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COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

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

TABLE OF CONTENTS

I. INTRODUCTION

1. The Commission on Genetic Resources for Food and Agriculture (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 for *in situ* conservation and on-farm management of plant genetic resources for food and agriculture (PGRFA) or two networks separately addressing these areas, for consideration by the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture (Working Group) and the Commission at their next sessions. The Commission stressed that the concept note should consider "*means of improving and strengthening national and regional networks and means of avoiding duplication of efforts*"[1].

2. In response to the Commission's request, FAO presented a concept note on global networking on *in situ* conservation and on-farm management of PGRFA to the last session of the Working Group, held in Rome 9-11 July, 2014.[2] The document reflected on the importance of *in situ* conservation and on-farm management of PGRFA and the need to better coordinate stakeholders and relevant activities in these two areas. It proposed a possible process which the Commission could host and which could lead to the establishment of a global networking mechanism for *in situ* conservation and on-farm management of PGRFA, a mechanism that should ideally be developed and owned by its foreseen membership. The active involvement of stakeholders that work on *in situ* conservation and on-farm management of PGRFA in the development processes of the global networking mechanism would be essential to its successful and efficient operation.

3. The Working Group recommended that the concept note be further elaborated, by detailing the functions, governance structure and budget requirements, and that an informal stakeholder dialogue be convened to discuss and propose options for a global networking mechanism (i.e. a joint network or two separate networks).[3] In response to the Working Group's request, this document provides additional information and aims to provide Members of the Commission with a more detailed comparative analysis (especially in regard to efficiencies, practicalities and cost effectiveness) of the options of establishing one versus two separate global mechanisms to address *in situ* conservation and on-farm management of PGRFA.

II. BACKGROUND

4. At its Thirteenth Regular Session in 2011, the Commission reiterated the need for greater attention to crop diversity essential for food security, and for on-farm management of PGRFA, and stressed the need for improved collaboration and coordination at national, regional and global levels in these areas. Recognizing that a global network can support the coordination of efforts, help raise resources and create more awareness, the Commission requested FAO to elaborate on the means and opportunities for establishing a global network for *in situ* conservation and on-farm management of PGRFA, in coordination with the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty), the Global Strategy for Plant Conservation of the Convention on Biological Diversity and other relevant stakeholders, ensuring that efforts are not duplicated.[4]

5. In response, FAO initiated a consultation process, including through a global survey[5] and the organization of two technical workshops. These consultations came to the conclusion that networking on *in situ* conservation and on-farm management was important and should be supported, and highlighted that the distinctness of the two themes (*in situ* conservation and on-farm management) must be factored into the considerations – whether as a single network or two separate networks. The consultations further stressed the need for the global mechanism to have a

[1] CGRFA-14/13/Report, paragraph 96.
[2] CGRFA/WG-PGR-7/14/Inf.3.
[3] CGRFA-15/15/14, paragraph 10.
[4] CGRFA-13/11/Report, paragraph 41.
[5] A preliminary analysis of the global survey: On-farm management of plant genetic resources for food and agriculture: http://www.fao.org/fileadmin/templates/agphome/documents/PGR/ITWG/ITWG6/workshop/Preliminary_analysis-OFMSurvey.pdf

decentralized structure, build on existing initiatives, link and coordinate efforts, and develop capacity at national and local levels. It was noted that there existed no other initiative to establish a global networking mechanism on *in situ* conservation and on-farm management. The reasons for this may be manifold but any perception of the lack of importance of *in situ* conservation or on-farm management of PGRFA was certainly not a factor as stakeholders were consistently emphatic on the importance of an overarching networking mechanism for the management of PGRFA outside of *ex situ* collections.

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

6. 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.

7. 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. 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.

8. It is quite likely that the challenge of producing more food sustainably with fewer inputs can only be met if breeders are able to rely on a broad spectrum of diversity of PGRFA as sources of new traits, rather than only those that are currently accessed from *ex situ* genebanks. 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.

9. 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.

10. 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.

Current status of the management of PGRFA outside of genebanks

11. There is a resurgent interest in paying attention to the conservation and sustainable use of PGRFA *in situ* and on-farm. Within the FAO's new Strategic Framework, in particular Strategic Objective 2, to "*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 Consortium are currently implementing several multi-country activities related to both, *in situ* conservation and on-farm management of PGRFA.[6] Other global entities, such as the Benefit-sharing Fund of the Treaty, support relevant initiatives and projects supporting

[6] CGIAR Research Programs (CRPs), including CRP1.1 Dryland Systems; CRP1.2 Humidtropics; CRP1.3 Aquatic Agricultural Systems; CRP2 Policies, Institutions and Markets; CRP3.4 Roots, Tubers and Bananas; CRP7 Climate Change, Agriculture and Food Security.

in situ conservation and on-farm management.[7] 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.

12. 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 genepools and Vavilov centres of diversity for cultivated species.

The need for a global networking mechanism

13. Currently, there is no overarching 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, whether in the form of one or two separate networks, could potentially 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 could be promoted through the network(s) by facilitating collaboration, coordination and the exchange of information and experience between organizations, projects and stakeholders. A global mechanism could 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 could therefore be a way to foster linkages between different institutions with complementary objectives in order to reinforce conservation and sustainable use of PGRFA.

III. TOWARDS A GLOBAL NETWORKING MECHANISM ON *IN SITU* CONSERVATION AND ON-FARM MANAGEMENT

14. While the Commission may initiate a global networking mechanism for *in situ* conservation and on-farm management of PGRFA and provide a platform for planning and coordination, it will be pivotally important to involve, in the very early stages of the establishment of such networking mechanism(s), 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 it.

15. This section considers some possible key functions, structures, governance and financial implications of the establishment of one common network that caters to both *in situ* conservation and on-farm management of PGRFA, or two separate networks that cater to these areas, respectively.

Potential Functions of the global network(s)

16. Pertinent to attaining overall, global aims, e.g. the implementation of the Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture and meeting the Aichi Biodiversity Targets of the Convention on Biological Diversity, the main goal of the global network(s) would be to maximise the *in situ* conservation and on-farm management of PGRFA in countries, and thereby contribute to safeguarding important genetic resources for sustainable use, either directly by famers or by plant breeders and scientists. For the moment, no existing body, mechanism or network addresses this goal. To ensure efficiencies, and avoid wasteful duplication of efforts, the global network(s) should have functions currently not covered by any other entity and which are best devolved to a neutral platform. To demonstrate how the global network(s) would reach this goal, this section articulates the possible unique functions that the mechanism(s) would have, along with the proposed core activities in the short- and long term.

17. Whether structured as a global network catering to both *in situ* conservation and on-farm management, or as two separate networks addressing these areas, it is proposed that the following functions would be central to the proposed network(s):

[7] For an overview of approved projects, see http://planttreaty.org/content/benefit-sharing-fund

- **Awareness-raising** at global, regional and national levels of the critical importance of PGRFA existing outside the *ex situ* conservation realm. This function would apply to several socio-economic domains including food and nutritional security, safeguarding of the environment, income generation and improved livelihoods;
- **Sharing of information and experience**. Considering the large body of experiences that have been accumulated over the years by many practitioners, a set of validated practices, tools and methods could be collated, packaged and shared as means to supporting the development of policies, for instance.
- **Strengthening of partnerships and linkages** that could foster viable "communities of practice" for the conservation, management and sustainable use, of PGRFA outside of genebanks;
- **Generation, coordination and implementation of tools, initiatives and interventions** that could be relevant to *in situ* conservation and on-farm management of PGRFA;
- **Implementation of evidence-based interventions** in the areas of *in situ* conservation and on-farm management, with a view to demonstrate **positive impacts at the country-level**; and
- **Mainstreaming the conservation of PGRFA in nature reserves** and other protected areas.

18. The global network(s) could demonstrate the relevance, value and feasibility of these functions through a work programme setting out core activities to be implemented in its early stage, for example:

- **Initiate a participatory process** to discuss and **to bring together all the potential members** and **provide a space** where all participants could interact to dialogue and refine the scope, functions, structure and financing of the networking mechanism;
- **Collectively identify global conservation priorities for PGRFA, and work towards esta**blishing a strategic and systematic global approach in line with the priorities established;
- **Identify joint initiatives** for ***in situ* and on-farm management of PGRFA** of diverse stakeholders and sectors;
- **Compile**, **validate**, **standardize** and **disseminate** information and knowledge, including state of the art tools, methodologies and best practices for conservationists, researchers and farmers;
- **Raise awareness** of *in situ* conservation and on-farm management, and present the activities of the network in relevant events (such as conferences of international instruments; scientific conferences etc.).

19. In the longer term, the network(s) could take on additional responsibilities, including for example:

- **Promote** research, including **community-based and participatory research**, to identify conservation practices to be deployed at local levels. Such research could help to demonstrate that its benefits directly support the ultimate custodians of PGRFA, who are involved in day-to-day management of crops and varieties;
- **Support access to and disseminate innovative technology**, relevant for, *inter alia*, surveying and assessing inter- and intra-specific diversity and its interaction in agro-ecological systems as well as in natural ecosystems, spatial analysis and phenotyping to identify varieties with climate-adapted traits;
- **Identify and monitor threats and vulnerabilities** associated with *in situ* conserved and/or on-farm managed PGRFA;
- **Act as a clearinghouse**, including for the validation and sharing of information and research findings, connecting local conservation practitioners, farmers, and plant breeders through their national PGRFA programmes to the relevant information resources and service providers maintained at national, regional, and international levels;
- **Leverage resources** and explore sustainable mechanisms for fundraising to support all activities relevant to *in situ* conservation and on-farm management of PGRFA.

20. Regarding the functions of the networking mechanisms, it is acknowledged that *in situ* conservation of wild genetic resources and on-farm management of PGRFA have different targets, involve different stakeholders and require different approaches. Whether the suggested functions and activities would best be catered to through one common or two separate global mechanisms should therefore be considered very carefully. On one hand, it may be argued, that the two

conservation approaches are too unique to be conveniently catered to through a single network. On the other hand, a single network model is logical in the sense that the one over-riding goal will be to provide a global mechanism to promote the conservation of PGRFA currently found in the wild and in farmers' fields, i.e. outside genebanks. It is expected that a unified network would benefit more 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 would 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.

21. With regard to fulfilling the above mentioned functions most efficiently and in the most cost-effective manners, it may be surmised that one network, rather than two with duplicated functions and activities, would be the more advantageous alternative. It is acknowledged, however, that the differences between *in situ* conservation and on-farm management must be recognized and factored into the considerations of the agreed functions and activities of the network. One global networking mechanism will be able to demonstrate the complementarities between *in situ* conservation and on-farm management for which activities are currently conducted separately by different stakeholder groups.

Potential Structure of the global Potential Structure of the global network(s)

22. The global network(s) should consist of a number of interrelated organizations bound by a common set of goals that address *in situ* conservation and on-farm management of PGRFA. The ‘structure’ refers to how these discrete entities, with clearly defined roles and responsibilities and possibly operating at different levels and scales, are organized into one unit. The ‘structure’ also refers to how the internal and external linkages are managed and coordinated. The structure of the network(s) must ensure that the mechanism can most efficiently fulfil its functions (as described above). The structure should also be easy to manage, and must be **sufficiently grassroots-oriented** to secure the essential national and local involvement. Focusing on results at the national level, the network(s) must ensure **broad, decentralized participation**, and have mechanisms in place which allow **efficient interaction** with and between global, regional and national stakeholders.

23. Based on the above, it is proposed that the network(s) is/are established as a managed coalition of interrelated entities that may be discrete or composite. In essence, it can be thought of as a group of interconnected stakeholders from all relevant domains -- including the private and public sectors, the academia and civil society -- , which share a common goal and are aggregated into a single cohesive entity. The network is thus seen as an organized structure that is playing a facilitating role, working with clusters of stakeholders, which themselves are interconnected with other clusters at various levels.

24. At the national level, where the impact and value addition of the network will be most relevant, its significance should go beyond the usual catchment constituency of national PGRFA programmes, for instance, in embracing a larger set of stakeholders. In practice, the global network’s (s) structure could allow it to interlink and strengthen existing organizations, and even other networks, operating at various levels. For instance, stakeholders and responsible personnel of in-country sites or areas where *in situ* conservation and on-farm management of PGRFA are taking place might constitute one component within a country. Several of these could coalesce and form a node of the network. At a higher order of complexity, the global network(s) would be the umbrella under which all these entities are brought together to form an overarching apex facility to champion and coordinate the implementation of the global agenda for *in situ* conservation and on-farm management of PGRFA.

25. The Global Network(s) would be inclusive, and likely to permit extensive coverage, commitment and support. Such an open structure would be adequate to fulfill the intended functions and the requirement for decentralization. This approach would likely also provide a more efficient and better coordinated way of operation, as it would build directly on already established coalitions of stakeholders at local, national and regional levels. It would also allow the

promotion and operation of individual networks within a larger connected whole. This approach would cater to the Commission's wish of improving and strengthening existing national and regional networks -- rather than creating novel structures. It is important to stress the fundamental role of national activities within the global network(s) as *in situ* and on-farm management takes place at local levels.

26. Irrespective of which organizational mechanism is eventually adopted, central to the concept of a global network is the imperative of building upon and strengthening current organizations, frameworks and networks, particularly at the national level. To the extent possible, the network(s) should therefore seek to operate through existing structures. In order to avoid overburdening the stakeholder base – and risk losing critical buy-in by small-scale stakeholders – it is important that new national and regional structures and mechanisms -- to support the global network -- are set up only to the extent they are essential for fostering requisite linkages. From the outset, the national constituents must recognize the value added in subscribing to this global endeavour. In this regard, it is critically important that the global network complements, strengthens and collaborates with, existing organizations, initiatives and networks. Ensuring that implementation of the global network(s) within a country has direct benefit to local communities, farmers, breeders and other national stakeholder will help underscore the value of the network(s) to national policy makers. It should be manifest from the network structure that it does not duplicate the functions of the grassroots entities and definitely does not compete with them for resources and/or relevance.

27. If a single network approach is to be adopted, it is essential that the global network is structured in a way that addresses the peculiarities of both *in situ* conservation and on-farm management of PGRFA. This would imply the need for more in-depth and deliberative considerations, albeit in the initial setting up phases. However, as administrative and coordinating units, two global networks are likely to have a number of components in common, and a global network is likely to be structured for each of them in much the same way. The need for tailored approaches for the two areas therefore does not prevent the networks from having a similar or, in fact, uniform structure. Indeed, there could even be two de facto global networks – for the respective domains – that are unified into one overall global mechanism. The underlying principles of inclusive structures would be relevant in both cases. In the end, the most compelling argument might hinge on how these two aspects of PGRFA management are organized within the countries: i.e. as stand-alone entities or conjoined into a single entity. If for instance, the global network will include existing networks, many of which address both *in situ* conservation and on-farm management together, a global network addressing both areas would be a preferable option as this would obviate the inefficiency of having essentially the same individuals participate in two separate networks which activities are implemented within the same organizational set ups in countries and/or regions. A common platform would also be essential if one of the aims is to increase collaboration and synergies between *in situ* conservation and on-farm management.

28. To be able to structure a network as outlined above, it is recommended, as a first step, to bring together the various stakeholders that are actively working on the relevant themes in order to constitute an initial "community of practice". Once global in coverage, the community of practice could establish itself as the initial global network. This "community of practice" could, for instance, serve as a common platform where information, lessons, tools and methodologies can be disseminated. To ensure a broad participation from different regions and countries, it is envisioned that the initial members of the "community of practice" are convened around one or several multi-stakeholder projects. The global network could remain at this initial stage for up to five years during which time its reputation would have become established and a critical mass of entities co-opted into its membership. Starting off on such an *ad hoc* basis is expected to be beneficial as it avails the network the flexibility of 'learning by doing' while at the same time being able to demonstrate its relevance and value.

Possible governance of the global network(s)

29. Governance refers to the processes for controlling, directing, or influencing the actions and conduct of affairs of the global network(s). Authority, decision making and the verification of performance are all attributes of governance, implying therefore that due consideration must be

accorded the articulation of this feature of the envisaged mechanism(s). In considering the establishment of a network, numerous governance options may be considered. Naturally, the foregoing considerations relating to the global network concept with decentralized operations must be factored into the deliberations pertaining to how this initiative's day-to-day operations would be administered. These will affect decisions on how the network's work-planning is conducted; how activities will be implemented and monitored; who has authority for what and for how long; etc.

30. For the success of any network, it is essential that it is created with the active participation of the stakeholders who are envisaged to contribute to, and benefit from, it. The functions and activities, structure, and governance would therefore need to be defined in a participatory process with all stakeholders involved, including governments, farmer, breeder and science organizations, the civil society and the private sector. This wide range of potential stakeholders presents both a challenge and an opportunity at the same time. If the network includes such a wide range of stakeholders as members, it might be important to clearly define the roles of the different stakeholders as well as the mechanisms through which they interact in the network, consult each other and take decisions.

31. 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 relevant to establish a **Facilitation Committee**. The mandate of this committee would include to convene the primer "community of practice", to draw up the work plan and coordinate and facilitate its activities. It is recommended that the Facilitation Committee consist of selected persons from some of the initial members of the "community of practice", as well as a few key resource persons from international organizations or research institutes. This would allow the initial network a close link with stakeholders at various levels.

Following the initial phase, it may be necessary to establish an administrative Secretariat, taking over from the Facilitation Committee. The Secretariat would be made responsible for the day-to-day operation of the network(s) in the long term, and its tasks would include:

- Coordinating network activities;
- Providing advice, expertise and access to appropriate methodologies and techniques;
- Promoting development of the scientific, socio-economic and policy context;
- Facilitating the involvement of partners and stakeholders;
- Promoting linkages between the network members;
- Preparing and facilitating network meetings;
- Producing documents, hard copy and web-based electronic;
- Helping leverage funding for activities;
- Administrating the network's assets, and
- Serving as the legal address of the network.

32. The criteria for selecting a permanent Secretariat need to be agreed upon among the members of the network (or initial "community of practice"), and may include the following examples:

- The hosting institution or organization has permanent scientific staff with expertise in the disciplines relevant to *in situ* and on-farm PGRFA conservation who could be assigned to the network.
- Dedicated time of administrative staff to the operation of the network can be provided.
- Necessary facilities and infrastructure to fulfil Secretariat's tasks, including office space, telephony, internet access and relevant information technology equipment can be provided.
- The hosting institution or organization has a track record of successful efforts aimed at advancing and facilitating *in situ* conservation and on-farm management of PGRFA.

In addition to staff expertise, the hosting institution has a profile capable of enlisting qualified experts to contribute to the network for *ad hoc* efforts and projects and as members of an advisory body to assist in network governance, thus augmenting the availability of science resources.

33. Once the permanent Secretariat is established, it should direct a thorough process of engaging existing organizations and stakeholders from all regions to fine-tune, further identify, and agree on the exact goals, functions and activities of the global network, as well as mechanisms for how stakeholders can collaborate most efficiently, benefit from, and be supported by the network.

34. In the long-term a Governing Body can be put in place to oversee the work of the global network(s) and ensure that it fulfils its functions. As is the norm in comparable mechanisms, the Governing Body should consist of a delegated representative or expert from participating entities– which may include countries (for instance through their national PGRFA programmes); relevant international organizations, mechanisms and processes; regional organizations and networks; etc.

35. It is recommended that the possible establishment of the Governing Body, its size, tenure, funding and precise terms of reference derive from the processes of the Commission.

36. For a common global network to be constituted, attending to both *in situ* conservation and on-farm management of PGRFA, care must be invested in ensuring that the full diversity of the stakeholders in these two themes are reflected in its governance structure. As opposed to an inclusive global network, the establishment of two separate networks would require individual governance mechanisms, i.e. two Governing bodies and two Secretariats. If this is the case, there will likely be some overlaps and redundancies – especially at country level, where the representatives to the two networks most probably will consist of many of the same people. This, again, supports the case for a single unified global network that may be anchored by two sub-communities, or a similar setup, to cater to the specificities of both domains. The establishment of one network will most likely require more secretariat staff than for each of the stand-alone networks but that number would still be less than the aggregate of two independent networks. Quite importantly also, a single overarching network would permit better synergistic linkages and, hence, coordination of activities between the two areas. Also, having two different Secretariats, possibly hosted by two different organizations, would imply that there is indeed no unifying mechanism for driving the management of PGRFA that are not held *ex situ*. This would imply that the international community would yet again need to invest efforts in instituting an all-embracing mechanism that can enhance collaboration and linkages within the PGRFA management domain.

Suggested immediate steps: Multi-stakeholder meeting towards establishing a global network

37. It is necessary to involve the widest spectrum of possible stakeholders from the outset in devising the modalities for establishing the proposed networking mechanism. Issues that need to be discussed and the most viable options with the widest stakeholder buy-in adopted include the functions and specific future activities, structure and governance of the networking mechanism. In this vein, it is important to consider what the concrete immediate steps will be that will engender the desired 'ownership' by the stakeholder base. One such step could be the holding of an informal multi-stakeholder dialogue, preferably convened by FAO at the request of the Commission. Subject to the availability of the necessary extra-budgetary funds, the meeting could be held prior to the next session of the Working Group. Such a dialogue would help to inform and shape the Commission's further work on this matter.

38. In order to identify the key entities whose participation in the informal multi-stakeholder dialogue would be critical, a survey (e.g. a desk audit) could be used to produce an updated inventory of practitioners to constitute the envisaged "community of practice". This survey could also be adapted to elicit information on crucial gaps in *in situ* conservation and on-farm management of PGRFA as a means to fine-tuning the functions of the network and defining its initial activities.

Financial implications of establishing the global network(s)

39. Costs for the establishment and running of the global network(s) will depend on the agreed functions and structure, as well as the scope of its interventions. For an initial phase of five years, where a "community of practice" is formed and delivering a specific set of tasks, it is expected that the network(s) will incur financial costs related to:

i. Preliminary work related to the establishment of a "community of practice" (see immediate steps above);
ii. Establishment and funding of the Facilitation Committee and a possible Secretariat;
iii. Initial activities, related to information compilation, standardization and dissemination, elaboration of knowledge tools and capacity building;
iv. Raising awareness of the importance of a global network for *in situ* conservation and on-farm management in relevant international events.

For the initial phase an extensive budget will not be required, and it is foreseen that project funding may be sufficient to cover the primary expenses.

40. The estimated budget for the initial two years, comprising staff and travel costs and the costs for convening a 3-day informal multi-stakeholder dialogue is the sum of three hundred and twenty-five thousand US dollars (US$ 325,000) for one network and approximately double this amount for two separate networks. The breakdown is presented below in *Table 1*. This budget excludes the travel and accommodation costs for participants from developing countries.

Table 1. Budget for the initial two years of a networking mechanism for *in situ* conservation and on-farm management of PGRFA

Items of Expenditure*		**Cost (US$)**		**Total (US$)**
		Year 1	Year 2	
Stakeholder dialogue	Direct Costs of the Meeting (interpretation, messengers)	35,000	0	35,000
	Document preparation	30,000	0	30,000
	Documentation (translation/printing)	50,000	0	50,000
Sub-total for meeting		**115,000**	0	115,000
Human resources (HR) as FAO in-kind contribution	P4 (30%)	60,000	60,000	120,000
	G4 (30%)	30,000	30,000	60,000
Sub-total for HR		**90,000**	**90,000**	**180,000**
Travel		15,000	15,000	30,000
Grand total		**220,000**	**105,000**	**325,000**

*The estimates are for one network; the estimate for two separate networks would be approximately double.

41. Following the initial phase, the annual running costs of a formally established global network will be related to:

i. Network activities (see full list of proposed activities in section "Potential Functions of the global network(s);
ii. Monitoring and evaluation
iii. Funding of the permanent Secretariat

The initial 5-year period is expected to demonstrate feasibility of, and added value for, the global network. This period will also be utilized in better defining more precisely the scope and activities of a long-term mechanism. A precise estimate for the expected annual running cost of an established network would therefore first be expected in the last 3 years of the first 5 years period.

42. Higher costs are to be expected, e.g. related to permanent staff, and a more extensive set of responsibilities, for a formally established global network. There would however be little point in establishing and implementing a permanent mechanism unless it was sustainable for the foreseeable future. It is therefore necessary to identify sustainable financial resources and mechanisms that could confer continued operation. Examples worth exploring include

i. Development of a resource mobilization strategy;
ii. Establishment of a legacy fund, particularly for supporting network interventions in developing countries; and
iii. Regional and global stakeholders contribute to the work of the global network by providing own funding for activities.

43. It is expected that the financial resources necessary to establish and run a single network will be slightly lower than the total for two separate networks. The main reasons for this include:

i. Lower investment in the preliminary phase, as the amount of travel and meetings can be combined and reduced;
ii. Lower operational costs of one Secretariat versus two (shared staff and/or administrative assistance, communication, infrastructure and equipment); and
iii. Implementation of activities and support can, in some cases, be combined (e.g. when the same stakeholders and/or countries are be involved in several initiatives).

With regard to resource-use, staff efficiency and implementation, a single network might therefore be a more efficient mechanism. Considering the prevalent limited resources available to *in situ* conservation and on-farm management of PGRFA, the development of a common global network may also signal a greater commitment to exploring cost-efficient solutions.

IV. CONCLUSIONS

44. There is an urgent need for concerted global attention on *in situ* conservation and on-farm management of PGRFA, as a necessary complement to *ex situ* conservation activities. The pervading fragmented conservation efforts threaten the availability of these resources, at a time when they are increasingly needed for crop improvement and for ensuring the stability of, and diversity in, agro-ecosystems as adaptive mechanisms to climate change and other drivers of food insecurity and malnutrition.

45. Considering the imperatives of increased awareness; enhanced coordination and collaboration; capacity building; development, validation and dissemination of information, tools and technologies; enhanced efficiencies and effectiveness; the pooling of resources; evidence-based prioritization; etc. in the areas of the *in situ* conservation and on-farm management of PGRFA, it is highly recommended that a global networking mechanism is established to cater specifically to these themes. The mechanism can be in the form of a common global network addressing both *in situ* conservation and on-farm management of PGRFA, or as two separate networks addressing each of the respective themes.

46. Based on the analysis provided in this concept note, it is concluded that a single global network, rather than two networks, may be the preferred alternative. *Table 2* provides a summary of the pros and cons for the two options according to the parameters specified in the request by the Commission, i.e. functions, structure, governance and financial implications. It must be recognized that *in situ* conservation of wild genetic resources and on-farm management of PGRFA have different targets, involve different stakeholders and require different approaches. It is therefore recommended that the global network carefully take these differences into account, and ensure that both aspects are reflected adequately in its functions and activities.

47. The establishment of a global network is a daunting endeavour that requires due deliberation, significant investments of resources, the buy-in of stakeholders and the agreement on a shared vision. The network, its governance structure, functions and work areas should therefore be developed with the active participation of these stakeholders. Towards this end, it is therefore recommended that a multi-stakeholder dialogue be convened to discuss the modalities for the establishment and operation of a global network *ab inicio*. It is envisaged that this dialogue will avail the interlocutors with the platform to suggest, discuss, fine-tune and agree on what the functions and activities, structure, governance and financing of the mechanism may be. Empaneling existing entities and networks into a global mechanism of shared goals can provide the logical starting point for building a global network.

48. Subject to the availability of necessary extra-budgetary funds, the Commission may wish to convene an informal stakeholder dialogue, preceding the next meeting of the Working Group, to consider the establishment of one or two networking mechanism(s) for *in situ* conservation and

on-farm management, including to provide a concrete and realistic action plan for the establishment and initial phase of the recommended global mechanism.

Table 2. Comparison of one common versus two separate global networks for *in situ* conservation and on-farm management of PGRFA

Parameters	Two Separate Networks	One Common Network
Functions	• The two conservation approaches have unique features; different targets, methods, significant percentage of the practitioners and require different approaches and are therefore better catered to separately.	• The one over-riding goal, to promote the conservation of PGRFA currently outside of the mandates of genebanks, is more conveniently addressed within a single framework. • The commonalities, i.e. overlaps that include important genetic resources in the wild/weedy/crop spectrum of plant species around farmers' fields, especially in centres of crop genetic diversity, between the two themes are better leveraged cohesively within one network. • A single network would be more efficient in supporting initiatives spanning the entire PGRFA management continuum (conservation and use) and thereby foster greater linkages between the conservationists on one hand and plant breeders and farmers, on the other. • One network, rather than two, would be more efficient in coordinating its work with related conventions, policy instruments, and initiatives.
Structure	• Two separate networks respond better to the need for tailored approaches for each of the two areas	• Greater in-depth and deliberative considerations, especially in the initial phases, are needed to ensure that the peculiarities of both approaches are reflected and attended to adequately in organizational arrangements • Two global networks – for the respective domains – can be unified into one overall global mechanism thereby achieving efficiency at the apex. • As administrative and coordinating units, two global networks are likely to have a number of components in common which may become redundant.
Governance	• There will be two apex bodies, i.e. two Governing bodies and two Secretariats, for the respective networks with the possibilities for some overlaps and redundancies – especially at country level, where the representatives to the two networks will most probably be largely the same people • The existence of two different Secretariats, possibly hosted by two different organizations,	• Care must be taken to ensure that the apex body reflects the full diversity of the stakeholders in these two themes • One network may require more secretariat staff than for each of the respective networks but that number would still be less than the sum of staff for two independent networks

	would defeat the purpose for the global network as this would imply that there is indeed no unifying mechanism for driving the management of PGRFA that are not held *ex situ*	
Financial implication		One network would cost significantly less, possibly as low as 50%.