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# COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

## Item 5.2 of the Provisional Agenda

### Sixteenth Regular Session

Rome, 30 January - 3 February 2017

## GLOBAL NETWORKING ON *IN SITU* CONSERVATION AND ON-FARM MANAGEMENT OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

### Table of Contents

	Paragraphs
I. Introduction .....	1 – 3
II. Background .....	4 - 8
III. The need for and feasibility of a Global Network on <i>In Situ</i> Conservation and On-Farm Management of Plant Genetic Resources for Food and Agriculture .....	9 - 12
VI. Financial implications of establishing one or two networks .....	13 - 14
V. Means and steps to establish one or two networks.....	15 - 17
<i>Annex: Draft call for establishing a Global Network on In Situ Conservation and On-Farm Management of Plant Genetic Resources for Food and Agriculture</i>	

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## I. INTRODUCTION

1. Crop wild relatives (CWR) and local crop diversity, their habitats and the agricultural systems they constitute require safeguarding and a much higher valorisation than is currently the case. Failure to ensure adequate conservation and management of these critically important components of plant genetic resources for food and agriculture (PGRFA) that are largely conserved outside genebank collections, such as CWR and wild food species that are growing in nature, as well as the local crop diversity maintained on-farm by small-scale farmers may result in their permanent loss. Currently, various drivers of genetic erosion, including changes in agricultural practices, the introduction of modern crop varieties, changes to land use, destruction or fragmentation of habitats, climate change and other factors, are increasingly threatening the continued existence, and hence availability, of these resources.
2. This concept note analyses the need for and feasibility of a global networking mechanism for *in situ* conservation and on-farm management of PGRFA. The document further provides an overview of the financial implications of establishing one common network as compared to two separate networks for *in situ* conservation and on-farm management and also looks into steps and means necessary to establish one joint or two separate networks.
3. The *Annex* to this document contains a *Draft call for establishing a Global Network on In Situ Conservation and On-Farm Management of Plant Genetic Resources for Food and Agriculture* (Draft Call) reflecting the outcome of an informal multi-stakeholder dialogue held in June 2016 and the inputs received from members of the Commission on Genetic Resources for Food and Agriculture (Commission). The Draft Call is based on the assumption that a single network is preferable to two networks. As immediate next steps towards the establishment and operationalization of the *Global Network on In Situ Conservation and On-Farm Management of Plant Genetic Resources for Food and Agriculture*, it is proposed that an inaugural meeting be held immediately prior to the next session of the Commission's Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture (Working Group) to decide on the goals and functions, governance, structure, management, partnerships and funding of the Global Network.

## II. BACKGROUND

4. The Commission, at its Fourteenth Regular Session, requested FAO to prepare a concept note detailing the structure, functions and financial implications of the establishment of either one global network on *in situ* conservation and on-farm management of PGRFA or two networks separately addressing these areas, for consideration by the Commission's Working Group and the Commission at their subsequent sessions. The Commission stressed that the concept note should also consider "means of improving and strengthening national and regional networks and means of avoiding duplication of efforts."<sup>1</sup>
5. In response to the Commission's request, FAO presented a concept note to the Seventh Session of the Working Group<sup>2</sup> and, at the request of the Working Group, elaborated the document further, for consideration by the Commission at its Fifteenth Regular Session. The Commission, at its Fifteenth Regular Session, took note of the revised concept note<sup>3</sup> and requested FAO to convene prior to the Working Group's Eighth Session an informal multi-stakeholder dialogue to discuss options for networking for *in situ* conservation and on-farm management, its functions, governance and budgetary requirements, in particular to ensure its long-term funding. The Commission requested FAO to revise the concept note in the light of the outcomes of the multi-stakeholder dialogue, for consideration of the Commission at its next session<sup>4</sup>.

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<sup>1</sup> CGRFA-14/13/Report, paragraph 96.

<sup>2</sup> CGRFA/WG-PGR-7/14/Inf.3.

<sup>3</sup> CGRFA-15/15/Inf.22.

<sup>4</sup> CGRFA-15/15/Report.

6. In response to the Commission's request, FAO and Centre de coopération internationale en recherche agronomique pour le développement (CIRAD) held an *Informal Multi-Stakeholder Dialogue on Global Networking on In Situ Conservation and On-farm Management of Plant Genetic Resources for Food and Agriculture* in Rome from 6 to 7 June 2016 at FAO headquarters immediately prior to the Eighth Session of the Working Group.<sup>5</sup> The dialogue was open to Commission members and observers, including non-governmental and civil society organizations and the private sector. Participants of the dialogue reviewed and revised a set of goals, functions as well as the governance structure and budgetary requirements of a possible networking mechanism on *in situ* conservation and on-farm management of plant genetic resources for food and agriculture. The multi-stakeholder dialogue was informal and did not adopt a report. However, a brief summary of the outcomes of the dialogue was presented at the end of the dialogue, for review and discussion by participants. The Chair of the Eighth Session of the Working Group, Mr. Don McGlashan (Jamaica), presented the summary, as revised in the light of comments received, to the Eighth Session of the Working Group as a Chair's Non-Paper.<sup>6</sup>

7. The Working Group, at its Eighth Session, noted that the concept note on *Global networking on in situ conservation and on-farm management of plant genetic resources for food and agriculture*<sup>7</sup> would be revised by FAO in the light of the outcomes of the informal multi-stakeholder dialogue that preceded the session of the Working Group and written comments submitted by Commission Members and observers before August 2016.

8. The Working Group recommended that the concept note provide a budget detailing the financial implications and an overview of the means and the steps necessary for establishing one network as compared to establishing two networks, as well as FAO having a strong role as facilitator in this process. It also recommended that the concept note analyse the need for and feasibility of a global networking mechanism and stress the importance of linkages and partnerships with existing networks and instruments, including the Treaty, with a view to avoid duplication of activities.

### **III. THE NEED FOR AND FEASIBILITY OF GLOBAL NETWORKING ON *IN SITU* CONSERVATION AND ON-FARM MANAGEMENT**

9. There is general consensus that many wild plant species that are related to crops as well as a large number of local crop varieties cultivated by small-scale farmers are at risk and every effort should be made to conserve them. Similarly, most stakeholders seem to agree on the need for global networking on *in situ* conservation and on-farm management.

10. However, as *in situ* conservation of wild genetic resources, on the one hand, and on-farm management of PGRFA, on the other, have different targets, involve different stakeholders and require different approaches, recent discussions focused on the question whether one common or two separate networks should be established for *in situ* conservation and on-farm management of PGRFA. Some have argued, that *in situ* conservation and on-farm management are too different and unique to be conveniently catered to through a single network. Others have pointed out that a single network model is logical in the sense that the one over-riding goal would be to provide a global mechanism to promote the conservation of PGRFA currently still available outside of genebanks. A single network, it is argued, could benefit from the commonalities of *in situ* conservation and on-farm management, and be better suited to ensure more cohesive interactions between the two conservation approaches. A single network could also be better placed to support initiatives spanning the whole PGRFA sector, in particular, linkages between the conservationists on one hand and the users of the conserved materials, such as plant breeders and farmers, on the other. Importantly, a single network would most likely be better suited to coordinate its work with related conventions, policy instruments and initiatives with greater levels of efficiency. Obviously, a common global network needs to ensure that the full

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<sup>5</sup> CGRFA-16/17/Inf.21.

<sup>6</sup> CGRFA-16/17/Inf.21, Annex II.

<sup>7</sup> CGRFA/WG-PGR-8/16/Inf.2.

diversity of stakeholders and the peculiarities of these two areas are adequately represented in its governance structure.

11. The informal multi-stakeholder dialogue, held in June 2016, recommended to consider establishing a common global networking mechanism for both, *in situ* conservation and on-farm management. There seems to be consensus that while a common global networking mechanism might be able to demonstrate the complementarities between *in situ* conservation and on-farm management, such a mechanisms will also have to reflect the differences between *in situ* conservation and on-farm management in the agreed functions and activities of the network, including in terms or governance and administration.

12. The feasibility of global networking on *in situ* conservation and on-farm management depends on the goals and functions of the networking, on the one hand, and the resources available, on the other. Regional genetic resources networks as well as (global) crop networks demonstrate that networks may catalyse information-sharing among important players and improve conservation and sustainable use of PGRFA. Global networking might also help to develop joint conservation and use strategies which may promote the rationalization of conservation efforts and facilitate the *in situ* conservation of crop wild relatives and the continued use of local landraces/ farmers' varieties. A common network for *in situ* conservation and on-farm management could also help to create or strengthen the relationship between conservation programmes and practitioners promoting on-farm management.

#### IV. FINANCIAL IMPLICATIONS OF ESTABLISHING ONE OR TWO NETWORKS

13. Costs for the establishment and running of the global networking mechanism will depend on the agreed functions and structure, as well as the scope of its interventions and activities, the number of meetings foreseen and the staff required to deliver on agreed functions and perform agreed activities. Although functions and activities of the network have yet to be identified and defined by its constituents, it seems clear that a common network for *in situ* conservation and on-farm management would have lower operating and logistical costs than two separate networks.

**Table 1 Preparation of the inaugural meeting of a common network on *in situ* conservation and on-farm management of plant genetic resources for food and agriculture**

Items of Expenditure		Cost (US\$)	Total (US\$)
Meeting logistics	Direct Costs of the Meeting (interpretation, messengers)	45,000	125,000
	Document preparation	30,000	
	Documentation (translation/printing)	50,000	
Participants' travel	60 participants	120,000	120,000
Human resources (HR) [as FAO in-kind contribution]	P4 (50%) – 12 months	110,500	157,500
	G4 (50%) – 12 months	47,000	
Staff travel			15,000
<b>Grand total</b>			<b>417,500</b>

14. *Table 1* contains, as an example, the draft budget for an inaugural meeting of the common network. The draft budget is based on the assumption that FAO would facilitate the preparation of the 4-days inaugural meeting. If it is decided to hold two separate meetings (*Table 2*) to initiate the global network on *in situ* conservation, on the one hand, and the on-farm management network, on the other, logistical and administrative costs, might considerably exceed the logistical costs of a single joint meeting. Other costs, such as participants' travel costs might not change, assuming that the number of participants of each network meeting would be about half the number of eligible participants estimated for a single meeting of the common network. Similarly, the costs for the preparation of documents and

tasks relating to documentation (especially translation and printing) for the two meetings of two separate networks would not be significantly different from those for the meeting of a joint network. It is estimated that the total cost for holding an inaugural meeting for a joint network is USD 417 500 while that for holding two separate meetings is USD 524 500, representing a difference of approximately 20%.

**Table 2. Preparation of the inaugural meetings of two separate networks**

Items of Expenditure		Cost (US\$)		Total (US\$)
		In-situ Conservation Meeting	On-farm Management Meeting	
Meeting logistics	Direct Costs of the Meeting (interpretation, messengers)	45,000	45,000	90,000
	Document preparation	15,000	15,000	30,000
	Documentation (translation/printing)	25,000	25,000	50,000
Participants' travel	30 participants	60,000	60,000	120,000
Human resources (HR) [as FAO in-kind contribution]	P4 (25%) for 12 months	55,250	55,250	110,500
	G4 (50%) – 12 months	47,000	47,000	94,000
Staff travel		15,000	15,000	30,000
<b>Grand total</b>				<b>524,500</b>

## V. MEANS AND STEPS NECESSARY TO ESTABLISH ONE OR TWO NETWORKS

15. It is important to consider what the concrete immediate steps will be that will engender the desired 'ownership' by the stakeholder base. One important step that has been taken was the successful holding of the multi-stakeholder dialogue which brought together a whole range of different stakeholders involved in *in situ* conservation and/ or on-farm conservation.

16. The concrete steps that need to be taken to start global networking depend, *inter alia*, on the desired structure and formal status of the networking mechanism. At this stage it is assumed that the network would, at least initially, not have any formal legal status. As a managed coalition of interrelated entities, network members would cooperate and collaborate on the basis of common objectives and agreed functions and activities of the network. It would be essential to involve the widest spectrum of relevant stakeholders from the outset in devising the modalities for global networking.

17. Subject to the availability of the necessary extra-budgetary funds, an inaugural meeting of the network should be held immediately preceding the next session of Working Group. The meeting would need to consider and agree on the goal, functions, activities, governance, structure and management of the network. It could base its discussions on the outcome of the informal multi-stakeholder dialogue held in June 2016, as reflected in the Draft Call, contained in the Annex to this document. Subject to the availability of the necessary resources, the meeting could be facilitated by FAO.

## ANNEX

### DRAFT CALL FOR ESTABLISHING A GLOBAL NETWORK ON *IN SITU* CONSERVATION AND ON-FARM MANAGEMENT OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

1. Following a series of consultations, including the *Multi-stakeholder Dialogue on Global Networking on In Situ Conservation and On-Farm Management of Plant Genetic Resources for Food and Agriculture*<sup>8</sup>, held in Rome on 6 & 7 June 2016, the Commission on Genetic Resources for Food and Agriculture (Commission) recommends the establishment of a *Global Network on In Situ Conservation and On-Farm Management of Plant Genetic Resources for Food and Agriculture*.

#### BACKGROUND

##### The importance of *in situ* conservation and on-farm management of PGRFA

2. Considerable progress has been made in safeguarding and providing access to crop genetic diversity and crop wild relatives (CWR) in *ex situ* germplasm collections. Over the years, desired traits found in PGRFA conserved *ex situ* have been successfully incorporated into improved varieties of many crops. However, despite the significant progress that has been made in the systematic conservation of PGRFA in *ex situ* genebanks, this approach alone is still inadequate to provide effective conservation and management of all categories of potentially useful PGRFA.

Firstly, it is unlikely that *ex situ* conservation will ever be sufficiently comprehensive as to conserve the full spectrum of genetic diversity of all plant populations relevant to food and agriculture. A significant proportion of PGRFA diversity is not available *ex situ*, but exists only in the wild, i.e. *in situ*, and/or in farmers' fields. Often highly variable and adapted to specific ecosystems and climatic conditions, these PGRFA that are found *in situ* and in local crop diversity maintained on-farm represent a diverse and rich repository of traits.

Secondly, genebank collections may be lost in times of civil strife and natural disasters, or due to sub-standard management. PGRFA conserved *in situ* and/or managed sustainably on-farm are therefore serving as a large repository and natural back-up for *ex situ* collections worldwide.

Thirdly, conserving plants *in situ* and through on-farm management also facilitates the continued adaptation and evolution of diversity, i.e. the creation of variants that are better suited to address environmental and climatic changes.

3. The challenge of producing more food sustainably with fewer inputs might be reachable only if the broadest possible diversity of PGRFA can be accessed and used as sources of new traits. The diversity of PGRFA currently conserved in *ex situ* genebanks may be insufficient to meet this challenge. CWR and local crop diversity, their habitats and the agricultural systems they constitute therefore require urgent safeguarding and a much higher valorisation than is currently the case.

4. Failure to ensure adequate conservation and management of these critically important components of PGRFA that are largely conserved outside genebank collections, such as CWR and wild food species that are growing in nature, as well as the local crop diversity maintained on-farm by small-scale farmers may result in their permanent loss. Currently, various drivers of genetic erosion, including changes in agricultural practices, the introduction of modern crop varieties, changes to land use, destruction or fragmentation of habitats, climate change and other factors, are increasingly threatening the continued existence, and hence availability, of these resources.

5. Consequently, *in situ* and *ex situ* conservation should be considered as complementary practices for the management of PGRFA diversity; one does not negate the other.

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<sup>8</sup> CGRFA-16/17/Inf.21

### **Current status of the management of PGRFA outside of genebanks**

6. There is a resurgent interest in the conservation and sustainable use of PGRFA *in situ* and on-farm. Within the FAO's new Strategic Framework, in particular Strategic Objective 2 ("Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner") *in situ* conservation and on-farm management of PGRFA form the basis of a number of important products and services. Bioversity International and other Centres of the CGIAR are currently implementing several multi-country activities related to both, *in situ* conservation and on-farm management of PGRFA. Other global entities, such as the Benefit-sharing Fund of the Treaty, support relevant initiatives and projects supporting *in situ* conservation and on-farm management.<sup>9</sup> However, the increased interest in this area has yet to result in a comprehensive global strategy for *in situ* conservation and on-farm management of PGRFA.

7. Overall, initiatives addressing the management of PGRFA outside genebanks appear scattered, not aligned to national conservation strategies and lack the coordination required to coalesce into national, regional and global mechanisms, which in many cases are needed for managing effectively, crop gene pools and Vavilov centres of diversity for cultivated species.

### **The need for a global networking mechanism**

8. Currently, there is no overarching global platform or network that provides coordination or aligns efforts in the area of *in situ* conservation and on-farm management of PGRFA. A global networking mechanism will address this shortcoming and ensure a greater impact of the efforts made at national levels. Improved *in situ* conservation and on-farm management of PGRFA will be promoted through global networking which will facilitate improved collaboration, coordination and the exchange of information and experience between networks, organizations, projects and stakeholders. Global networking will also help to avoid duplications of efforts and assure complementarities and synergies among on-going activities, create strategic partnerships and raise awareness of the need to conserve PGRFA. Establishing a global network on *in situ* conservation and on-farm management of PGRFA will foster linkages between different institutions with complementary objectives in order to reinforce conservation and sustainable use of PGRFA.

### **PREPARATION OF A FIRST MEETING TO ESTABLISH THE GLOBAL NETWORK ON IN SITU CONSERVATION AND ON-FARM MANAGEMENT OF PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

9. Broad participation of relevant stakeholders in the global network is essential. It is pivotally important to involve, in the very early stages of the establishment of the network all potential members and participants, including governmental as well as non-governmental organizations, farmers and breeders, international partner organizations as well as the private sector, indigenous and local communities, and civil society organizations. Decisions related to functions, structure, governance and budget requirements of the networking mechanism ought to be taken jointly by those who decide to contribute to and to be part of the network.

10. An inaugural meeting should consider and agree on the Network's goal, functions/ activities, governance, structure and management with the aim to establish and operationalize the Network.

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<sup>9</sup> For an overview of approved projects, see <http://planttreaty.org/content/benefit-sharing-fund>

### Goal

13. The Multi-Stakeholder Dialogue, as summarized by the Chair of the Eight Session of the Commission's Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture, identified as a possible goal of the network to

*Contribute to the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture and the achievement of Sustainable Development Goal Target 2.5 by strengthening on-farm management and in situ conservation and sustainable use of plant genetic resources for food and agriculture, taking into account the complementarity of different in situ and ex situ conservation approaches and the need to balance them.<sup>10</sup>*

14. At its first meeting, the Network could therefore decide to base discussions of its goal on the above text. For the moment, no existing global network addresses this goal and there seems to be agreement among stakeholders that a global network could indeed help to strengthen on-farm management and *in situ* conservation without losing sight of the important role of *ex situ* conservation and the need to balance and wisely coordinate different conservation approaches.

### Functions/ activities

15. To ensure efficiencies, and avoid the duplication of efforts, the global network should have functions currently not covered by any other entity and which are best devolved to a network. At its first meeting, the Network may wish to use the outcome of the Multi-stakeholder Dialogue, as summarized by the Chair's Non-Paper, as a starting point of deliberations. The Multi-Stakeholder Dialogue, according to the Chair's Non-Paper, identified a range of possible functions and activities of the network, including:

- Taking action in support of the role and important contribution of farmers and indigenous peoples and local communities to the conservation of PGRFA;
- Raising awareness about, and increase visibility of, the importance of in situ conservation and on farm management of PGRFA to policy makers at the national and international levels;
- Sharing knowledge, experiences and information within the network and with others on a voluntary basis;
- Increasing collaboration among stakeholders;
- Providing and coordinating capacity building opportunities;
- Influencing policy development and facilitating participation of stakeholders in policy development and decision-making at national, regional and international levels;
- Reinforcing the implementation of Farmers' Rights;
- Providing the platform for dialogue on an equal footing among stakeholder groups;
- Connecting and strengthening existing stakeholders, projects and networks;
- Promoting the monitoring of trends;
- Mobilizing resources; and
- Defining areas of work, work programme and clusters of work.

### Governance, structure and management

16. The multistakeholder dialogue characterized the network as an evolving stakeholder-policy interface with specialized, interacting networks (*in situ* and on-farm). The network could build bridges and partnerships with other communities of practice. It should be open to all stakeholder groups. It

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<sup>10</sup> CGRFA-16/17/Inf.21, *Annex II*.

should be transparent. And its meetings should be held, where possible, back-to-back with other relevant meetings, such as the meetings of the Commission's Working Group.

17. In considering the establishment of a network, numerous governance options may be considered. To ensure the necessary coordination and support in the initial phase of the initiative, it may be useful to establish a Facilitation Committee. The mandate of this committee would be to prepare for meetings of the network. Subject to the availability of the necessary financial resources, FAO could facilitate the preparation of meetings, including an inaugural meeting.