



# The International Treaty

ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE



E

## Item 10 of the Provisional Agenda

### FIFTH SESSION OF THE GOVERNING BODY

Muscat, Oman, 24-28 September 2013

## SYNTHESIS OF THE OUTCOMES OF THE STAKEHOLDER CONSULTATION ON THE IMPLEMENTATION OF ARTICLE 6

### EXECUTIVE SUMMARY

1. This document provides an overview of the main elements resulting from the Electronic Consultation on Sustainable Use of Plant Genetic Resources for Food and Agriculture. The consultation was conducted by the Secretary as part of the process “to gather information to identify and elaborate elements of a Programme of Work on sustainable use of PGRFA, involving a wide range of stakeholders and relevant international organizations”, according to the request made by the Governing Body at its Fourth Session.

2. More than 160 respondents representing, *inter alia*, governmental organizations and authorities, national agricultural research institutes, universities, civil society organizations and non-governmental organizations, farmers’ organizations, international agricultural research centres, private plant breeders and seed production companies, participated in the consultation. This document takes into account the completed questionnaires that were received by the Secretary before 31 March 2013.

3. Participants in the consultation were invited to rank the priorities of the Second Global Plan of Action on Plant Genetic Resources for Food and Agriculture (hereafter ‘Second GPA’) that are relevant to the sustainable use of PGRFA according to their preferences; to identify further challenges to be addressed by the Programme of Work (hereafter ‘PW-SU’); to suggest measures for the implementation of the provisions of Article 6 of the International Treaty to be incorporated in the PW-SU; to express their views on the linkages between sustainable use of PGRFA, the implementation of Farmers’ Rights and the protection of indigenous and traditional knowledge related to PGRFA; and to make proposals on how the PW-SU should be monitored and evaluated. In summary, the main elements resulting from the consultation are the following:

- Generally, respondents considered important all priorities of the Second GPA that are relevant to the sustainable use of PGRFA. Out of the five priorities, however, the following three received the highest rankings: expanding characterization, evaluation and development of collections to facilitate use; support plant breeding, base broadening and genetic enhancement efforts; and promoting diversification of crop production and broadening of crop diversity for sustainable agriculture.

- Facilitating access to PGRFA was the most frequently suggested measure in response to the different questions of the survey. Ways and means to facilitate access to PGRFA put forward by respondents included, *inter alia*, expanding the scope of the Multilateral System of the International Treaty (hereafter ‘MLS’) and encouraging further inclusions of PGRFA; ensuring that intellectual property rights (IPR) do not restrict facilitated access to PGRFA for research and breeding; facilitating access to PGRFA under the MLS for direct use and cultivation by farmers; strengthening local seed supply systems; enhancing linkages and collaborations between gene banks, breeders and farmers; and collecting and making available samples of local varieties, underutilized species and crop wild relatives.
  - Further among the five most frequently suggested measures were: introducing incentives to promote the sustainable use of PGRFA; strengthening capacities for the sustainable use of PGRFA; directing sustainable use activities to local varieties and underutilized species; and reviewing strategies and regulations related to PGRFA.
  - Regarding incentives to promote the sustainable use of PGRFA, respondents referred to, *inter alia*, policy, legal and financial incentives including preferential financing for breeders and farmers using local varieties and underutilized species; payments for ecosystem services to promote ecological farming practices and on-farm management and conservation of local varieties; and the use of geographic indications and other labels. Further, respondents underlined the importance of creating niche markets for local varieties and underutilized species, including by raising awareness on the consumer side through local food fairs and by promoting traditional cuisine.
  - Suggested ways and means to strengthen capacities for the sustainable use of PGRFA include developing local plant breeding capacity by promoting participatory plant breeding and supporting small breeder organizations and seed companies; developing capacities of farming communities to manage crop diversity on-farm and to market value added products; supporting Contracting Parties and other stakeholders in the development of relevant policies; and raising public awareness about genetic erosion and the need to conserve and sustainably use PGRFA and related traditional knowledge.
  - Participants in the consultation pointed to the need of directing sustainable use activities to local varieties and underutilized species, including by facilitating access to such PGRFA and creating incentives for their use (see above); promoting research aimed at characterization, value addition and improving productivity; enhancing breeding activities for the development of locally adapted, climate resilient and stress tolerant varieties; and increasing funding for sustainable use activities that focus on local varieties and underutilized species.
  - Putting forward the need to review strategies and regulations related to PGRFA, many respondents suggested the introduction of flexibilities in national seed regulations allowing for the registration, commercial release and distribution of local and farmer-developed varieties. Efficient control mechanisms to ensure seed health and quality should, however, be maintained. Many respondents also stressed that IPR should not restrict access to PGRFA for research and breeding, and that a fair balance between IPR and the rights of farmers to save, use, exchange and sell farm-saved seed should be achieved.
  - According to respondents, a proper impact analysis would require baseline surveys of the situation prior to the implementation period of the PW-SU to be carried out, and clear measurement parameters including quantifiable indicators and milestones would need to be defined. Synergies with the reporting process for the Third Report on the State of the World’s Plant Genetic Resources for Food and Agriculture and/or the impact analysis process of the Second GPA may be established and capitalized on.
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**TABLE OF CONTENTS**

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	<i>Para.</i>
I. Composition of Respondents	1-2
II. Main Elements Resulting from the Consultation	
(a) Importance of Relevant Priorities of the Second Global Plan of Action on Plant Genetic Resources for Food and Agriculture	3-4
(b) Additional Challenges to be Addressed by the Programme of Work	5-10
(c) Measures to Implement the Provisions of Article 6 of the International Treaty	11-44
(d) The Linkage Between Farmers' Rights, Indigenous and Traditional Knowledge and the Conservation and Sustainable Use of PGRFA	45-55
(e) Monitoring and Evaluation of the Programme of Work	56-61

*Appendix 1: Questionnaire of the Electronic Consultation on Sustainable Use of Plant Genetic Resources for Food and Agriculture*

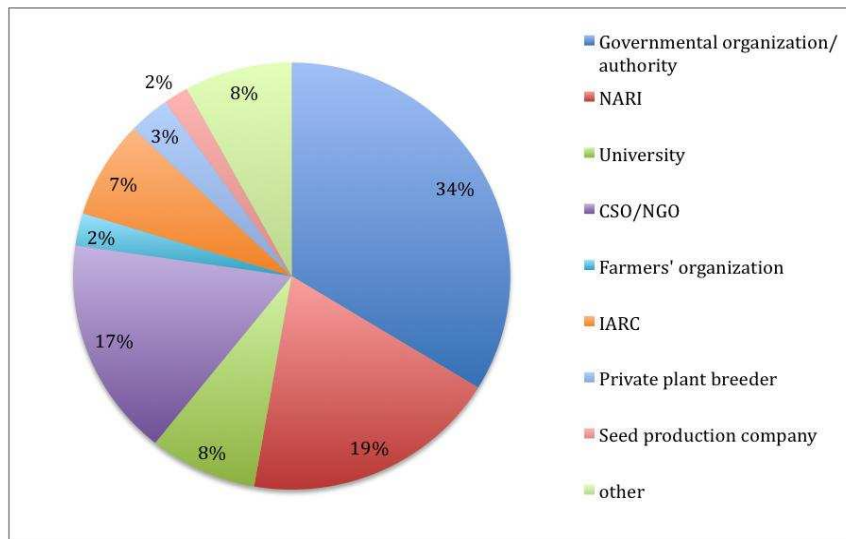
*Appendix 2: Basic Information of Respondents*

## I. COMPOSITION OF RESPONDENTS

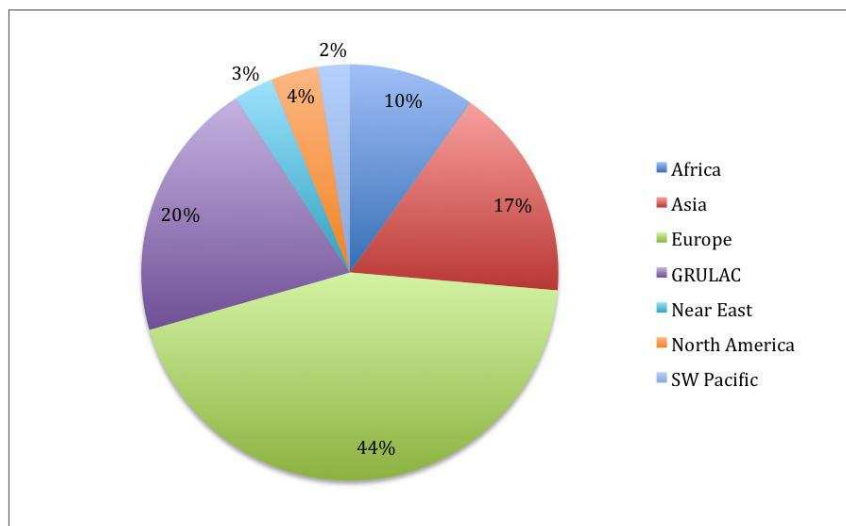
1. The stakeholder consultation was open during 14 weeks, until 31 March 2013. During this period, the Secretary received a total of 164 completed questionnaires from respondents based in all seven regions of the International Treaty. All of these 164 respondents replied as a minimum to question 5 of the survey, ranking the priorities of the Second GPA according to their preferences, while the remaining questions were answered on average by 83 respondents.

2. Figures 1-3 below contain more information on the composition of participants in the stakeholder consultation:

*Figure 1: Types of organizations that were represented in the stakeholder consultation<sup>1</sup>*



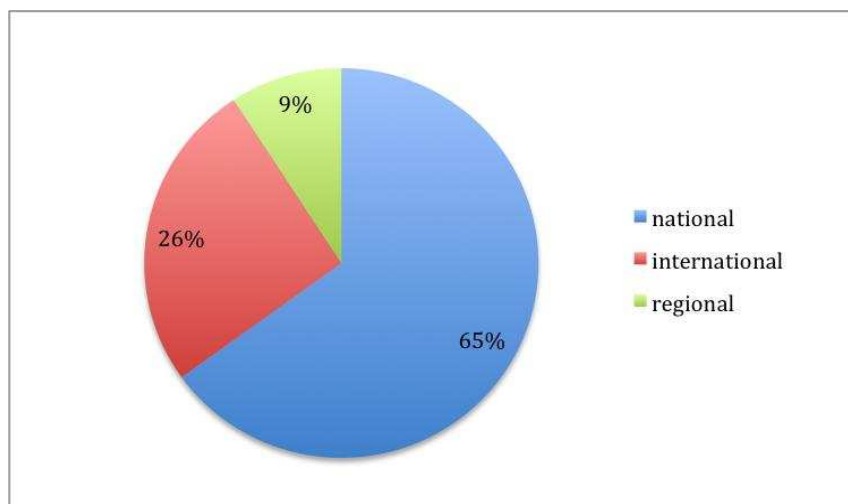
*Figure 2: Regions in which the respondents' organizations are based<sup>2</sup>*



<sup>1</sup> NARI: National Agricultural Research Institute; CSO/NGO: Civil Society Organization and Non-governmental Organization; IARC: International Agricultural Research Centre.

<sup>2</sup> GRULAC: Latin American and Caribbean Regional Group; SW Pacific: Southwest Pacific.

Figure 3: Level at which the respondents' organizations operate



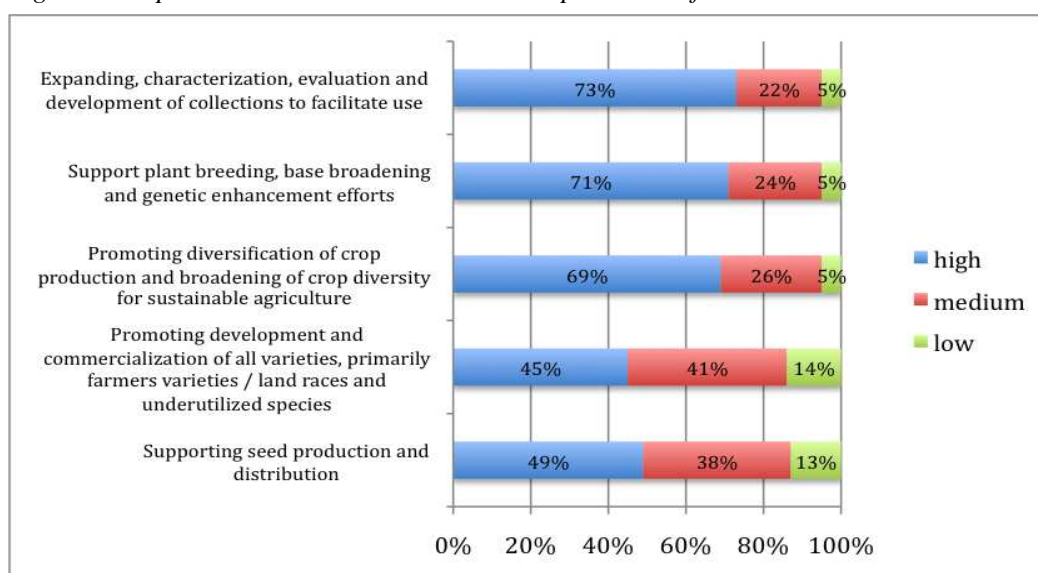
## II. MAIN ELEMENTS RESULTING FROM THE CONSULTATION

### (a) Importance of Relevant Priorities of the Second Global Plan of Action on Plant Genetic Resources for Food and Agriculture

3. Figure 4 below shows that, generally, respondents consider important all priorities of the Second GPA that are relevant to the sustainable use of PGRFA. Only five percent of participants in the consultation accorded low priority to expanding characterization, evaluation and development of collections to facilitate use; support plant breeding, base broadening and genetic enhancement efforts; and promoting diversification of crop production and broadening of crop diversity for sustainable agriculture, respectively. The respondents that accorded low priority to supporting seed production and distribution; and to promoting development and commercialization of all varieties, primarily farmers varieties / landraces and underutilized species; are equally a minority, with only 13 and 14 percent, respectively.

4. Figure 4 further illustrates that, in general, respondents ranked the first three priorities of the Second GPA that are related to sustainable use, as more important than the latter two.

Figure 4: Importance accorded to the relevant priorities of the Second GPA



**(b) Additional Challenges to be Addressed by the Programme of Work**

5. Additional relevant challenges to be addressed by the PW-SU, which were most frequently proposed by respondents, are summarized under the following thematic groupings:
6. Facilitating access to PGRFA. A majority of respondents underlined the importance of ensuring facilitated access to all PGRFA for research and breeding, and many referred to the importance of access to PGRFA by farmers for cultivation, in particular. Measures suggested included broadening the scope of the MLS through an expansion of *Annex 1*. Respondents further referred to the importance of collecting local varieties, underutilized species and crop wild relatives, and of multiplying and re-introducing such PGRFA in the surroundings where they have disappeared due to genetic erosion, while highlighting that the ultimate goal should be to ensure farmers' access to high quality, locally adapted seed and propagating material. Respondents also expressed the need to enhance information on and access to PGRFA held in private collections, and stressed that access to PGRFA should not be restricted by IPR. Strengthening institutional capacities for the participation in the MLS, and raising awareness on its benefits, may further increase the accessibility of PGRFA.
7. On-farm management and conservation of PGRFA. Several respondents highlighted the need to promote on-farm management and conservation of PGRFA by creating policy, legal and financial incentives for farmers and farmers' organizations. Further proposed measures to promote on-farm management and conservation included participatory plant breeding; linking farmers and gene banks; farmer networks for on-farm seed production; and ensuring seed supply of local varieties through community seed banks.
8. Reviewing strategies and regulations related to PGRFA. Various respondents suggested that flexibilities should be introduced in national seed regulations to allow for the registration of local varieties, and for the registration and commercial release of farmer-developed varieties. This was presented as an option for farmers to participate in benefit-sharing. Also, it was stressed that IPR should not restrict access to PGRFA. Some respondents were of the view that farmers should be allowed to conserve, use, exchange and sell also unregistered and uncertified local varieties.
9. Strengthening capacities for the sustainable use of PGRFA. According to respondents, a further challenge to be addressed by the PW-SU is capacity development, including local plant breeding capacity (through strengthening extension services, formal training of professional breeders, farmer training and participatory plant breeding); capacities of farming communities regarding on-farm conservation and value addition; and training of young researchers in areas such as gene mapping and base-broadening using local varieties.
10. Introducing incentives to promote the sustainable use of PGRFA. In addition to the incentives in relation to on-farm management referred to under para. 7 above, respondents underlined the need for more general incentives to promote the sustainable use of PGRFA. Proposed measures included the creation of niche markets for local varieties and underutilized crops through value addition and research on alternative uses; promotion of marketing strategies that link the different actors of the food industry, including local food fairs; and creation of farmer networks to promote the consumption and commercialization of local varieties.

**(c) Measures to Implement the Provisions of Article 6 of the International Treaty**

11. This section provides for each provision of Article 6 of the International Treaty a summary of the measures that were most frequently put forward by respondents for inclusion in the PW-SU.

*Article 6.2 (a) pursuing fair agricultural policies that promote, as appropriate, the development and maintenance of diverse farming systems that enhance the sustainable use of agricultural biological diversity and other natural resources;*

12. *Policies that promote incentives for the sustainable use of PGRFA.* Several respondents proposed the development and application of policies to support farmers that promote crop diversity on their farms and maintain biodiversity-rich agricultural landscapes, e.g. through payments for ecosystem services and/or preferential financing. Respondents also expressed that policies should focus on farm profitability and on linking diverse farming systems to markets, e.g. through infrastructure investments and post-harvest technology assistance, ensuring fair prices for local products, and/or direct purchases for school feeding programmes.

13. *Incorporating sustainable use of PGRFA in agricultural policies.* Respondents were of the view that agricultural policies should be in line with the provisions of the International Treaty and responsive to both farmers' and consumers' needs and concerns. According to many respondents, agricultural policies should promote diversification of crop production, and direct breeding efforts to varieties that are conducive to ecological farming. Respondents further underlined that national strategies for the conservation and sustainable use of PGRFA should be established, relevant agricultural and environmental policies should be harmonized, and policy coherence among countries should be enhanced.

14. *Reviewing strategies and regulations related to PGRFA.* In the view of various respondents, it is necessary to ensure a fair balance between the need to conserve all PGRFA and the importance of improving productivity and quality of seed and propagating material. Several respondents therefore suggested the inclusion of flexibilities in national seed regulations, allowing for registration of local and farmer-developed varieties, and for the exchange, cultivation and commercialization of such varieties.

15. *Strengthening capacities for the sustainable use of PGRFA.* There appears to be a need to support Contracting Parties and other involved stakeholders in the development of relevant policies, as well as to raise awareness among policy makers and the general public about the importance of sustainable use of agricultural biodiversity and the maintenance of local food systems.

16. *Policies that promote ecological farming practices.* Several respondents underlined the importance of agricultural policies that promote ecological farming practices, e.g. organic farming, integrated pest management, minimal tillage, the enhancement of natural areas within the farm, etc.

*Article 6.2 (b) strengthening research which enhances and conserves biological diversity by maximizing intra- and inter-specific variation for the benefit of farmers, especially those who generate and use their own varieties and apply ecological principles in maintaining soil fertility and in combating diseases, weeds and pests;*

17. *Enhancing cross-sectoral and participatory research.* Respondents expressed that research should be based on actual needs, and therefore carried out in a participatory way involving all relevant stakeholders, in particular farmers in developing countries. Research types referred to included farmer-led research and breeding; research targeted at farmers' needs conducted by local institutions and involving social scientists; and research with the involvement of farmers' organizations, the public sector, private breeders and/or food processing industries.

18. *Directing research to local varieties and underutilized species.* In the view of various respondents, research on local varieties and underutilized species should be prioritized. Examples that were mentioned included research to generate better characterization data of such PGRFA; research aimed at adding value to such varieties that are traditionally grown; and research to improve their productivity and yield stability. In addition, according to some respondents research strategies focussing on genetically modified varieties and non-reproducible seeds should be

reassessed, since evidence as to whether they have brought upon sustainable results appears inconclusive.

19. Enhancing research on ecological farming practices. Several respondents highlighted the need for increased research on ecological farming practices that optimize the use of natural resources and the provisioning of food, and minimize environmental impact (e.g. conservation agriculture, use of green manure, integrated pest management, etc).

20. Increasing funding for agricultural research. There appears to be a need for increasing funding levels for research activities that fall under Article 6.2 (b) of the International Treaty. Possible sources presented by respondents include financial resources made available through official development assistance, public investments, and the Benefit-sharing Fund of the International Treaty.

21. Research on low-cost agricultural technologies. Various respondents stressed the need to increase research on basic value addition technologies and on low-cost technology packages such as informal seed production, participatory plant breeding, water harvesting, etc.

*Article 6.2 (c) promoting, as appropriate, plant breeding efforts which, with the participation of farmers, particularly in developing countries, strengthen the capacity to develop varieties particularly adapted to social, economic and ecological conditions, including in marginal areas;*

22. Developing participatory plant breeding capacity. There appears to be a need to strengthen local plant breeding capacities, including capacities of farmer breeders, small breeder organizations and seed companies, particularly in developing countries. In addition to measures such as stakeholder meetings, strengthening extension services and farmer-driven private-public partnerships, most responses presented participatory plant breeding as a key strategy to enhance local plant breeding capacity. Respondents mentioned that participatory plant breeding holds the potential to sustain livelihoods by enabling farmers to develop new varieties that are adapted to their local needs and changing climate conditions, through the combination of modern science with local farmer knowledge. Some respondents argued that participatory plant breeding should be included in national plant breeding programmes.

23. Directing breeding efforts to local and locally adapted varieties and underutilized species. Several respondents highlighted the crucial role of local varieties and underutilized crops for breeding efforts that aim at developing varieties that are adapted to particular local conditions, including in marginal areas. According to respondents, such locally adapted varieties help enhancing farming communities' resilience to climate change and reduce their dependency on unadapted commercial varieties.

24. Facilitating access to PGRFA. In the view of various respondents, facilitating access to PGRFA held *ex situ* - in particular local varieties - for researchers, breeders and farmers, is crucial for the development of locally adapted varieties. Some respondents expressed that all PGRFA should be accessible under the facilitated terms of the MLS, and that simplifying national regulations for germplasm exchange and procedures to access *ex situ* material would accelerate the development of the plant breeding sector. It was further stressed that locally adapted varieties must be affordable to low-income farming communities, and that local seed supply systems, including local seed production and community seed banks, should be strengthened.

25. Increasing funding for participatory plant breeding. Various respondents underlined the need for increased financial support of breeding programmes, including public programmes and in particular programmes that involve farmers in participatory plant breeding. Official development assistance, public investments, and the Benefit-sharing Fund were referred to as possible funding sources.

26. Contributing towards food security and poverty alleviation through breeding. Several respondents stated that the primary goal of all plant breeding efforts referred to in Article 6.2 (c) should be to alleviate rural poverty and to strengthen food security. In this regard, some



respondents argued that breeding should be directed towards the development of reproducible varieties that are conducive to ecological farming.

*Article 6.2 (d) broadening the genetic base of crops and increasing the range of genetic diversity available to farmers;*

27. *Facilitating access to PGRFA.* Similar to para. 24 above, respondents underlined the importance of facilitated access to PGRFA to enhance the implementation of Article 6.2 (d), in particular local varieties, to all users such as public and private plant breeders and farmers. In this context, the role of collaboration between gene banks and breeders was highlighted, as well as the importance of exchanging PGRFA between international, national and community seed banks, and within farmer networks. Respondents further referred to the need to strengthen seed production, and to the value of introducing and/or reintroducing *ex situ* PGRFA to farmers' fields.

28. *Directing sustainable use activities to local varieties, crop wild relatives and underutilized species.* In the view of various respondents, breeding programmes involving underutilized species should be promoted, and efforts to survey, collect, characterize, conserve and manage on-farm local varieties and crop wild relatives should be enhanced. The role of introgression of traits found in crop wild relatives, e.g. for climate resilience, was also stressed in this regard.

29. *Strengthening breeding efforts.* There appears to be a need for effective breeding programmes, both public and private. Respondents stated that such programmes should have a particular focus on pre-breeding activities and on participatory plant breeding. The role of both conventional breeding techniques and modern biotechnology was acknowledged in the survey.

30. *Promoting community seed banks.* Several respondents proposed that the establishment of local-level community seed banks should be promoted, both to meet local seed demand and to regenerate collections of public gene banks, including with the financial support of the public sector.

31. *Facilitating stakeholder participation.* In general, respondents expressed the importance of including all relevant stakeholders in activities for the implementation of Article 6.2 (d), ensuring that farmers' needs, in particular, are taken into account.

*Article 6.2 (e) promoting, as appropriate, the expanded use of local and locally adapted crops, varieties and underutilized species;*

32. *Introducing incentives to promote the sustainable use of PGRFA.* Most respondents acknowledged the need of creating incentives for farmers and breeders that use local varieties and underutilized species. Possible incentives suggested by respondents include financial support to farmers and breeders of certain local and underutilized species, and support in the form of preferential financing and technical assistance, for example. Further, respondents argued that creating consumer demand through the development of marketing strategies, and by promoting traditional cuisine to the wider public through publicity and outreach activities, including food fairs and liaising with the tourism sector, will create incentives to farmers and breeders to expand their use of local varieties and underutilized species. In this regard, the wider use of market-oriented instruments such as geographic indications and other labels was also presented as an effective measure.

33. *Directing research to local varieties and underutilized species.* Several respondents argued that there is a need to direct more research to underutilized species, including research regarding nutritional values, in order to promote their use. In particular, more studies on the economic and social benefits of local varieties and underutilized species need to be carried out, to avoid the dissemination of unsuited material and to determine which local varieties and

underutilized species are appropriate to be promoted and in what contexts (e.g. climate change adaptation).

34. *Facilitating access to PGRFA.* Respondents proposed that more emphasis should be put on collecting underutilized species in order to promote their use; that farmers should be linked with gene banks, including at international, national and community level; and that local and community level seed production and supply systems should be strengthened.

35. *Increasing funding to expand the use of local and locally adapted crops, varieties and underutilized species.* Various respondents highlighted the need to make more funding available to promote the use of local varieties and underutilized species more generally, through sources including official development assistance, the Benefit-sharing Fund of the International Treaty, and through the establishment of national and local funding mechanisms to support farmer breeders.

*Article 6.2 (f) supporting, as appropriate, the wider use of diversity of varieties and species in on-farm management, conservation and sustainable use of crops and creating strong links to plant breeding and agricultural development in order to reduce crop vulnerability and genetic erosion, and promote increased world food production compatible with sustainable development; and*

36. *Facilitating the access to PGRFA.* Similar to para. 24, 27 and 34 above, respondents underlined the importance of facilitated access to PGRFA at all levels and for all stakeholders, including farmers and public and private breeders, to enhance the implementation of Article 6.2 (f). Respondents also suggested to promote community seed banks containing on-farm developed varieties and to link them to national and international gene banks, for both the breeding sector as well as local communities to benefit from increased access for breeding purposes. Respondents also expressed the need to strengthen community based seed production and farmer networks for the exchange of local and farmer-developed seed and propagating material.

37. *Facilitating stakeholder participation.* Several respondents stressed the value of participative approaches that link the activities of breeders and farmers in order to promote crop diversity for on-farm management, conservation and sustainable use. Approaches that were referred to included participatory plant breeding and farmer-led research.

38. *Introducing incentives to promote the sustainable use of PGRFA.* Various respondents were of the view that farmers need incentives to diversify crop production and manage and conserve crop diversity on-farm, and that custodians of crop diversity should receive some benefit for their efforts, for example through payments for ecosystem services and/or preferential financing. In this context it was also stated that, when promoting participatory plant breeding on-farm, it should be ensured that such activities result in profitable varieties.

39. *Promoting ecological farming practices.* Several respondents highlighted the importance of promoting ecological farming practices, e.g. organic farming, integrated pest management and the sustainable use of natural resources, including through local participatory research programmes.

40. *Strengthening capacities on the sustainable use of PGRFA.* According to respondents, raising public awareness on the issue of genetic erosion, and strengthening capacities in the area of on-farm management and conservation, seed production and marketing of local varieties, particularly among farming communities, will further contribute to the implementation of Article 6.2 (g).

*Article 6.2 (g) reviewing, and, as appropriate, adjusting breeding strategies and regulations concerning variety release and seed distribution.*

41. *Reviewing strategies and regulations related to PGRFA.* A number of respondents argued for the introduction of flexibilities in national regulations for variety release and seed distribution. Such flexibilities should allow for the management, use and exchange, and the commercial release and distribution of local and farmer-developed varieties, which would be conducive to the development and use of a broader range of varieties. In this context, it was mentioned that seed regulations should be reviewed periodically, to reflect changes in market demand and evolving technologies. In addition, some respondents indicated that there is a need to reassess biosafety regulations in order to prevent genetically modified crops from cross-pollinating with local varieties. Further, some respondents highlighted the importance of fostering private efforts in breeding and seed production in developing countries.

42. *Incorporating participatory plant breeding in breeding strategies.* In the view of several respondents, farmer participation in breeding programmes should be strengthened, and participatory plant breeding programmes with strong farmer – and even consumer – involvement should receive more funding from national governments and other donors.

43. *Maintain regulations that ensure the health and quality of varieties.* Respondents expressed that it is important to ensure the maintenance of efficient control mechanisms to guarantee health and quality of seed and propagation material, when introducing flexibilities in seed regulations according to para. 8, 14 and 41 above. It was further stressed that seed regulations should facilitate the release of varieties that are conducive to ecological farming.

44. *Facilitating access to PGRFA.* Several respondents underlined the need for seed regulations to allow for access to all PGRFA for research and breeding. It was argued that such access should not be restricted by the application of IPR on plant varieties.

**(d) The Linkage Between Farmers' Rights, Indigenous and Traditional Knowledge and the Conservation and Sustainable Use of PGRFA**

45. This section provides a summary of the ways and means to emphasize the linkages between conservation and sustainable use of PGRFA, Farmers' Rights and the protection of indigenous and traditional knowledge related to PGRFA, that were most frequently proposed by participants in the consultation.

*Ways and means to emphasize the linkage between conservation and sustainable use of PGRFA and Farmers' Rights in the Programme of Work*

46. *Promoting the implementation of Article 9 of the International Treaty.* According to a variety of respondents, implementing the provisions on Farmers' Rights directly supports the conservation and sustainable use of PGRFA. Respondents further stated that the contribution of farmers towards the development, management and conservation of PGRFA should be adequately recognized, and measures should be taken to protect farmers' traditional knowledge (including by documenting it); enhance effective benefit-sharing (including financial support from the Benefit-sharing Fund); and increase farmer participation in national decision-making processes related to PGRFA. At the same time, a minority of respondents argued that the PW-SU should not emphasize Farmers' Rights.

47. *Facilitating access to PGRFA.* Respondents expressed that the inclusion of PGRFA into the MLS also from non-Contracting Parties and collections that are not under public control should be encouraged, and that farmers, too, should benefit from facilitated access to PGRFA under the MLS. An option put forward was the development of a simplified standard material transfer agreement allowing farmers to access PGRFA under the MLS. Respondents also underlined the need to strengthen seed systems that ensure the distribution of sufficient quality seed to farmers, including by establishing programmes that link farmers, breeders and gene banks through joint activities in the area of on-farm management and sustainable use of PGRFA.

48. *Strengthening breeding efforts.* Several respondents highlighted the linkages between the promotion of breeding programmes (including pre-breeding and participatory plant breeding) and the implementation of Farmers' Rights, especially programmes working with local varieties, underutilized species and crop wild relatives. Respondents proposed that gene banks should be directly linked to programmes for participatory plant breeding and variety selection. They were of the view that participatory plant breeding directly contributes to the implementation of Farmers' Rights, by strengthening farmers' access to and control over PGRFA.

49. *Reviewing strategies and regulations related to PGRFA.* There appears to be a need to provide for flexibilities in seed regulations, in order to allow for the commercialization of farmers' varieties, which would increase crop diversity and contribute to the implementation of Farmers' Rights. Respondents stressed that a fair balance between IPR and the rights of farmers to save, use, exchange and sell farm-saved seed should be achieved.

50. *Strengthening capacities.* A number of respondents referred to the importance of raising awareness among farmers about the value of conserving their PGRFA and related traditional knowledge, and of informing farmers about their rights in line with Article 9 of the International Treaty. Some respondents indicated that training farmers in the cultivation and on-farm management of both local and improved varieties will also contribute to the sustainable use of PGRFA.

*Ways and means to emphasize the linkage between indigenous and traditional knowledge and the conservation and sustainable use of PGRFA*

51. *Promoting the use of traditional knowledge.* Respondents expressed that traditional knowledge should be adapted to present needs and promoted through extension services and the use of local varieties. It was stated that similar to the breeding process, where traits from local varieties are often bred into modern locally adapted varieties, traditional knowledge should be used in combination with scientific knowledge in order to develop knowledge practices that are adapted to particular local needs. Respondents further suggested that including information on traditional knowledge in passport data in collections, inventories and PGRFA information systems will also promote the use of traditional knowledge, as will its dissemination through radio and audiovisual supports. A minority of respondents argued that the PW-SU should be silent with regard to the linkage between indigenous and traditional knowledge and the conservation and sustainable use of PGRFA.

52. *Documentation of traditional knowledge.* In the view of several respondents, collection and documentation of traditional knowledge related to PGRFA will directly support the conservation and sustainable use of PGRFA. Information on such documented traditional knowledge can be included in national inventories and/or community biodiversity registers to facilitate its use by farmers at the local level. Respondents further proposed that it should be made available together with passport and evaluation data in information systems on PGRFA, such as public web-based databases, to make it broadly accessible to users.

53. *Facilitating stakeholder participation.* According to respondents, it should be ensured that all relevant stakeholders, including public administration, scientists, gene banks, breeders and in particular farmers, are included in activities and decision-making processes related to conservation and sustainable use of PGRFA. In this context, respondents underlined the need for holders of traditional knowledge to be involved in the development of the PW-SU. In addition, it was highlighted that participatory plant breeding directly enhances the use and protection of traditional knowledge.

54. *Introducing incentives to promote the sustainable use of PGRFA.* Various respondents stressed that promoting products based on local varieties and traditional knowledge, for example local traditional dishes, contributes to the conservation and sustainable use of both PGRFA and related traditional knowledge. Further, respondents presented additional incentives that may support the protection of traditional knowledge, such as payments for ecosystem services for

farmers that promote local crop diversity on-farm and ecological agricultural practices, or promoting the linkage of conservation and sustainable use of PGRFA and related traditional knowledge with non-farm income sources such as farm tourism.

55. Granting recognition to the holders of traditional knowledge. Several respondents indicated that the PW-SU should properly acknowledge and recognize holders and custodians of traditional knowledge related to PGRFA.

**(e) Monitoring and Evaluation of the Programme of Work**

56. Ways and means to carry out the impact analysis of the PW-SU that were most frequently put forward by respondents include the following:

57. Defining measurement parameters. Most respondents argued for the establishment of objective and measurable performance indicators and milestones against which the impact of the PW-SU will be evaluated. It was suggested that such indicators and milestones could be developed through regional workshops involving all stakeholder groups.

58. Possible measurement parameters. According to respondents, possible indicators and milestones for the evaluation of the PW-SU could include, *inter alia*: levels of crop diversity managed on-farm and conserved *ex situ*; share of local varieties, underutilized species and crop wild relatives managed on-farm and conserved *ex situ*; levels of economic well-being of targeted stakeholders; levels of PGRFA transfers; number of new varieties released; number of additional varieties (including local varieties, underutilized species and crop wild relatives) characterized and evaluated.

59. Carrying out baseline surveys. To be able to monitor and evaluate the impact of the PW-SU during and after its implementation according to the established indicators and milestones, it appears to be necessary to carry out baseline surveys prior to the implementation of the PW-SU.

60. Defining processes. Respondents referred to the fact that clear processes on how to carry out the impact analysis of the PW-SU need to be defined. Whereas some respondents proposed that an independent external impact assessment should be done, others believe that impact should be analyzed through periodic implementation reports submitted by Contracting Parties. It was further put forward to hold regional workshops or an international forum to discuss the impact analysis. In addition, it was mentioned that the evaluation and monitoring of the PW-SU should be linked to the reporting process for the Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture and/or the impact analysis process of the Second GPA, in order to avoid duplications of work.

61. Facilitating stakeholder participation. Respondents stated that the impact analysis should be carried out in a participatory manner, involving all stakeholder groups including farmers, gene banks and breeders, e.g. by means of discussion platforms and stakeholder questionnaires.

*Appendix I*

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**QUESTIONNAIRE OF THE ELECTRONIC CONSULTATION ON SUSTAINABLE  
USE OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

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**I. Introduction and purpose of the Consultation**

Dear colleague,

At its Fourth Session the Governing of the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty) adopted Resolution 7/2011 “Implementation of Article 6 – Sustainable Use of Plant Genetic Resources” and Resolution 6/2011 “Implementation of Article 9, Farmers’ Rights” both of which are of relevance to the development of the Programme of Work on Sustainable Use of Plant Genetic Resources for Food and Agriculture (PW-SU-PGRFA).

The purpose of this consultation is to gather information to identify and elaborate elements of the Programme of Work (PW-SU-PGRFA). The questionnaire is articulated in three sections as follows:

- Basic information of the respondent.
- Views and experiences on the implementation of the Sustainable Use of PGRFA in the context of the Article 6 of the International Treaty.
- Basic elements that should be addressed by the Programme of Work.

We appreciate your participation and contribution, please feel free to distribute the link to this questionnaire among potential respondents in your network.

The questionnaire can be compiled online until 31 March 2013. It is accessible in English, French, Spanish at <http://www.planttreaty.org/content/su-consultation2013> and it can be downloaded in Arabic. You can send it through email to [ITPGRFA-Consultation-Sustainable-Use@fao.org](mailto:ITPGRFA-Consultation-Sustainable-Use@fao.org) or by fax at: (+39) 06 570 53057.

**II. Tell us about you****1. Please indicate at what level does your organization operate:**

- National
- Regional
- International

**2. Please select the country where your organization is based.**

\_\_\_\_\_

**3. Please select the type of organization you work in:**

- Governmental organization/authority
- National agricultural research institution (NARI)
- University
- Civil society organization (CSO) and non-governmental organization (NGO)
- Farmers’ Organization
- Seed production company

- Private plant breeder
- International Agricultural Research Centre (IARC)
- United Nations agency
- Other (please specify):

\_\_\_\_\_

#### 4. Name of your organization

\_\_\_\_\_

### **III. Sustainable Use of PGRFA**

#### Article 6 – Sustainable Use of Plant Genetic Resources

6.1 The Contracting Parties shall develop and maintain appropriate policy and legal measures that promote the sustainable use of plant genetic resources for food and agriculture.

6.2 The sustainable use of plant genetic resources for food and agriculture may include such measures as:

- (a) pursuing fair agricultural policies that promote, as appropriate, the development and maintenance of diverse farming systems that enhance the sustainable use of agricultural biological diversity and other natural resources;
- (b) strengthening research which enhances and conserves biological diversity by maximizing intra- and inter-specific variation for the benefit of farmers, especially those who generate and use their own varieties and apply ecological principles in maintaining soil fertility and in combating diseases, weeds and pests;
- (c) promoting, as appropriate, plant breeding efforts which, with the participation of farmers, particularly in developing countries, strengthen the capacity to develop varieties particularly adapted to social, economic and ecological conditions, including in marginal areas;
- (d) broadening the genetic base of crops and increasing the range of genetic diversity available to farmers;
- (e) promoting, as appropriate, the expanded use of local and locally adapted crops, varieties and underutilized species;
- (f) supporting, as appropriate, the wider use of diversity of varieties and species in on-farm management, conservation and sustainable use of crops and creating strong links to plant breeding and agricultural development in order to reduce crop vulnerability and genetic erosion, and promote increased world food production compatible with sustainable development; and
- (g) reviewing, and, as appropriate, adjusting breeding strategies and regulations concerning variety release and seed distribution.

#### **5. Please rank these priorities of the Second Global Plan of Action for PGRFA according to your preferences:**

- |   |                            |                              |                           |
|---|----------------------------|------------------------------|---------------------------|
| Expanding characterization, evaluation and development of collections to facilitate use | <input type="radio"/> High | <input type="radio"/> Medium | <input type="radio"/> Low |
| Support plant breeding, base broadening and genetic                                     | <input type="radio"/> High | <input type="radio"/> Medium | <input type="radio"/> Low |

enhancement efforts

Promoting diversification of crop production and broadening crop diversity for sustainable agriculture  High  Medium  Low

Promoting development and commercialization of all varieties, primarily farmers varieties / landraces and underutilised species  High  Medium  Low

Supporting seed production and distribution  High  Medium  Low

**6. Which additional relevant challenges would you like the Programme of Work to address?**

Challenge 1 \_\_\_\_\_

Challenge 2 \_\_\_\_\_

Challenge 3 \_\_\_\_\_

Challenge 4 \_\_\_\_\_

Challenge 5 \_\_\_\_\_

**IV. Views on the provisions the provisions of Article 6 and the PW-SU**

Article 6.1 states that “Contracting Parties shall develop and maintain appropriate policy and legal measures that promote the sustainable use of plant genetic resources for food and agriculture”. According to your experience and preferences, please indicate for each provision of Article 6, which measures should be incorporated in the Programme of Work and explain them.

**7. Article 6.2.(a) pursuing fair agricultural policies that promote, as appropriate, the development and maintenance of diverse farming systems that enhance the sustainable use of agricultural biological diversity and other natural resources;**

\_\_\_\_\_

**8. Article 6.2.(b) strengthening research which enhances and conserves biological diversity by maximizing intra- and inter-specific variation for the benefit of farmers, especially those who generate and use their own varieties and apply ecological principles in maintaining soil fertility and in combating diseases, weeds and pests;**

\_\_\_\_\_

**9. Article 6.2.(c) promoting, as appropriate, plant breeding efforts which, with the participation of farmers, particularly in developing countries, strengthen the capacity to develop varieties particularly adapted to social, economic and ecological conditions, including in marginal areas;**

\_\_\_\_\_



**10. Article 6.2.(d) broadening the genetic base of crops and increasing the range of genetic diversity available to farmers;**

\_\_\_\_\_

**11. Article 6.2.(e) promoting, as appropriate, the expanded use of local and locally adapted crops, varieties and underutilized species;**

\_\_\_\_\_

**12. Article 6.2. (f) supporting, as appropriate, the wider use of diversity of varieties and species in on-farm management, conservation and sustainable use of crops and creating strong links to plant breeding and agricultural development in order to reduce crop vulnerability and genetic erosion, and promote increased world food production compatible with sustainable development; and**

\_\_\_\_\_

**13. (g) reviewing, and, as appropriate, adjusting breeding strategies and regulations concerning variety release and seed distribution.**

\_\_\_\_\_

#### **V. The Programme of Work on Sustainable Use (PW-SU)**

**14. How should the Programme of Work emphasize the linkage between Conservation and Sustainable Use of PGRFA and Farmers' Rights?**

\_\_\_\_\_

**15. How should the Programme of Work highlight the link between indigenous and traditional knowledge and the conservation and sustainable use of PGRFA?**

\_\_\_\_\_

**16. How should the impact analysis of the Programme of Work be carried out and why?**

\_\_\_\_\_

*Appendix 2***BASIC INFORMATION OF RESPONDENTS<sup>3</sup>**

<b>Name of the respondent's organization</b>	<b>Type of organization</b>	<b>Country in which the organization is based</b>	<b>Level at which the organization operates</b>
Aegean Agricultural Research Institute	NARI	Turkey	National
Arboretum Bolestraszyce	Other: Institution of Culture	Poland	Regional
AS-PTA Assessoria e Serviços a Projetos em Agricultura Alternativa	CSO and NGO	Brazil	National
Ashok Sansthan	CSO and NGO	India	National
Asociación Semilleros Argentinos	CSO and NGO	Argentina	National
Associação Brasileira de Agricultura Biodinamica - BOTUCATU-SP-BRASIL	CSO and NGO	Brazil	National
Australian Government, Department of Agriculture, Fisheries and Forestry	Governmental organization/authority	Australia	National
Austrian Agency for Health and Food Safety	Governmental organization/authority	Austria	National
AVRDC - The World Vegetable Center	IARC	Thailand	International
Bangladesh Agricultural Research Council	NARI	Bangladesh	National
Bangladesh Institute of Nuclear Agriculture (BINA)	NARI	Bangladesh	National
Bangladesh Rice Research Institute	NARI	Bangladesh	National
Berne Declaration	CSO and NGO	Switzerland	International
Bifurcated Carrots	NARI	Netherlands	International
Biodiversity Network	CSO and NGO	Japan	International
Biotechnology Center, Ministry of Environment	Governmental organization/authority	Qatar	National
Bioversity International	IARC	France	International
Bioversity International, Commodities programme (banana, cacao and coconut)	IARC	France	International
Botanical Garden in Bydgoszcz	Other: Botanical Garden	Poland	Regional

<sup>3</sup> This list reflects the basic information of all respondents whose completed questionnaires were received by the Secretary before 31 March 2013. Questionnaires that did not respond to at least one of the substantial questions were not taken into account.

Bundesverband Deutscher Pflanzenzüchter e.V.	Other: Breeders' organization	Germany	National
Canadian Society of Environmental Biologists (CSEB)	CSO and NGO	Canada	National
Centre for Genetic Resources, the Netherlands	NARI	Netherlands	National
Centre for Genetic Resources, the Netherlands	NARI	Netherlands	National
Centre for Genetic Resources, the Netherlands	NARI	Netherlands	National
Centre Wallon de Recherches Agronomiques (CRA-W)	Governmental organization/authority	Belgium	Regional
Centro de Agricultura Alternativa do Norte de Minas	CSO and NGO	Brazil	National
Centro de Investigaciones Agronómicas, Universidad de Costa Rica, Costa Rica	University	Costa Rica	National
Centro Internacional de la Papa (CIP)	IARC	Peru	International
CINVESTAV	Other: Research centre of advanced studies	Mexico	Regional
Colectivo Ecologista Jalisco, A.C.	CSO and NGO	Mexico	National
Community Technology Development Trust	CSO and NGO	Zimbabwe	National
Conabio	Governmental organization/authority	Mexico	National
Coordinated contribution of all federal and regional governmental organizations of Belgium, involved in the domain of agriculture and environment (biodiversity).	Governmental organization/authority	Belgium	International
Corporación Nacional Forestal	Governmental organization/authority	Chile	National
CropLife International	CSO and NGO	Belgium	International
Department of Agriculture, Fisheries and Forestry Queensland	Governmental organization/authority	Australia	International
Department of Environment Ministry of Local Government, Urban Development, Housing & Environment	Governmental organization/authority	Fiji	National
Development Fund (Utviklingsfondet)	CSO and NGO	Norway	International
Development Fund (Utviklingsfondet)	CSO and NGO	Norway	International

Direccion de Fitozoogenetica y Recursos Nativos Viceministerio de Sanidad Agropecuaria y Regulaciones Ministerio de Agricultura, Ganaderia y Alimentacion	Governmental organization/authority	Guatemala	National
Direction des Parcs Nationaux	Governmental organization/authority	Senegal	National
Eliakim Sakayoya Direction de la protection des vététaux	Governmental organization/authority	Burundi	National
EMBRAPA	NARI	Brazil	National
ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development	Governmental organization/authority	Italy	International
ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development	Governmental organization/authority	Italy	International
ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development	Other: Institute of Research	Italy	International
Environmental Protection Agency	Governmental organization/authority	Montenegro	National
ESA European Seed Association	Other: Breeders' organization	Belgium	Regional
EURALIS SEMENCES	Private plant breeder	France	International
Federal Ministry of Consumer Protection, Food and Agriculture	Governmental organization/authority	Germany	National
Federal Office for Agriculture and Food (BLE)	Governmental organization/authority	Germany	National
Former agriculture and agrifood Canada employee	Other: Retired	Canada	National
Foundation for Genetic Resource, Energy, Ecology and Nutrition (Green Foundation)	Farmers' Organization	India	Regional
General Directorate of Agricultural Research and Policies (GDAR)	Governmental organization/authority	Turkey	National
German Federal Agency for Nature Conservation	Governmental organization/authority	Germany	International
Göteborg University	University	Sweden	International
Grains Research and Development Corporation	Governmental organization/authority	Australia	National
ICRISAT	IARC	India	International
Identidad Cultural y la Preservacion de la Biodiversidad de los Maices y Otros Cultivos Criollos AC	CSO and NGO	Mexico	Regional

IFOAM	CSO and NGO	European Union	International
Initiative Mondiale pour l'Horticulture (GlobalHort)	CSO and NGO	Italy	International
Institut national des recherches agricoles du Bénin	NARI	Benin	National
Institut Togolais de Recherche Agronomique (ITRA)	NARI	Togo	National
Institute of Experimental Botany	Other: Academy of Sciences	Czech Republic	National
Institute of Himalayan Environmental Research and Education (INHERE)	CSO and NGO	India	National
Institute of Natural Fibres and Medicinal Plant	NARI	Poland	Regional
Institute of Plant Genetic Resources "K.Malkov"	NARI	Bulgaria	National
Institute of Plant Genetics Polish Academy of Sciences, Poland	Governmental organization/authority	Poland	National
Institute of Soil Science and Plant Cultivation, State Research Institute in Pulawy, Poland	NARI	Poland	National
Instituto Nacional Autónomo de Investigaciones Agropecuarias	NARI	Ecuador	National
Instituto Nacional de Biodiversidad (INBio)	CSO and NGO	Costa Rica	Regional
Instituto Nacional de Innovación Agropecuaria y Forestal (INIAF)	NARI	Bolivia	National
Instituto Nacional de Investigaciones Agrícolas (INIA)	NARI	Venezuela (Bolivarian Republic of)	National
Instituto Nacional de Investigaciones Agropecuarias - INIAP	NARI	Ecuador	National
Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias (INIFAP)	NARI	Mexico	National
International Center for Agricultural Research in the Dry Areas (ICARDA)	IARC	Syrian Arab Republic	International
International Center for Agricultural Research in the Dry Areas (ICARDA)	IARC	Syrian Arab Republic	International
International Center for Tropical Agriculture (CIAT)	IARC	Colombia	International
International Institute of Tropical Agriculture (IITA)	IARC	Nigeria	International

International Maize and Wheat Improvement Center (CIMMYT)	IARC	Mexico	International
International Planning Committee for Food Sovereignty <sup>4</sup>	CSO and NGO	Italy	International
International Rice Research Institute	IARC	Philippines	International
IUCN Species Survival Commission Crop Wild Relative Specialist Group	Other	United Kingdom	International
Jõgeva Plant Breeding Institute	NARI	Estonia	National
Jõgeva Plant Breeding Institute	NARI	Estonia	National
Julius Kühn-Institut, Federal Research Centre for Cultivated Plants (JKI) Institute for Breeding Research on Agricultural Crops	NARI	Germany	National
Kuwait institute for scientific research	NARI	Kuwait	International
Kuwait institute for scientific research	NARI	Kuwait	National
Local Initiatives for Biodiversity, Research and Development (LI-BIRD)	CSO and NGO	Nepal	International
Ministère de l'Agriculture	Governmental organization/authority	Madagascar	National
Ministerio de Agricultura de Chile	Governmental organization/authority	Chile	National
Ministerio de Desarrollo Agropecuario	Governmental organization/authority	Panama	National
Ministerio del Ambiente	Governmental organization/authority	Ecuador	National
Ministry of Agriculture and Rural Development (MARD)	Governmental organization/authority	Poland	National
Ministry of Agriculture Department of Agriculture & Cooperation, Government of India	Governmental organization/authority	India	National
Ministry of Agriculture Department of Agriculture & Cooperation, Government of India	Governmental organization/authority	India	National
Ministry of Agriculture of Estonia	Governmental organization/authority	Estonia	National
Ministry of Agriculture, Vilnius	Governmental organization/authority	Lithuania	National
Ministry of Food Production	Governmental organization/authority	Trinidad and Tobago	National
Ministry of Forests and Soil Conservation	Governmental organization/authority	Nepal	National

<sup>4</sup> The completed questionnaire submitted by the International Planning Committee for Food Security was signed by over 90 social movements, peasants networks and other civil society organizations.

Ministry of Forests and Soil Conservation	Governmental organization/authority	Nepal	National
Ministry of Agrarian Development	Governmental organization/authority	Brazil	National
Monsanto Company	Other: Multinational agricultural research and development company	United States of America	International
National Agriculture and Forestry Research Institute (NAFRI)	NARI	Lao People's Democratic Republic	National
National Agriculture Genetic Resources Center (Genebank) under Nepal Agricultural Research Council (NARC)	NARI	Nepal	National
National Biodiversity Authority, India	Governmental organization/authority	India	National
National Biodiversity Centre	Governmental organization/authority	Bhutan	National
National Centre for Genetic Resources and Biotechnology	NARI	Nigeria	National
National Plant Genetic Resources Centre	Governmental organization/authority	Zambia	National
NBPGR	Governmental organization/authority	India	National
Nodal Department, Department of Agriculture and Cooperation, Government of India, Implementing agency - NBPGR of ICAR	Governmental organization/authority	India	National
Norddeutsche Pflanzenzucht Hans-Georg Lembke KG	Private plant breeder	Germany	International
Norwegian Genetic Resource Centre	Governmental organization/authority	Norway	National
Norwegian Ministry of Agriculture and Food	Governmental organization/authority	Norway	National
Norwegian University of Life Sciences	University	Norway	National
Nottingham Arabidopsis Stock Centre	University	United Kingdom	International
Nunhems Netherlands B.V.	Seed production company	Netherlands	International
Oficina de Estudios y Políticas Agrarias – Ministerio de Agricultura	Governmental organization/authority	Chile	National
Peermade Development Society	CSO and NGO	India	Regional

Plant Gene Bank	Governmental organization/authority	Lithuania	National
Plant Genetic Resources Unit, Agricultural Research Corporation, Sudan	NARI	Sudan	National
Plant Research International	NARI	Netherlands	International
Plant Science Agricultural Research Institute	NARI	Mongolia	National
Plantum	Other: Seed association	Netherlands	National
ProSpecieRara	CSO and NGO	Switzerland	International
Rasi Seed P LTD	Seed production company	India	Regional
Red de Semillas “Resembrando e Intercambiando”	CSO and NGO	Spain	National
Red de Semillas “Resembrando e Intercambiando”	CSO and NGO	Spain	National
Rede de Sementes Agroecológicas Bionatur/Conaterra	Farmers' Organization	Brazil	National
Research Institute of Horticulture, Skierniewice, Poland	NARI	Poland	National
Rete Semi Rurali	CSO and NGO	Italy	National
Rijk Zwaan	Private plant breeder	Netherlands	International
SADC Plant Genetic Resources Centre	Other	Zambia	Regional
Scottish Crofting Federation (SCF)	Farmers' Organization	United Kingdom	National
Seed Control and Certification Institute	Governmental organization/authority	Zambia	National
Service de l'Environnement au sein du Ministère de l'Agriculture	Governmental organization/authority	Madagascar	National
Service of Environment within the Ministry of Agriculture	Governmental organization/authority	Madagascar	National
Sistema Nacional de Recursos Fitogenéticos para la Alimentación y la Agricultura	Governmental organization/authority	Mexico	National
Swedish University of Agricultural Sciences	University	Sweden	National
Swiss Federal Office for Agriculture	Governmental organization/authority	Switzerland	National
Tajik Agrarian University	University	Tajikistan	National
The J B Trust	Other: Private Conservation Trust	United Kingdom	International



The Research Council	Governmental organization/authority	Oman	National
The University of the West Indies, St. Augustine, Trinidad and Tobago Cocoa Research Centre (International Cocoa Genebank, Trinidad)	University	Trinidad and Tobago	Regional
Unité des Ressources Génétiques / Institut d'Economie Rurale	NARI	Mali	National
United States Department of Agriculture	Governmental organization/authority	United States of America	International
United States Department of Agriculture, Agricultural Research Service	Governmental organization/authority	United States of America	National
Universidad Nacional Autónoma de México	University	Mexico	National
Universidad Nacional Autónoma de México, Programa Universitario de Alimentos	University	Mexico	National
Universidad Rey Juan Carlos	University	Spain	National
Universidad Rey Juan Carlos	University	Spain	National
Warsaw University of Life Sciences, WULS - SGGW, Department of Vegetable and Medicinal Plants	University	Poland	International
n/a	Private plant breeder	Afghanistan	National
n/a	Private plant breeder	Azerbaijan	Regional
n/a	Farmers' Organization	Azerbaijan	Regional
n/a	IARC	Belgium	International
n/a	CSO and NGO	Bolivia	National
n/a	Governmental organization/authority	Democratic Republic of the Congo	National
n/a	University	Finland	National
n/a	Governmental organization/authority	Germany	National
n/a	Governmental organization/authority	Ireland	National
n/a	CSO and NGO	Netherlands	International
n/a	CSO and NGO	United Kingdom	National
n/a	Seed production company	United States of America	International