up and include a reference to progress made since 1996. New funding sources e.g. Global Crop Diversity Trust and the Benefit-Sharing Fund of the ITPGRFA should be referred to in 7(g).

9. A new section is proposed to explain the updating of the GPA; the urgency to address new challenges and the contribution of PGRFA to solutions.

10. Para 8 should refer to the SOW-2 and the updating of the GPA, while the first mention of strategy should be pluralized to 'strategies'. The bullets in Para 9 will need updating in line with the priority activity areas of the updated GPA. The 1<sup>st</sup> bullet point to add the issue of climate change; 2<sup>nd</sup> bullet point to highlight PGRFA for 'nutrition and food', and the 3<sup>rd</sup> bullet point on benefit sharing should be in line with the ITPGRFA's provisions on this subject.

11. The Strategies section (Para 10) needs to refer to the ITPGRFA and GCDT and also explain the updating of the GPA. The reference to substantial international cooperation in this paragraph should be strengthened. In general, the bullet points should refer to new global issues, e.g. climate change, and note the progress made since 1996.

12. Para 10(a) should refer specifically to the loss of materials due to the lack of funding. Para 10(b) and 10(d) can be merged while also adding 'crop improvement', and highlighting the need for participatory plant breeding and capacity building for plant breeding. Add "Establishing and" to 'strengthening the selection efforts ...' The wording for 'on-farm and in nature' need to be clarified. The sixth line should add 'research' to

the linkages.

13. An additional section is proposed on building awareness.

14. Priority Activity Areas (PAA) 12 and 14 can be merged. All PAA's should be updated with key achievements since 1996. Some suggested changing 12(a) 'Assessment' to 'Background'; and, in 12(b), changing 'Long-term' and 'Intermediate' (Objectives), to 'General' and 'Specific' respectively.

15. The Policy/Strategy section should include 'regional' and not only national and international, as the Pacific often takes a regional approach to issues of common concern.

16. The Capacity section to include 'infrastructure' along with the current reference to human and institutional capacities. This section to be strengthened to highlight the urgency for building capacity and the value of using partnerships.

17. The text on Implementation and Financing of the GPA should be updated as necessary (e.g. text refers to an upcoming World Food Summit in 1996) and also include new financing mechanisms such as the GCDT and Benefit-Sharing fund in the ITPGRFA. There is a need to highlight the importance of securing funds for implementation of the GPA and provide more details on the arrangements for implementation, such as monitoring and review.

18. Para 8 in this section should emphasise the commitments by members in terms of funding and policy support for national programmes. The consultation also suggested to consider the establishment of an endowment fund to address GPA priorities and plant genetic resources that are not currently covered by the Global Crop Diversity Trust and the Benefit-Sharing Fund of the ITPGRFA.

19. A general comment was to ensure that the Introductory parts refer not only to crops but also to crop wild relatives.

## **PART TWO: *IN SITU* CONSERVATION AND DEVELOPMENT**

20. General comments from the Pacific group were that the 'regional' dimension should be added when national and international action is mentioned. Long-term and Intermediate Objectives could be simplified to Goals and Objectives, respectively. The text should also be specific on what is meant by "seeds", whether or not it refers to planting material in general, thereby including vegetative propagules.

### **PAA 1. Surveying and inventorying plant genetic resources for food and agriculture**

21. The title for PAA 1 should be strengthened by including 'monitoring' and 'knowledge on PGRFA'.

22. As per the Long-term objectives, Para 15 should mention 'crop wild relatives'

after the reference to ‘populations of plants’. The words ‘monitoring or documentation’ could be added so that Para 15 is more than an inventory. It was also suggested that the words ‘especially those that are of anticipated use’ after ‘agriculture’ be deleted. In Para 16 the words ‘and monitoring’ should be added after ‘sustainable use’.

23. The Intermediate objective in Para 17 should be strengthened by adding words to improve existing methods and develop new ones where needed. Other suggestions are to mention traditional knowledge, monitoring and the importance of implementation.

24. Under Capacity, the gap from the SOW-2 inserted in Para 22 should add ‘and ethnobotany’ after the reference to crop wild relatives. The Pacific consultation also felt that the need for training in the use of descriptor lists for PGR should also be mentioned.

### **PAA 2. Supporting on-farm management and improvement of plant genetic resources for food and agriculture**

25. The title for PAA 2 should reflect the range of traditional food production systems from home gardens to forest farming.

26. The 5<sup>th</sup> Long-term objectives “To foster the future emergence of public or private seed companies and cooperative enterprises as an outgrowth of successful on-farm selection and breeding.” in Para 32 could be reworded to read “To foster successful traditional and innovative selection and breeding particularly in the light of climate change”.

27. Under Intermediate objectives, in the 4<sup>th</sup> sentence of Para 33, a distinction is made between on-farm and garden programmes which may require clarification. In the same objective/sentence the reference to systems of knowledge could replace the word ‘local’ with ‘traditional’. The reference to women in the final sentence should be clarified, or, reworded to replace ‘women’ with ‘gender and age’ or ‘different farmers’. Another suggestion is to reword the final sentence to read ‘Understanding production and resource management in rural households should be gender sensitive’. The importance of participatory approaches in the Pacific needs to be reflected in the updated GPA.

28. Under Policy/strategy in Para 37, the 8<sup>th</sup> and 9<sup>th</sup> bullet points (identified gaps from SOW-2) dealing with participatory plant breeding can be merged. The Pacific group felt that it was important to understand the role of consumers within food systems and this should be written into the text. The final bullet point in Para 43 should be expanded to include help with marketing.

### **PAA 3. Assisting farmers in disaster situations to restore agricultural systems**

29. The title of PAA 3 could be made more proactive such that ‘Assisting in advance of disaster situations to restore agricultural systems’.

30. In Long-term objectives, Para 51, it was suggested that farmers and rural peoples

could be replaced with ‘communities’. The objective could also benefit by including ‘diversifying agricultural systems’. The Pacific group felt that the word ‘seed’ under Intermediate objectives, in Para 52 should be replaced with the words ‘planting materials’, which is broader. The updated GPA needs to be sensitive to the potentially restricted understanding of the term “seeds”. In Para 53 the reference to ‘establish’ should be followed by the words ‘improve and maintain’ in order to reflect continuity of the process.

31. Under Policy/strategy after Para 55, in the 1<sup>st</sup> bullet point of the insertions from SOW-2 gaps and needs, the reference to genetic erosion could be replaced by ‘agro-biodiversity or genetic diversity loss’. In the 3<sup>rd</sup> bullet point, the sentence could be changed to read ‘There is a need for comprehensive collections of landraces, farmers’ varieties and CWR before they are lost as a result of changing climates’.

32. Other sectors could be added to the agriculture and the environment sectors in the reported need of the SOW-2 after Para 62 e.g. forestry, education and public works.

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

33. The title of PAA 4 could end with ‘and for traditional uses’. The first sentence in Para 65 should also refer to climate change. Another suggestion is to amend Para 66 of Long-term objectives to read ‘To promote conservation of genetic resources of wild crop relatives and wild plants for food production and other uses where they are grown’. The reference in Intermediate objectives, Para 68, to environmental health could be changed to ‘human health and environmental sustainability’.

34. After Para 73, in the gaps and needs reported from SOW\_2, some delegates questioned the relevance of the 1<sup>st</sup> and 3<sup>rd</sup> bullet points.

35. The importance of various awareness raising efforts was stressed by the group as CWR are often not recognized by local communities as potentially useful plant genetic resources.

#### **PART THREE: *EX SITU* CONSERVATION**

36. The Pacific group suggested some changes to reflect a regional approach and to ensure that under-utilized species, traditional knowledge and capacity needs will be adequately covered in the updated GPA. Text should refer to the ITPGRFA where the CBD is mentioned, if appropriate. The titles Long-Term and Intermediate objectives could be changed to General objectives and Specific objectives, respectively.

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

37. The Long-term and Intermediate Objectives should be re-written to take into account the developments in the area of *ex situ* conservation since the mid-1990s. There should also be recognition of the contribution that regional programmes and institutions can make to a global system of *ex situ* conservation.

38. In small island states, diesel-based electricity is relatively expensive. The Pacific group proposed that in the Policy/Strategy section, Para 83 also highlights the need to explore cheaper and more reliable power supply options for crop collections that rely on expensive conservation methods.

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

39. Under Para 95, “highlighting the need for users of PGRFA to feedback information after evaluation of *ex situ* accessions” should be inserted after the 6<sup>th</sup> sentence, which reads “Lack of information...impeding rational regeneration”. The need for regenerating vegetatively propagated materials and recalcitrant seeded plants should be adequately referred to under this PAA. The Assessment part should be updated with information on progress made in the regeneration of collections including those supported by the Global Crop Diversity Trust.

40. Under Intermediate objectives last sentence of Para 97, which begins ‘To complete the first ...’, could be deleted.

41. Under Policy/strategy in Para 101, the sentence should include a reference to the genebank standards and regeneration guidelines developed by FAO and the Global Crop Diversity Trust, respectively. A similar addition is suggested for Para 104, where characterization should be developed in line with globally accepted crop descriptor lists.

42. Under Capacity, Para 105, the words ‘and other relevant stakeholders’ should be added to the list in the last line. In this same section, the Pacific group felt that for the small islands a priority was for training in basic conservation skills due to high staff turnover and the limited numbers of people who might qualify for tertiary level study. A new sentence is proposed to read ‘Training should also increase the number of people who are trained in basic conservation skills’.

### **PAA 7. Supporting planned and targeted collecting of plant genetic resources for food and agriculture**

43. The Pacific group felt that more weight should be given to crop wild relatives. In the Assessment, Para 116, line 5 should add ‘crop wild relatives’ to the list. In Para 117, a new sentence is proposed to read ‘Priority be given to collecting the remaining under-utilized species and crop wild relatives, in particular, for those ecosystems at risk of climate change and land-use changes’.

44. In Long-term objectives, Para 118, the Pacific group felt the collections should be matched by the ease of retrieval. The suggestion is to add to the end of the sentence, the phrase ‘and ensure they are secure and safely conserved and made available’.

45. Under the Policy/strategy section, Para 120, it should be stressed the need for *in situ* and *ex situ* conservation strategies to be integrated and connected to access and use strategies.

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

46. The Pacific group believes that a large knowledge base exists at the local level and this needs to be reflected in the Assessment (Para 131). A new sentence is proposed to read ‘The lack of using local knowledge and promotional activities is limiting access to new and under-utilised species’.

47. After Para 136, the 4<sup>th</sup> bullet point of the gaps and needs from the SOW-2 should add the words ‘urbanisation and adoption of developed cultivars’ at the end of the first sentence. The 5<sup>th</sup> bullet point should add ‘traditional knowledge’ to the list in line 1. The 7<sup>th</sup> bullet point could be made more inclusive by changing the phrase in line 1 to ‘educate managers, politicians and policy makers ...’

48. In the Capacity section, the Pacific group felt that training in new technologies was required to strengthen *ex situ* conservation. The existing sentence in Para 139 should be changed to read ‘Support should be given to training in *in vitro* orthodox seed conservation and utilization techniques, cryo-preservation and other new and appropriate technologies. Training in new information technologies and applications is also required’.

49. Para 140 in the Research/Technology section should be strengthened, and the word ‘must’ is suggested so that the sentence opens as ‘Protocols must be developed ...’. At the end of the same sentence, the proposal is to add the words ‘and optimised orthodox seed storage’.

#### **PART FOUR: UTILIZATION OF PLANT GENETIC RESOURCES**

50. The Pacific group felt the title could be simplified to ‘Use of PGRFA in crop improvement’. In general, the text should highlight the role of plant breeding along with terms such as ‘plant breeding’, ‘pre-breeding’ and ‘participatory plant breeding’. These are at the core of the PAAs in this section, especially PAA 10.

51. The need to mainstream the participatory approaches involving farmers, community-based interventions and local knowledge in crop improvement must be articulated, including capacity building in plant breeding.

52. Reference should be made to the novel biotechnologies in characterization, improvement and selection within IPR regimes. The text should emphasize the development of policy frameworks for PGRFA to ensure sustainability and promote best

practice. Highlighting the need for strong links between breeding, conservation and seed/planting material systems will help to support optimal outcomes.

53. The impacts of climate change, vulnerable environments and nutritional needs as drivers for crop improvement should be noted. The nutritional qualities of staple crops should also be highlighted. The text should also promote ecosystem-based crop production, including organic farming, that support balanced biological systems.

54. Long-term and Intermediate Objectives could be changed to ‘Goals’ and ‘Specific Objectives’ respectively, or similar, to be in line with conventional styles.

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

55. The title of PAA 9 could be changed to ‘Strengthening and expanding the characterization and evaluation of germplasm’. References to “Core collections” in the title should be dropped.

56. In the Assessment, Para 146, as well as throughout the PAA when it applies the term ‘core-collection’ appears too restrictive and could be replaced with the term ‘sub-set’. In Para 147, there is a need to emphasize the use of a minimum set of descriptors complemented by molecular marker systems in germplasm characterization and the identification of sub-sets.

57. In Para 161 (a), the text should highlight the efficiencies derivable from the use of modern biotechnologies and information technology tools in both managing PGRFA and using them to develop superior crop varieties.

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

58. The title for PAA 10 should reflect the need to increase access to the widest possible genetic variation for breeding purposes and to expand improvement activities, e.g. ‘Increasing exploitable genetic variation’, or, ‘Increasing pre-breeding and breeding efforts’. Breeding should be discussed throughout the PAA accordingly.

59. In Para 169 (b), this should include a reference to induced mutations, facilitated by molecular biology – including reverse genetics strategies - as a means to expand the genetic base of germplasm. This change is also suggested for the Intermediate objectives in Para 171.

60. Under the Long-term objectives, the 3<sup>rd</sup> sentence in Para 170 could be changed to read ‘To increase genetic variability in crop varieties through the utilization of wild relatives, local materials and/or modern varieties’.

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

61. Para 178 should highlight the need to develop strategies that promote the use of nutritious local foods in diversified diets. Similarly, the Long-term objective in Para 179 should highlight the need to improve crop quality attributes through breeding as a means to improve the nutritional and health status of the population. The text could also emphasize product development and value-adding as stimuli for production.

### **PAA 12. Promoting development and commercialization of underutilized crops and species**

and

### **PAA 14. Developing new markets for local varieties and “diversity-rich” products**

62. PAA 12 and 14 could be merged with the resulting PAA catering to boosting the production and commercialization of under-utilized crops and local varieties. This PAA should emphasize the importance of value-adding as a means to boost production and generate incomes; raise awareness of the benefits of a diversified food base, and promote under-utilized crops in enhancing the nutritional status of the population. In addition, the importance of increasing awareness and education on the benefits of a diversified food base should be promoted.

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

63. The title in PAA 13 could be changed to use the words ‘planting materials’ in place of, or in addition to, the word ‘seeds’.

64. Under Policy/strategy, Para 203 should highlight the need to promote smallholder farmer distribution channels; build capacity; raise awareness of the need to use high quality planting materials, and promote commercial distribution. There is also a need to promote the use of open pollinated cultivars to enable farmers to save seeds, and to facilitate seed distribution and production. The same Para should emphasize the need to facilitate access to PGRFA by streamlining plant quarantine requirements.

## **PART FIVE: INSTITUTIONS AND CAPACITY BUILDING**

### **PAA 15. Building strong national programmes**

65. For PAA 15, ‘strengthening’ and ‘regional’ should be added to the title to read ‘Building and strengthening national and regional programmes’.

66. The first sentence of Para 219 should read “Many countries still lack national policies, strategies and/or action plans....”acknowledging the importance of having policies in place from which to develop strategies and action plans. The 2<sup>nd</sup> bullet point should clarify the three categories from the SOW-1 that are referred to so the reader does not have to read the report. The 5<sup>th</sup> and 6<sup>th</sup> bullet points can be combined as they both

refer to the NISM.

67. Many of the bullet points in Para 219 are very general and fail to show that regional differences exist (e.g. the 3<sup>rd</sup>, 11<sup>th</sup> and 12<sup>th</sup> bullet points). Other sectors, such as education and health, should be acknowledged given the increasing recognition that PGRFA can contribute to nutrition and health, and the need to alert children and youth to the benefits of PGRFA. For example, Para 220 only mentions the agriculture, environment and development sectors.

68. In Para 221 the importance of ‘maintenance’ and ‘documentation’ is omitted from the third sentence, such that the sentence should read ‘The integration of conservation, maintenance, characterization, evaluation, documentation, dissemination and use will facilitate the valorization of plant genetic resources for food and agriculture.’

69. The Long-term objectives and the Intermediate objectives need to indicate a timeframe, or, be renamed as ‘General’ and ‘Specific’. Objectives should consider regional needs due to the role played by regional networks and programmes in strengthening national programmes.

70. Under Policy/strategy, Para 229, last sentence, highlights the need for biosecurity regulations. The need for and importance of human resource capacity in implementing biosecurity regulations must be recognized e.g. ‘Human resources capacity should be considered at the same time as any establishment of regulations’ to be added to the end of the paragraph. The term “broadly-comprised” in Para 230 (last sentence) should be more specific. The establishment of committees is not enough – they must also be effective. A revised sentence could read ‘Establishment of effective, multi-sectoral national committees will be an important means of organizing and coordinating efforts in most countries’.

71. In Para 233, the reference to *in situ* and on farm conservation in the 1<sup>st</sup> bullet point of the gaps and needs from the SOW-2 should reflect national and regional differences with regards to the need for strategies in these areas. In Para 237, some bullet points were similar and could be merged; the 6<sup>th</sup> bullet point could be changed to read ‘Further research to provide information to underpin the development of appropriate policies for the conservation and use of genetic diversity, in particular, the economic valuation of PGRFA’, to emphasize the importance of determining the value of PGRFA. More emphasis is needed on the importance of building and strengthening capacity in Participatory Plant Breeding (PPB) methodology in the 8<sup>th</sup> and 9<sup>th</sup> bullet points (Para 237). References to plant breeding should mention both conventional and participatory breeding.

72. In the Coordination/Administration section, after Para 238, the 8<sup>th</sup> bullet point from the gaps and needs of the SOW-2 discusses international linkages but there is little mention, if any, for effective linkages between international, regional and national levels. The Pacific group proposes a separate bullet point which reads ‘Effective linkages are essential between agencies and institutions at the international, regional and national

levels'. The role of regional bodies (e.g. Secretariat of the Pacific Community) in facilitating communication at the national level be acknowledged.

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

73. For PAA 16, the title could be improved by adding the word 'strengthening', to read 'Promoting and strengthening networks for PGRFA'.

74. Under the Assessment section in Para 241, the 3<sup>rd</sup> line which lists the activities that networks support and facilitate, omits the word 'documentation'. The importance of documentation needs more emphasis generally in the document and appears to have been omitted in several lists of genebank activities.

75. The 4<sup>th</sup> bullet point of the gaps and needs reported from the SOW-2, after Para 242, should also mention the Pacific, where funding is also a constraint for the Pacific network PAPGREN. The Pacific group is unaware of the existence of the Pacific cassava network mentioned in the 5<sup>th</sup> bullet point.

76. As per the Intermediate objective in Para 248, reported figures (5 to 15 international crop and thematically-oriented networks) need updating. Under Policy/strategy after Para 252 the 3<sup>rd</sup> bullet point of the SOW-2 gaps and needs omits 'regional' and also ignores the importance of sectors outside of agriculture and the environment. The last bullet point refers to international germplasm exchange as 'a key motivation' rather than 'one of the motivating factors behind many networks'. Given the importance of networks, a new bullet point is proposed to read 'There is a need for studies to assess the benefits and impacts of networks to support policy development and funding'.

77. Under Capacity, Para 253 should note the importance of 'coordination' skills. The 1<sup>st</sup> bullet point of the SOW-2 gaps and needs after Para 253 discusses the need for new and innovative funding strategies. The need to strengthen the capacity of PGRFA staff to write successful proposals should be noted. Para 254 infers that new networks should be established in several regions including the Pacific. Prior to the establishment of any new networks, existing ones should be strengthened. The bullet point of the SOW-2 gaps and needs after Para 254, i.e. the importance of south-south cooperation, especially for capacity building, should be emphasized. Linkages between networks also need to be strengthened.

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

78. For PAA 17 strengthening should be inserted, to read 'Constructing and strengthening comprehensive information systems for PGRFA'.

79. The 'regional' dimension should be mentioned in the Capacity section, Para 272, to read 'Access by national and regional programmes to basic scientific, research and

bibliographic information should be facilitated'. Regional programmes are vital in supplying information to national programmes in a region as fragmented as the Pacific. In the same section, the lead sentence in Para 273 ("Genebanks ... national goals") should stand alone, or, be worded to carry more emphasis. Human resources in this area are often a low priority. The word 'regional' should be added so that the sentence reads 'Genebanks should have sufficient personnel to manage information and make it easily and widely accessible to users according to national and regional goals'.

80. 'Self-teaching manuals' as mentioned in Para 274, are of key importance and as such it should be highlighted that these manuals should be in user-friendly language and, where relevant, translated into local languages. The use of the word 'manual' was queried and it was suggested that perhaps 'tools' would be a better word, thereby incorporating both hard copies and online.

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

81. For PAA 18, the sentence "loss of genetic resources in crops occurs mainly through adoption of new crops or new varieties of crops with the consequent abandonment of traditional ones without appropriate conservation measures" at the end of Para 279 is very important especially in the light of projects which focus on trade, as such this sentence could stand alone to highlight its importance. Several bullet points from the SOW-2 gaps and needs after Para 280, e.g. the 2<sup>nd</sup> and 3<sup>rd</sup>, are very similar and could be synthesized in the updated GPA.

82. The wording in the Long-term objective could be more concise. The Intermediate Objectives contain three points which could be separated to ensure clarity.

83. Under the Policy/strategy section in Para 284, the 4<sup>th</sup> bullet point from the gaps and needs of the SOW-2, has several points under it, which vary in their focus. The 4<sup>th</sup> bullet point (*Specific research needs relating to on farm management or in situ conservation of PGRFA*) provides sufficient detail for the GPA; the other sub-bullet points are not necessary.

84. After Para 291, the 2<sup>nd</sup> bullet point from the SOW-2 gaps and needs should read 'There is a need for more efficient, strategic and integrated approaches to the management of PGRFA at the national and regional levels'; 'genetic improvement seed production and distribution' is misleading and would better read 'genetic crop improvement and plant material production and distribution'.

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

85. The title of PAA 19 could be improved through 'Building and Strengthening Human Resource Capacity'. In general, PGRFA education and training should not just occur within agriculture and biological sciences but also be included in the health, economics and environment curricula. There is insufficient emphasis on the importance

of primary and secondary education to achieve this priority activity. There should be a statement to reflect this, rather than ‘concerning PGRFA at all levels’ as in the Policy/strategy section, Para 300.

86. The importance of developing e-learning and distance education in the various aspects of PGRFA conservation, management and use should be mentioned. The Intermediate objective in Para 297 appears to suggest this but it needs to be clearer. There is also insufficient mention of the importance of on-going training so that skills can be updated. Overall the Intermediate Objectives ignore the importance of training in PGRFA aspects at all levels. Further, Para 299 is too restrictive and should be changed into ‘To encourage institutions to include PGRFA aspects in related courses and programmes in biological, agricultural and environmental sciences. The nutritional benefits of PGRFA should also be included in health courses.

87. Under the section on Capacity, there is insufficient recognition of the need for practical hands-on training. Further value would be added to this section if suggestions are made as to how this could be provided, for example, staff exchanges between countries or regions.

88. Para 309 under Research/technology is unclear as to what is meant. Suggested change reads as follows ‘Institutions should link to ongoing research both within educational institutions and also national programmes and other relevant agencies’. This change acknowledges the benefits that can be gained by placing students with NARS.

89. Para 310 under Coordination/administration should include international, such that the sentence would read ‘Training courses should be developed and offered in close collaboration with international, regional and national programmes’.

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

90. For PAA 20, the title could be improved through ‘Promoting and strengthening public awareness of the importance of PGRFA for food and nutritional security and trade’.

91. The Assessment (Paras 312 and 313) would benefit from highlighting the relatively recent evidence concerning the nutritional benefits that can be gained from the diversity found within PGRFA.

92. Intermediate Objectives would benefit if changed to read ‘To support mechanisms particularly in developing countries, for coordinated public awareness activities ~~at all levels~~ targeting all stakeholders, in particular youth’.

93. The ‘Capacity’ section placed the emphasis on PGRFA staff to become good communicators. However, it should also highlight the need to build capacity within the media by strengthening linkages with the local media; encourage the local media to cover

PGRFA issues on a regular basis, and involve the media in PGRFA workshops and meetings so they gain a better understanding of the subject area.

94. Para 323 should include ‘the need to analyse the impact of promotional materials so that limited resources can be used for maximum impact’.

-----

## ANNEX – LIST OF PARTICIPANTS

1. AUSTRALIA **Dr Sally Norton**, Curator, Agri-Science Queensland, [sally.norton@deedi.qld.gov.au](mailto:sally.norton@deedi.qld.gov.au)
2. COOK ISLANDS. **Mr Tiria Rere**, FAO National Correspondent, [tiria@agriculture.gov.ck](mailto:tiria@agriculture.gov.ck)
3. COOK ISLANDS. **Mr William Wigmore**, Director of Research, Ministry of Agriculture, [research@oyster.net.ck](mailto:research@oyster.net.ck)
4. FEDERATED STATES OF MICRONESIA. **Mr Adelino Lorens**, Chief, Agriculture Pohnpei, [pniagriculture@mail.fm](mailto:pniagriculture@mail.fm)
5. FIJI ISLANDS. **Mr Peter Kjaer**, Farmer representative, [ppl@connect.com.fj](mailto:ppl@connect.com.fj); [pkppl@connect.com.fj](mailto:pkppl@connect.com.fj)
6. FIJI ISLANDS. **Mr Poasa Nauluvula**, Principal Research Officer, Ministry of Agriculture, [poasa\\_n@ymail.com](mailto:poasa_n@ymail.com)
7. FIJI ISLANDS. **Mr Osea Ratuyawa**, FAO National Correspondent
8. REPUBLIC OF KIRIBATI. **Mr Tianeti Ioane Beena**, FAO National Correspondent, [jetuati@gmail.com](mailto:jetuati@gmail.com) [beenna\\_ti@yahoo.com](mailto:beenna_ti@yahoo.com)
9. REPUBLIC OF KIRIBATI. **Ms Kinaai Kairo**, Director of Agriculture, [kinaaikairo@gmail.com](mailto:kinaaikairo@gmail.com)
10. REPUBLIC OF MARSHALL ISLANDS. **Mr Henry Capelle**, Chief Agriculture/Quarantine, [kikurto@yahoo.com](mailto:kikurto@yahoo.com)
11. REPUBLIC OF MARSHALL ISLANDS. **Ms Rebecca Lorennij**, FAO National Correspondent, [rlorennij@hotmail.com](mailto:rlorennij@hotmail.com)
12. REPUBLIC OF NAURU. **Mr Frankie Ribauw**, Director of Agriculture, [frankie.ribauw@naurugov.nr](mailto:frankie.ribauw@naurugov.nr)
13. REPUBLIC OF NAURU. **Mr Gregory Adonis Stephen**, Senior Project Officer, Agriculture Division, [gregory.stephen@naurugov.nr](mailto:gregory.stephen@naurugov.nr)
14. NEW ZEALAND **Dr Bill Griffin** Breeding & Genomics Portfolio Manager, NZ Institute for Plant & Food Research Ltd, [bill.griffin@plantandfood.co.nz](mailto:bill.griffin@plantandfood.co.nz)
15. NIUE. **Mr Brandon Tauasi**, Head of Forestry & Chief Quarantine Officer, [flextauasi@yahoo.com](mailto:flextauasi@yahoo.com) NIUE.
16. NIUE. **Ms Alana Tukuniu**, Crop Research Officer, Department of Agriculture, [atukuniu@niue.nu](mailto:atukuniu@niue.nu)
17. REPUBLIC OF PALAU. **Dr Aurora G Del Rosario**, Researcher, Palau Community College, [aderose929@yahoo.com](mailto:aderose929@yahoo.com)
18. REPUBLIC OF PALAU. **Mr Fernando M Sengebau**, Director, Bureau of Agriculture, [FFMS@palaunet.com](mailto:FFMS@palaunet.com); [fredsengebau@yahoo.com](mailto:fredsengebau@yahoo.com)
19. PAPUA NEW GUINEA. **Mr Ario Movis**, Chief Food Crops Advisor, Department of Agriculture, [jjave52@yahoo.com](mailto:jjave52@yahoo.com)
20. PAPUA NEW GUINEA. **Ms Janet Paofa**, Research Associate, [Janet.paofa@nari.org.pg](mailto:Janet.paofa@nari.org.pg), [banag\\_jay@yahoo.com.au](mailto:banag_jay@yahoo.com.au)
21. SAMOA **Mr Tolo Iosefa**, Manager, USP Alafua Campus, [iosefa\\_t@samoa.usp.ac.fj](mailto:iosefa_t@samoa.usp.ac.fj)
22. SAMOA. **Mr Parate Matalavea**, Principal Research Officer, Ministry of Agriculture, [pmatalavea@lesamoa.net](mailto:pmatalavea@lesamoa.net)
23. SOLOMON ISLANDS. **Mr John Bosco Sulifoa**, Principal Research Officer, Ministry of Agriculture, [j\\_sulifoa@yahoo.com](mailto:j_sulifoa@yahoo.com)
24. KINGDOM OF TONGA. **Mr Manaia Halafihi**, Chief Agronomist, Ministry of Agriculture, [mhalafihi@gmail.com](mailto:mhalafihi@gmail.com)
25. KINGDOM OF TONGA. **Mrs Luseana Taufua**, FAO National Correspondents, [luseane04@yahoo.co.nz](mailto:luseane04@yahoo.co.nz), [luseane.taufua@mafff.gov.to](mailto:luseane.taufua@mafff.gov.to)
26. TUVALU. **Mr Itايا Lausaveve**, Director of Agriculture, [ilausaveve@gov.tv](mailto:ilausaveve@gov.tv)
27. VANUATU. **Ms Marie Melteras**, Chief Executive Officer, Department of Agriculture, [m\\_melteras@vanuatu.com.vu](mailto:m_melteras@vanuatu.com.vu)
28. VANUATU. **Mr James Wasi**, FAO National Correspondent, [j\\_wasi@hotmail.com](mailto:j_wasi@hotmail.com), [jwasi@vanuatu.gov.vu](mailto:jwasi@vanuatu.gov.vu)

## RESOURCE PERSONNEL

### FAO/Global Crop Diversity Trust/Bioversity International

29. **Dr Stefano Diulgheroff**, GPA Updating Coordinator, FAO, ITALY. [Stefano.Diulgheroff@fao.org](mailto:Stefano.Diulgheroff@fao.org)
30. **Dr Dan Leskien**, Senior Liaison Officer, FAO, ITALY. [Dan.Leskien@fao.org](mailto:Dan.Leskien@fao.org)

31. **Dr Barbara Pick**, Consultant, [Barbara.Pick@fao.org](mailto:Barbara.Pick@fao.org), FAO, ITALY
32. **Dr Daniele Manzella**, Project Coordinator, ITPGRFA, FAO, ITALY. [Daniele.manzella@fao.org](mailto:Daniele.manzella@fao.org)
33. **Dr Chikelu Mba**, Agricultural Officer, FAO, ITALY. [Chikelu.Mba@fao.org](mailto:Chikelu.Mba@fao.org)
34. **Dr Duncan Vaughan**, Chief Technical Adviser, FAO, THAILAND. [Duncan.Vaughan@fao.org](mailto:Duncan.Vaughan@fao.org)
35. **Dr Melissa Wood**, Director of Operations, Global Crop Diversity Trust c/o FAO, ITALY. [melissa.wood@croptrust.org](mailto:melissa.wood@croptrust.org)
36. **Dr Leocadio S Sebastian**, Regional Director, Bioversity International, MALAYSIA. [l.sebastian@cgiar.org](mailto:l.sebastian@cgiar.org)

#### **SPC**

37. **Dr Mary Taylor**, Genetic Resources Coordinator, SPC, FIJI ISLANDS. [maryt@spc.int](mailto:maryt@spc.int)
38. **Ms Valerie S Tuia**, Curator, SPC, FIJI ISLANDS. [valeriet@spc.int](mailto:valeriet@spc.int)
39. **Ms Reapi Masau**, Project Assistant, SPC, FIJI ISLANDS. [reapim@spc.int](mailto:reapim@spc.int)
40. **Mr Waisale Tabuavou**, Communication & Extension Assistant, SPC, FIJI ISLANDS. [waisalet@spc.int](mailto:waisalet@spc.int)
41. **Mr Amit Sukal**, Lab Technician, SPC, FIJI ISLANDS. [amits@spc.int](mailto:amits@spc.int)
42. **Ms Sainimili Baiculacula**, Lab Technician, SPC, FIJI ISLANDS. [sainimilib@spc.int](mailto:sainimilib@spc.int)
43. **Mr Elliot Child**, Research Assistant, Australian National University, AUSTRALIA. [U4418303@anu.edu.au](mailto:U4418303@anu.edu.au)
44. **Ms Ulamila Lutu**, Lab Technician, SPC, FIJI ISLANDS. [ulamilal@spc.int](mailto:ulamilal@spc.int)
45. **Ms Shiwangni Rao**, Research Assistant, SPC, FIJI ISLANDS. [wani.rao@gmail.com](mailto:wani.rao@gmail.com)

#### **OTHER**

46. **Mr Ulafala Aiavao**, Consultant, [ulafala@gmail.com](mailto:ulafala@gmail.com)

## ANNEX

### Strengthening Conservation and Sustainable Use of PGRFA in the Pacific Island Countries Suva, Fiji, 7-10 December 2010

#### AGENDA

#### 7 December

Time	Themes	Speakers
08:30	Registration	
09:00	Welcome and opening remarks	FAO, Australia, SPC
09:15	Introduction of participants, Objectives and Agenda	FAO
<b>Session 1</b>	<b>Conservation and sustainable use of genetic resources – Status, trends and networking</b>	
10:10	Status of conservation and sustainable use of genetic resources in the Pacific Island Countries	Mary Taylor, SPX & country reps
11:00	Reinvigorating conservation and sustainable use of agro-biodiversity for food security	Working Groups
14:00	Key issues in conservation and use of genetic resources for food and agriculture: The Role of the Commission of Genetic Resources for Food and Agriculture (CGRFA)	Dan Leskien, FAO CGRFA Secretariat
14:30	ITPGRFA and the Multilateral System for Access and Benefit-Sharing: Global Challenges and Future Directions	Daniele Manzella, ITPGRFA-Secretariat
15:00	Trust activities to further the development of the global system for PGR conservation	Melissa Wood, Global Crop Diversity Trust
16:00	Global Instruments -Expected Outputs for PI Countries	Working Groups

#### 8 December

<b>Session 2</b>	<b>Information Sharing and Reporting mechanisms for GRFA in the region</b>	
09:00	Web portals: CGRFA, ITPGRFA, GCDT, GPA Facilitating Mechanism, Information & reporting tools, NISMs, GENESYS.	Panel
<b>Session 3</b>	<b>Partnerships and Alliances : Opportunities for the Pacific Island region</b>	
11.15	Global Partnership Initiative for Plant Breeding Capacity Building – GIPB	Chikelu Mba, FAO
13:30	Towards strategies & plans for national plant breeding capacity	Chikelu Mba, FAO
13:55	Taro participatory plant breeding in Samoa: a success story	Tolo Iosefa, USP, Samoa
14:10	Opportunities and challenges in PGRFA for trade in the Pacific	Bill Griffin, NZIPFRL
14:40	Regional partnerships and networks for agro-biodiversity	Leocadio Sebastian, Bioersity International
15.30	Funding opportunities for plant genetic resources to address climate change under the Benefit Sharing Fund	Daniele Manzella, ITPGRFA-Secretariat
15:45	Partnerships in the Region for plant genetic resources under the Global Crop Diversity Trust	Global Crop Diversity Trust

#### 9 December

<b>Session 4</b>	<b>Updating the GPA for the Conservation and Sustainable Utilisation of PGRFA</b>	
09.00	Changes in PGRFA conservation and use: Challenges for the new GPA	Stefano Diulgheroff, FAO
09:15	Regional Summary of PGRFA Conservation and Use	Mary Taylor, SPC
10:15	Expected Inputs and Dynamics of working group discussion	Barbara Pick, FAO
<b>Session 5</b>	<b>Working Groups on the updating of the GPA (Sections I-V)</b>	
11:00 – 17:40	Working Group session 6A, 6B, 6C	

#### 10 December

<b>Session 5</b>	<b>Working Groups on the updating of the GPA (Sections I-V)</b>	
09:00	Working Group session 6D, 6E	
<b>Session 6</b>	<b>Proposals for updating the Global Plan of Action</b>	
14:00	Wrap up Section I, II, III, IV, V	
17.00	Closing Remarks	

