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**COMMISSION ON GENETIC RESOURCES  
FOR FOOD AND AGRICULTURE  
ACTING AS  
INTERIM COMMITTEE FOR THE INTERNATIONAL TREATY  
ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

**POLICY AND CRITERIA FOR THE FUNDING STRATEGY FOR THE  
IMPLEMENTATION OF THE INTERNATIONAL TREATY ON PLANT  
GENETIC RESOURCES FOR FOOD AND AGRICULTURE**

by

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This document was prepared at the request of the Secretariat of the Commission on Genetic Resources for Food and Agriculture acting as Interim Committee for the International Treaty on Plant Genetic Resources for Food and Agriculture, and under the guidance of the Seed and Plant Genetic Resources Service of the Plant Production and Protection Division, in order to provide background information on policy and criteria for the Funding Strategy for the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture.

The content of this document is entirely the responsibility of the authors, and does not necessarily represent the views of the FAO, or its Members.

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### Summary

The International Treaty on Plant Genetic Resources for Food and Agriculture (hereinafter referred to as the “Treaty”) provides for the establishment of a Funding Strategy, “to enhance the availability, transparency, efficiency and effectiveness of the provision of financial resources to implement activities under this Treaty” (Art. 18.2).

The FAO Commission on Genetic Resources for Food and Agriculture (CGRFA), in its second meeting acting as Interim Committee for the Treaty, in November 2004, noted the need for further analysis of the issues relating to the Funding Strategy, and requested the Secretariat to conduct a study on the nature, criteria and possible contents of the Funding Strategy. This background study contributes to the response to this request.

The objectives of this background study are to provide an analysis of the issues surrounding the establishment of the Funding Strategy, in particular regarding relevant policy, priority setting and funding criteria, and to set out recommendations for the consideration of the Governing Body of the Treaty.

Based on an analysis of the relevant Treaty provisions, three categories of funds relevant to the Funding Strategy can be distinguished, each requiring different policy, priority setting and funding criteria:

- funds stemming from sharing monetary benefits of commercialization of plant genetic resources for food and agriculture included in the Treaty’s Multilateral System for Access and Benefit-Sharing, under the direct control of the Governing Body,
- other funds under the direct control of the Governing Body, and
- funds not under the control of the Governing Body.

The following factors can be taken into account in establishing policy and criteria for the Funding Strategy. General factors include transparency; effectiveness and efficiency; complementarity of *ex situ* and *in situ* approaches; time frame of activities; and project size. PGRFA-specific factors include crop relevance; geographic scope; objectives of activities; location of activities; access and benefit-sharing; identity of beneficiaries; extent of collaboration; eligibility of implementing institutions; relationships with other funding agencies and other funding channels; and the relation between monetary and non-monetary benefit-sharing.

In establishing priorities, various perspectives can be taken into account. Based on the Treaty, the following four major perspectives are proposed in setting priorities, i.e. the status of the available funds; the crop concerned; the types of activities; and targeted beneficiaries. For each of these major perspectives, the provisions of the Treaty provide clear guidance. In addition, considerations from a technical perspective have been included to facilitate the priority setting process. Furthermore, the relevance of guidelines and standards for project implementation is discussed.

A number of recommendations for the establishment of priorities have been formulated, distinguishing between the three identified fund categories, and bearing on *ex situ* conservation, *in situ* conservation and management, the promotion of utilization, as well as policies and capacity building. These recommendations are complemented by a set of suggested funding criteria and priorities.

The final chapter of this study briefly reiterates roles of the Governing Body, as well as decisions to be made by the Governing Body in its first meeting, and some follow-up activities. The establishment of a technical working group for the implementation of the Funding Strategy is suggested for consideration by the Governing Body.

## 1. Background

The International Treaty on Plant Genetic Resources for Food and Agriculture (hereinafter referred to as the “Treaty”) provides for the establishment of a Funding Strategy, “to enhance the availability, transparency, efficiency and effectiveness of the provision of financial resources to implement activities under this Treaty” (Art. 18.2). The Governing Body is “to adopt, at its first session, [...] the Funding Strategy for the implementation of the Treaty, in accordance with the provisions of Article 18” (Art. 19.3c).

The FAO Commission on Genetic Resources for Food and Agriculture (CGRFA), in its second meeting acting as Interim Committee for the Treaty, held in November 2004, considered the document *Preparation for Consideration by the Governing Body of the Funding Strategy for the Treaty*<sup>2</sup>. It noted the need for further analysis of the issues relating to the Funding Strategy, and requested the Secretariat to conduct a study on the nature, criteria and possible contents of the Funding Strategy for the International Treaty<sup>3</sup>. The First Meeting of the Open-Ended Working Group on the Rules of Procedure and the Financial Rules of the Governing Body, Compliance, and the Funding Strategy, held in Rome on 14 – 17 December 2005, adopted a revised draft Resolution and a draft Funding Strategy to be submitted to the Governing Body for consideration at its first session<sup>4</sup>. The Open-ended Working Group further requested the Interim Secretariat to provide information to the first session of the Governing Body on how it might set priorities for the use of resources under the Funding Strategy<sup>5</sup>. It also discussed, but did not adopt, a provisional list of Priorities for the Use of Resources under the Funding Strategy<sup>6</sup>, that largely reflects the priority areas of the Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture<sup>7</sup>.

This background study<sup>8</sup> contributes to answering the request of the Interim Committee. The objectives of this background study are

- to provide an analysis of the policies, including priority setting and funding criteria for the use of different types of funds under the Funding Strategy for the implementation of the Treaty, and
- to make recommendations to the Governing Body of the Treaty with regard to these issues.

To that end this study re-examines relevant articles of the Treaty dealing with the Funding Strategy and/or its elements.

This study only focuses on the sort of activities that the Funding Strategy may address. Issues related to mobilizing funds are addressed in Background Study Paper 29 by Johnston, entitled “Report on the types of funding and assistance and institutions with relevant mandates to the Funding Strategy of the International Treaty on Plant Genetic Resources for Food and Agriculture” and in the process of the development of the Standard Material Transfer Agreement. Non-monetary contributions to the implementation of the Treaty are addressed in Background Study Paper 30 by Visser *et al.*, entitled “Options for Non-Monetary Benefit Sharing – an inventory”<sup>9</sup>.

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<sup>2</sup> CGRFA/MIC-2/04/4.

<sup>3</sup> CGRFA/MIC-02/04/REP, para.17.

<sup>4</sup> CGRFA/IC/OWG-1/05/REP, Appendix F.

<sup>5</sup> CGRFA/IC/OWG-1/05/REP, para.22.

<sup>6</sup> CGRFA/IC/OWG-1/05/REP, Appendix F, Provisional Annex I.

<sup>7</sup> See <http://www.fao.org/WAICENT/FAOINFO/AGRICULT/AGP/AGPS/GpaEN/gpatoc.htm>

<sup>8</sup> This study has been performed at the request of the Secretariat of the Commission for Genetic Resources for Food and Agriculture (CGRFA) and the Seed and Plant Genetic Resources Service (AGPS) of the UN Food and Agriculture Organisation (FAO), and has been funded by the Netherlands Ministry of Agriculture, Nature and Food Quality through its research programme on International Cooperation.

<sup>9</sup> Background Study Papers can be found at <http://www.fao.org/ag/cgrfa/docs.htm#bsp>

## 2. Review of the purpose and objectives of the Funding Strategy

### 2.1 General remarks

The Funding Strategy is an essential part of the Treaty. Its purpose is to provide guidelines and procedures for the acquisition and use of funds for the implementation of the Treaty. In particular, the Funding Strategy of the Treaty will have to enhance the availability, transparency, efficiency and effectiveness of the provision of its financial resources. It addresses resources directly under the control of the Governing Body, held in “as needed, an appropriate mechanism, such as a Trust Account”; Art. 19.3(f), and funds not directly under the Governing Body’s control, the allocation of which the Treaty and its Contracting Parties may influence. The Funding Strategy may provide guidance on resources allocated by Contracting Parties for national activities, and on funds mobilized at the regional and international level. In this connection, Article 7.2(d) of the Treaty provides that international cooperation shall, in particular, be directed, *inter alia*, to implementing the Funding Strategy of Article 18.

The Treaty is supported by the Global Plan of Action, by *ex situ* collections held by the International Agricultural Research Centres of the Consultative Group on International Agricultural Research (CGIAR) and other international institutions, by international plant genetic resources networks, and by the Global Information System on Plant Genetic Resources for Food and Agriculture (PGRFA). Given the relevance of these supporting components to the implementation of the Treaty, as well as the Global Crop Diversity Trust, coherence between the deployment of these supporting components and the objectives of the Funding Strategy is crucially important.

In summary, the Funding Strategy has wide significance, surpassing the acquisition and use of funds through the Treaty’s account, and providing advice and guidance on all activities related to the conservation and use of PGRFA and the benefit-sharing arising out of their use.

### 2.2 Relevant articles in the Treaty that explicitly relate to the Funding Strategy

A number of articles provide direct guidance to the policy, priority setting and establishment of criteria under the Funding Strategy.

- Part VI of the Treaty contains the financial provisions in its Article 18 on Financial Resources. This article describes major obligations on the Contracting Parties and some on the Governing Body and other stakeholders. Article 18.1 stipulates that Contracting Parties undertake to implement a funding strategy, and Article 18.2 specifies its objectives “to enhance the availability, transparency, efficiency and effectiveness of the provision of financial resources to implement activities under this Treaty”. Article 18.3 and 18.4 deal with the mobilization of funds through the Governing Body or in other ways, and with the periodical establishment of a target for funding, and determines that financial benefits arising from Article 13.2(d) are part of the funding strategy. Article 18.4 also contains some provisions for the use of funds by Contracting Parties, i.e. to provide financial resources for national activities for the conservation and use of PGRFA, as well as for developing countries and countries with economies in transition to ensure due priority and attention to effective resource allocation and building capacity in PGRFA in their own plans and programmes..
- Article 18.5 provides guidance as to the beneficiaries of the Funding Strategy, in that “priority will be given to the implementation of agreed plans and programmes for farmers in developing countries, especially in least developed countries, and countries with economies in transition, who conserve and sustainably utilize PGRFA”.
- Article 19.3 specifies that the Governing Body is “to adopt, at its first session, and periodically review the funding strategy for the implementation of this Treaty, ...”; “to establish, as needed, an appropriate mechanism, such as a Trust Account, for receiving and utilizing financial resources [...] for purposes of implementing this Treaty”; “to establish and maintain

cooperation with other relevant international organizations and treaty bodies [...] including their participation in the funding strategy”; and “to consider modalities of a strategy to encourage voluntary contributions, in particular, with reference to Articles 13 and 18”.

- In Part IV of the Treaty, dealing with the Multilateral System of Access and Benefit-Sharing (MLS), Article 13.2(d) provides for payments of “an equitable share of the benefits arising from the commercialization” of certain products to the mechanism referred to in Article 19.3(f). Article 13.3 notes that “benefits arising from the use of PGRFA that are shared under the MLS should flow primarily, directly and indirectly, to farmers in all countries, especially in developing countries, and countries with economies in transition, who conserve and sustainably utilize PGRFA”. Article 13.4 refers to specific assistance for the conservation of PGRFA in developing countries, or countries with economies in transition, whose contribution to the diversity of PGRFA in the MLS is significant and/or which have special needs. Article 13.5 recognizes that “the ability to fully implement the Global Plan of Action, in particular of developing countries and countries with economies in transition, will depend largely upon the effective implementation of this Article and of the funding strategy as provided in Article 18.”

### 2.3 Analysis of the Treaty with respect to different categories of funds

Based on the above articles of the Treaty, two major distinctions between funds under the Funding Strategy can be made, resulting in three funding categories. These distinctions bear directly on the policy, priority setting and criteria for the Funding Strategy.

In the first place, the monetary benefits referred to in Article 13.2(d) as mandatory or voluntary payments, any voluntary contributions of funds under Article 13.6, and any funds donated to the Governing Body under Article 18.4(c) or (f), are under the direct control of the Governing Body. Consequently, the Governing Body is responsible for managing such funds.

Other funds are not under the direct control of the Governing Body, i.e. funds referred to in Article 18.4(a) relating to international mechanisms, funds and bodies, funds referred to in Article 18.4 (b), (c), (d) and (f) relating to national, bilateral and regional channels, and multilateral channels besides the Governing Body. The Governing Body may wish to provide advice to the parties involved regarding the level of funding, and the policies and funding criteria concerning their allocation.

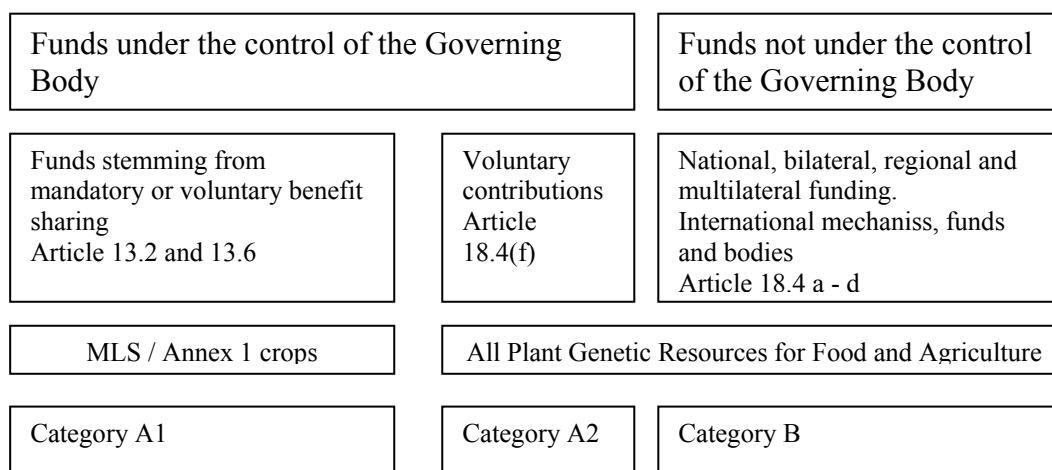
A second major distinction can be made between funds that stem from the benefit-sharing provisions of the MLS referred to in Article 13, and other funds provided under Article 18(a), (b), (c), (d) and (f) .

This leaves us with three categories, each requiring different policy, priority setting and funding criteria:

- funds stemming from sharing of benefits of commercialization, under the direct control of the Governing Body (category A1)
- other funds under the direct control of the Governing Body (category A2)
- funds not under the control of the Governing Body (category B).

For ease of identification elsewhere in the text, these categories will also be indicated according to the category numbering introduced above, i.e. as categories A1, A2, and B.

The policy and criteria for the use of these three categories of funds may differ significantly. This will be dealt with in the next section.

**Figure 1. Schematic presentation of the three categories of funds under the Funding Strategy**

## 2.4 Articles referring to the scope and potential areas of activities of the Funding Strategy

The articles of the Treaty listed below, in defining the rights and obligations of the Contracting Parties to the Treaty and other stakeholders, implicitly define the area of activities that the Funding Strategy will encompass. These articles also guide the setting of priorities and the establishment of criteria for assistance under the Funding Strategy.

- Articles 5 and 6 define the scope of activities that Contracting Parties shall undertake in order to contribute to the objectives of the Treaty. The activities listed in Article 5 include the exploration, collection, regeneration, characterization, evaluation, documentation and conservation of PGRFA. Article 6 focuses on sustainable use and includes policy development, strengthening research, promoting plant breeding, genetic base broadening, promoting the use of neglected and underutilized crops, supporting on-farm management, and reviewing breeding strategies and seed regulations.
- Articles 7 and 8 consider the need for integration of the above activities in the national agricultural and rural development policies and programmes of Contracting Parties, as well as the need for cooperation among Contracting Parties, including by providing technical assistance. Thus, they define potential additional activities to be considered for assistance under the Funding Strategy (i.e. integrative efforts) and suggest criteria by which requests can be evaluated (the extent of cooperation).
- Article 9 specifies that Contracting Parties should “as appropriate, [...] take measures to protect and promote Farmers’ Rights”, including the protection of traditional knowledge, the right to equitably participate in sharing benefits arising from the utilization of PGRFA, and the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of PGRFA. As in the case of Articles 7 and 8, this article provides guidance on additional activities that may fall under the scope of the Funding Strategy and on criteria for evaluating proposals. It affirms that “the responsibility for realizing Farmers’ Rights, as they relate to plant genetic resources for food and agriculture, rests with national governments”.
- Article 12 deals with facilitated access under the MLS. Where it places obligations on the Contracting Parties and other stakeholders, these can be regarded as conditions that –where relevant – need to be fulfilled in order for a country or a stakeholder to qualify for specific assistance under the Funding Strategy as provided in Article 13.4.
- Article 13 deals with benefit-sharing in the MLS. The article defines the instruments by which benefits are to be shared under the MLS, i.e. exchange of information, access to and transfer of technology, capacity building and sharing of monetary and other benefits arising from commercialisation. Furthermore, it defines when monetary benefits are to be shared, and to



whom benefits should flow. It also refers to the implementation of the Global Plan of Action, thereby indicating that activities that address the priority activity areas of the Global Plan of Action should potentially qualify for assistance through the Funding Strategy.

- Articles 14 to 17 refer to the supporting components that contribute to the implementation of the Treaty and are therefore relevant to the Funding Strategy. The first Global Plan of Action comprises twenty priority activity areas, in four main groups covering *in situ* conservation and development, *ex situ* conservation, plant genetic resources utilization, and institutions and capacity-building. It was adopted by 150 countries in 1996. The CGRFA is preparing the second *Report on the State of the World's PGRFA* (identified in Art. 17.3), in order to facilitate the updating of the rolling Global Plan of Action. As noted above, the other supporting components are the *ex situ* collections of PGRFA held by the CGIAR and other international institutions, international plant genetic resources networks, and the Global Information System on PGRFA. These Articles provide activity areas that may qualify for assistance from the Funding Strategy, as well as guidance on setting priorities.

### 3. Factors to be taken into account in establishing policy and criteria for the Funding Strategy

This chapter distinguishes between factors that apply to the establishment and implementation of the Funding Strategy at different levels. It distinguishes general policy elements that can be considered as part of any funding strategy regarding PGRFA, or indeed of wider activity areas. Factors are taken from the text of the Treaty with special reference to good governance policies currently adopted by major donor agencies, and the basic goals and objectives of the Treaty and the Global Plan of Action. It continues with listing factors relevant for all funds regarding the conservation and utilization of PGRFA, whether under the control or not under the control of the Governing Body. Two remaining sets of factors deal with funds under the direct control of the Governing Body in general and those stemming from sharing of monetary benefits of commercialization under the MLS in particular. These factors are partly not referred to in the earlier sections of this paper, and partly specifications of factors mentioned in the earlier sections.

Each additional set of factors further defines the scope and implementation modes of the Funding Strategy.

#### 3.1 General policy elements

General policy elements apply to all components of the Funding Strategy and all three categories of funds. They may provide leading principles for the use of funds under the control of the Governing Body, and may serve as guidance for other parties that intend to contribute to the implementation of the Treaty.

*Effectiveness and efficiency.* Effectiveness is a measure of the net results of the Funding Strategy or any of the supported projects regarding conservation and promoting the utilization of PGRFA, whereas efficiency is a measure of the cost/benefit ratio, off-setting the experienced benefits or results against the costs to develop and maintain the Funding Strategy, e.g., to support a particular project. To measure effectiveness and efficiency it is necessary to agree on project indicators for measuring progress, and on milestones by way of pre-set reference, and to regularly monitor project implementation and evaluate project results and impact. In addition, well-defined indicators measuring progress in the implementation of the Funding Strategy as a whole may be needed.

In relation to effectiveness, the supported activities should result in sustainable capacity, be it material or human capacity, and stakeholders should be willing and able to guarantee such sustainability after completion of the project. Unnecessary duplication of efforts, a widespread phenomenon in the genetic resources domain, should not be supported.

*Transparency.* The transparency of policy development, of the priority setting process, and of the development and use of funding criteria is especially important since the Funding Strategy is relevant to a large number of divergent stakeholders with different values, perspectives and expectations, and divergent means to follow and assess the implementation of the Funding Strategy. In this respect, it is not only the quality of the policies, but also the communication about these policies that determines the transparency of the Funding Strategy. Transparency will be important to encourage voluntary contribution to the Funding Strategy.

*Time frame of activities.* Many activities concerning the conservation of PGRFA and the promotion of their use require long-term objectives and often call for relatively long time frames to produce results, when compared with other types of activities, in particular when the activities supported involve a change in the behaviour of stakeholders. However, it should be realized that the time scale of different project activities may vary, and this can be turned into an advantage in building a project portfolio consisting of projects with impacts realized in the short term as well as in the long term.

*Project size.* The project size should take into account the type of activities, the optimal duration of supported projects, and the number of partners required. Flexibility of project size may be important. However, at a fixed fund budget a preference for projects encompassing a larger number of collaborating partners would inevitably result in a smaller number of larger projects.

### 3.2 Factors of relevance to the entire Funding Strategy

The factors mentioned in this section bear on the entire Funding Strategy. They are relevant not only for funds under the control of the Governing Body, but may also be taken into account by other parties that intend to contribute to the implementation of the Treaty, and by Contracting Parties that develop their own programmes at the national level.

*Conservation.* Article 5 of the Treaty and the first eight priority activity areas of the Global Plan of Action can be taken as reference for activities that support the implementation of the Treaty in the field of conservation. In this context, undertaking new surveys and collecting missions may no longer be relevant for major staple crops, such as cereals and potato, unless for filling in specific gaps<sup>10</sup> [Art. 5.1(a) and (b)], but could be more meaningful for other crop and forage species. Improving the viability and securing the genetic integrity of existing collections may qualify as a major activity, in the light of levels of genetic erosion in genebanks reported in the first Report on the State of the World's PGRFA<sup>11</sup> and off-set against the high investments made to build these collections [Art. 5.1(f)]. On-farm management of PGRFA, complementary to *ex situ* conservation, is more relevant in production systems where considerable genetic diversity of one or more crops exists and where prolonged and sustainable management of the crop gene pool can be expected or facilitated [Article 5.1(c)]. In the same vein, the conservation of wild crop relatives and wild plants for food production by local and indigenous communities depends on the sustainability of the use by these communities [Article 5.1(d)].

The Global Plan of Action provides detailed guidance in its priorities 1 – 4 on *In situ* conservation and development and its priorities 5 – 8 regarding *ex situ* conservation. Other supporting components, such as the *ex situ* collections held by international institutions (Article 15), international plant genetic resources networks (Article 16) and the Global Information System on PGRFA (Article 17) contribute to and complement the priorities in Article 5 of the Treaty.

*Complementarity of ex situ and in situ approaches.* The Treaty, as well as the Global Plan of Action, takes the view that *ex situ* and *in situ* approaches are complementary, and that no *a priori* preference to

<sup>10</sup> Fowler C, and T Hodgkin. 2004. Plant genetic resources for food and agriculture: Assessing global availability. *Ann Rev Environm Res* 29: 143-179

<sup>11</sup> The State of the world's plant genetic resources for food and agriculture. 1998. FAO, Rome, Italy.

either of these approaches is warranted. The optimal balance and interaction between these approaches has yet to be established.

*Sustainable use.* Article 6 of the Treaty describes activities contributing to sustainable use of plant genetic resources. In order to promote sustainable use, this Article refers explicitly to the need to develop and maintain appropriate policy and legal measures [Art. 6.1] and to review regulations concerning variety release and seed distribution [Art. 6.2(g)]. Strengthening research that maximizes intra- and inter-specific variation, and promoting breeding efforts resulting in well-adapted varieties, is mentioned in Article 6.2(b) and (c). Additional activities encompass promoting sustainable use including promotion of diverse farming systems [Art. 6.2(a)], genetic base broadening efforts [Art. 6.2(d)], and promoting the use of neglected and underutilized crops and varieties [Art. 6.2(e)], often of regional importance, but regularly providing major elements of the human diet. Article 6.2(f) summarizes some of these activities and links them to on-farm management, conservation and sustainable use.

Furthermore, detailed guidance is again offered by the Global Plan of Action in its priorities 9 – 14 regarding the Utilization of Plant Genetic Resources, and the other supporting components listed in Part V of the Treaty, may also contribute to the sustainable use of PGRFA.

*Crop relevance.* Crops have different relevance for global or regional food security in terms of calorie intake, and contribute to the quality of the human diet to varying extents. In addition, project proposals may cover qualitatively or quantitatively different sections of crop gene pools. Furthermore, the status of conservation and the level of utilization differ substantially between crops, so the threat of genetic erosion differs for different types of germplasm. Whereas the crops covered by the MLS are listed in Annex I, the Treaty itself concerns the conservation and sustainable use of all PGRFA, and thus the Funding Strategy must address all PGRFA, and not be restricted to the crops listed in Annex I.

*Geographic scope.* Crops differ in significance in different regions. Some crops are only cultivated in a single region or sub region, and are only significant in that particular (sub)region, whereas other crops have global importance. If a crop is limited to a particular (sub)region, this should not mean that activities concerning that crop cannot be considered for assistance or receive low priority only, since other factors may strongly suggest support for it, e.g. the relatively high (quantitative or qualitative) importance of that crop for food security in the (sub)region, or the immediate threat of loss of crop diversity. Many neglected and underutilized crops belong to this category. In addition, some crops are mainly of importance to agriculture in developed countries (e.g., *Fragaria*, *Pyrus*, *Secale*), whereas other crops occur in particular in developing countries, or countries with economies in transition (e.g. *Musa*, *Manihot*, *Vigna*).

*Extent of collaboration.* The Treaty refers explicitly to the relevance of international collaboration in many articles, notably in Articles 5.1(e), 7 and 8. More importantly, the Multilateral System described in Part IV, and the Supporting Components described in Part V both imply close collaboration. Specifically, the Treaty refers to the potential role of networks in general in Article 16, and to establishing access to and transfer of technology in the framework of the MLS [Art. 13.2(b)]. Article 16 refers to the role that governmental, private, non-governmental, research, breeding and other institutions may play in international networks. Plans and programmes submitted for funding may be evaluated for the extent to which these enhance cooperation between different stakeholders of different countries, and the extent to which new forms and consortia are forged. It is assumed that the larger the number of stakeholders and countries involved the larger the impact of such plans and programmes may potentially become. In the vein of the International Treaty, multilateral collaboration might preferably be promoted over bilateral collaboration. The development and adoption of the rolling Global Plan of Action and the international role of the *ex situ* collections of PGRFA held by the IARCs, included in Articles 14 and 15 of the Treaty, provide additional proof and reference for the added value of multilateral approaches.

*Beneficiaries.* Article 18.5 provides guidance as to the beneficiaries of the Funding Strategy, in that priority will be given to the implementation of agreed plans and programmes for farmers in developing countries, especially in least developed countries, and countries with economies in transition, who conserve and sustainably utilize PGRFA. In addition, Article 9.2(c) of the Treaty calls for the right of farmers to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of PGRFA, a right that national governments may find appropriate to recognize.

*Coherence among various funding agencies and funding channels.* It is realistic to assume that the budgets not under the control of the Governing Body will at least initially exceed the funds under its direct control. To assist decision-making in the allocation of funds not under the direct control of the Governing Body, the Governing Body may develop funding policies that can act as models for other agencies and that demonstrate their effectiveness through successful project examples. In its relationships with other bodies it may also solicit support from such bodies. It should develop collaboration with other bodies as specified in Article 19.3(g). In this context it is important to note that the Global Crop Diversity Trust, whose objective it is to contribute to *ex situ* conservation of PGRFA, seeks guidance from the Governing Body in developing and implementing its own strategies.

*Monetary and non-monetary benefit-sharing.* The fair and equitable sharing of the benefits arising out of the use of PGRFA is one of the objectives of the Treaty. Therefore, this issue conditions the entire Funding Strategy. In developing the Funding Strategy, complementarity between monetary and non-monetary benefit-sharing should be taken into account. For a balanced use of available means, policies should accommodate and value both monetary and non-monetary benefit-sharing activities.

*Relationship with the Millennium Development Goals.* In developing its policy, the Governing Body needs to clarify the importance of conservation and sustainable use of PGRFA for the achievement of the Millennium Development Goals, in particular Goals 1 and 7, on eradicating extreme poverty and hunger, and on ensuring environmental sustainability, respectively. This will help other organisations and funding mechanisms to understand the role and importance of the Funding Strategy and the implementation of the Treaty.

### **3.3 Specific factors relating to funds under the direct control of the Governing Body.**

For the funds under the direct control of the Governing Body, i.e. categories A1 and A2, the articles of the Treaty bearing on the Funding Strategy can be taken as direct guidance, in addition to the more general factors discussed in the previous two sections.

*Access and benefit-sharing.* As a general policy, it seems reasonable that efforts financially supported under the Funding Strategy should result in the conservation of PGRFA for which availability can be guaranteed to any user under the conditions of the standard MTA that will be adopted by the Governing Body, or under similar conditions of facilitated access, as far as crops not listed in Annex I are concerned. In addition, available documentation on the associated information regarding such PGRFA should be readily accessible, if possible through the internet. Conditions for sharing benefits, in line with the provisions of the Treaty, may be set by project partners in providing access to third parties for materials covered by projects supported by the Funding Strategy, which do not belong to the crops listed in Annex I.

*Location of the activities.* Article 18.5 notes that “priority will be given to the implementation of agreed plans and programmes for farmers in developing countries, especially in least developed countries, and in countries with economies in transition, who conserve and sustainably utilize plant genetic resources for food and agriculture”. Certain provisions refer to the involvement of farmers, particularly in developing countries, in plant breeding activities (Article 6.2(c)); to on-farm management of existing diversity (Article 6.2(f)); or to the plans and programmes of developing countries to build their capacity in PGRFA (Article 18.4(b)). All of these imply priority for certain

locations for the activities referred to, in developing countries or countries with economies in transition.

*Eligibility of implementing institutions.* The location and nationality of institutions soliciting support under the Funding Strategy, as far as this concerns funds under the direct control of the Governing Body, can be regarded as relevant in relation to the question whether the country involved is a Contracting Party to the Treaty. If an institution soliciting support under the Funding Strategy is not located in a Contracting Party to the Treaty, it should be required to provide government-backed guarantees on access and benefit-sharing in line with the provisions of the Treaty.

### **3.4 Additional factors relating to funds stemming from the sharing of monetary benefits of commercialization under the Multilateral System**

The sharing of monetary benefits of commercialization under the Treaty (category A1) might be limited, at least initially, because it will usually take several years to develop new products from the genetic resources obtained under the MLS. However, the guidance provided by the Treaty for this category of funds is most specific.

*Access and benefit-sharing.* Since this category of funds concerns moneys that are provided in the framework of the MLS, any activity supported from these funds should involve facilitated access to the germplasm and or associated information supported, developed under such funding, in agreement with the access provisions contained in Article 12 of the Treaty. Similarly, when benefits are created through project activities supported by this category of funds, they should be shared under the conditions of the MLS, as specified in Article 13, through the exchange of information, access to and transfer of technology, capacity building, and sharing the monetary and other benefits of commercialization.

*Beneficiaries.* Part IV of the Treaty on the MLS contains specific text on the beneficiaries of the MLS. Article 13.3 notes that “Contracting Parties agree that benefits arising from the use of PGRFA that are shared under the MLS should flow primarily, directly and indirectly, to farmers in all countries, especially in developing countries, and countries with economies in transition, who conserve and sustainably utilize PGRFA”. Article 13.4 specifies that the Governing Body shall consider “specific assistance under the agreed Funding Strategy established under Article 18, for the conservation of PGRFA in developing countries, or countries with economies in transition, whose contribution to the diversity of PGRFA in the MLS is significant and/or which have special needs”.

*Location of the activities.* Some additional guidance is provided as to the location of certain benefit-sharing activities. Article 13.2(c) on capacity building in the framework of benefit-sharing states that scientific research should be carried out “preferably, and where possible, in developing countries and countries in transition, in cooperation with institutions of such countries...”

*Eligibility of implementing institutions.* The provision of Article 11.4, specifying that - at the discretion of the Governing Body - facilitated access may in future be linked to contribution of PGRFA by natural or legal persons to the MLS, may bear similarly on the question of whether institutions soliciting support from the funds stemming from benefit-sharing under the MLS would qualify for such support. In other words, in order to be eligible, candidate institutions may be required to provide germplasm to the MLS, whether stemming from projects for which funding is solicited, or otherwise.

**Figure 2: Representation of the policy elements, priorities and funding criteria that guide different types of funds**

Funds not under the control of the Governing Body (cat B)		Specific factors	Factors relevant for the entire Funding Strategy	General policy elements
Funds under Article 18 under the control of the Governing Body (cat A2)				
Funds arising from benefit sharing, Art.13 (cat A1)	Additional factors			

### 3.5 The relation with the Global Crop Diversity Trust

The Global Crop Diversity Trust has been established to operate as an element of the Treaty's Funding Strategy, to contribute to the long-term conservation and availability of the world's PGRFA by providing funding for the sustainable maintenance of *ex situ* collections holding distinct germplasm, and updating management practices to allow such sustained maintenance.

Although the Global Crop Diversity Trust will manage funds that are not under the control of the Governing Body, it will operate in accordance with the overall policy guidance to be provided by the Governing Body in ensuring an effective and efficient use of its available funds. Therefore, the development as well as the implementation of the Funding Strategy should take into account the activities of the Global Crop Diversity Trust, keeping in mind the scope of the Trust's activities, which are focussed on *ex situ* conservation.

### 3.6 Relation with the Facilitating Mechanism for implementation of the Global Plan of Action

The Global Plan of Action presents a plan to conserve PGRFA and to promote its use. The Commission on Genetic Resources for Food and Agriculture requested FAO to establish a Facilitating Mechanism, in partnership with other relevant international organizations, to facilitate its implementation. In 2004, the Commission adopted the objective, operational principles, activities and operational structure of the Facilitating Mechanism. The Treaty clearly recognizes the importance of the Global Plan of Action (Article 14) and calls for its effective implementation, implying that activities undertaken in the framework of the Facilitating Mechanism and of the Funding Strategy of the Treaty should provide a coherent approach. Close consultation in developing the Facilitating Mechanism and the Funding Strategy appears warranted.

## 4. Perspectives and areas of work that may qualify for assistance under the Funding Strategy

### 4.1 General remarks

Different perspectives in establishing priorities can be taken, related to the factors discussed in the previous chapter. Each of them may result in a different set of priorities. Together, these perspectives would create a multi-dimensional set of priorities, since all of them relate to and interact with the

others. A working hierarchy of these perspectives in the form of a one-dimensional set of perspectives is presented below, as an overview.

As the first major perspective, the status of the funding source is chosen. In its provisions, the Treaty - in describing its Funding Strategy in Article 18 - clearly distinguishes between funds under its direct control and funds that are not. In addition, within the category of funds under its direct control a distinction is made between funds stemming from mandatory and voluntary sharing of monetary benefits of commercialization [Article 13.2(d) and 13.6], and voluntary contributions in general [Article 18.4(e) and (f)]. Below we will map the other perspectives onto this first perspective.

As the second major perspective, the crop perspective is chosen. This appears to be justified by the fact that the Treaty distinguishes between crops listed in Annex I, whose gene pools form the MLS and for which the Treaty contains specific provisions, and other crops, that fall under the general provisions of the Treaty.

As the third major perspective, the types of activities proposed for support under the Funding Strategy have been selected. This choice is motivated by the fact that the Treaty provides a high level of detail regarding the various activities that may be undertaken to contribute to the objectives of the Treaty, and the ample support that the Global Plan of Action provides to an assessment of the proposed activities based on its own Priorities.

As the fourth major perspective, the beneficiaries of the activities undertaken under the Funding Strategy have been chosen. The desirable beneficiaries are mentioned in several articles of the Treaty, and in particular the concept of Access and Benefit-sharing presupposes a clear view on who should be major potential beneficiaries.

Other perspectives and groupings of priorities are possible as well, such as geographic perspectives, time perspectives, and stakeholder perspectives. Based on an analysis of its provisions, the Treaty provides much less guidance for the adoption of such perspectives than for its primary perspectives.

A hierarchy is reflected in the order by which each of these perspectives is presented in the paragraphs below. Note that the order, by which the types of funds are discussed, is different from that in Chapter 3 of this study.

## **4.2 Funds stemming from sharing monetary benefits of commercialization**

These funds (category A1) follow from the implementation of Articles 13.2(d)(ii) and 13.6 that stipulate that “a recipient who commercializes a product that is a PGRFA and that incorporates material accessed from the MLS, shall pay to the mechanism referred to in Article 19.3(f) an equitable share of the benefits arising from the commercialization of that product, except whenever such a product is available without restriction to others for further research and breeding, in which case the recipient who commercializes shall be encouraged to make such payment”. Article 13.3 and 18.4(e) distinguish whether the benefits arise from the use of PGRFA that are shared under the MLS and whether they fall under 13.2(d), but not whether the sharing of these benefits is obligatory or voluntary.

*Crop perspective.* The MLS is limited to the crops listed in Annex I of the Treaty, and hence it seems only logical that use of the funds in this category should benefit activities in the crops listed in Annex I. In other words, we regard a clear linkage between access and benefit-sharing at the level of the Multilateral System as implicit in the Treaty.

*Activities perspective.* The benefit-sharing provisions of Article 13 on the MLS specify that benefits may be realised “through the following mechanisms: the exchange of information, access to and

transfer of technology, capacity building, and the sharing of the benefits arising from commercialization, taking into account the priority activity areas in the rolling Global Plan of Action". In addition, Articles 5 and 6, as well as Articles 14-17 of the Treaty specify the topics to which such support might be dedicated. Whereas the provisions of Article 13 relate to obligations of the Contracting Parties in general, it may be regarded a matter of coherence if such obligation would also guide the setting of the scope of activities under this part of the Funding Strategy.

*Beneficiaries perspective.* The beneficiaries of the MLS, including these funds, are clearly described in Article 13.3. Benefits "should flow primarily, directly and indirectly, to farmers in all countries, especially in developing countries, and countries with economies in transition, who conserve and sustainably utilize PGRFA"

**Recommendation 1.** The Governing Body may see to it that funds stemming from obligatory or voluntary benefit-sharing under the Multilateral System shall be used for the assistance of activities regarding crops listed in Annex I of the Treaty. Results should support farmers in all countries, especially in developing countries, and countries with economies in transition.

#### **4.3 Funds under the direct control of the Governing Body, not stemming from sharing monetary benefits of commercialization**

The Governing Body, as a result of developing and implementing its Funding Strategy, may be in the position to manage funds that do not directly stem from sharing monetary benefits arising out of commercialization (category A2). The use of such funds is clearly less restricted than the use of funds in the benefit-sharing category described above.

*Crop perspective.* In addition to support for crops listed in Annex I of the Treaty, assistance for the conservation and utilization of neglected and under-utilized crops and any other plants for food and agriculture not listed in Annex I, falls within the provisions of the Treaty and is at the discretion of the Governing Body.

*Activities perspective.* The activity areas described in Articles 5, 6, and 14 to 17 apply. Furthermore, guidance is provided by the priority activity areas of the rolling Global Plan of Action. Whereas no clear guidance is given as to the mechanisms by which such support might be made available, the mechanisms described in Article 13.2 may be utilized but are not exclusive. In particular, some provisions of Articles 5 and 6 may require additional mechanisms. These activities may be strengthened by the Supporting Components described in Articles 14 to 17, whereas Article 9 might provide additional direction as to the mechanisms and effects of activities.

*Beneficiaries perspective.* The beneficiaries have been indicated in Article 18.5 of the Treaty, in that "priority will be given to the implementation of agreed plans and programmes for farmers in developing countries, especially in least developed countries, and in countries with economies in transition, who conserve and sustainably utilize PGRFA".

**Recommendation 2.** The Governing Body may see to it that funds under its direct control that do not stem from sharing monetary benefits of commercialization will be used for the implementation of agreed plans and programmes for farmers in developing countries, especially in least developed countries, and in countries with economies in transition, who conserve and sustainably utilize PGRFA, without prejudice to the crop involved.



#### 4.4 Funds not under the control of the Governing Body

According to Article 18 of the Treaty, the Funding Strategy explicitly addresses those funds not under the control of the Governing Body, but used for the conservation and utilization of PGRFA (category B). Article 18.3 specifies that the Governing Body should establish a target “in order to mobilise funding for priority activities, plans and programmes in particular in developing countries and countries with economies in transition, and taking the Global Plan of Action into account”. Article 18.4(b) provides further guidance by noting that “Contracting Parties that are developing countries and Contracting Parties with economies in transition will accord due priority in their own plans and programmes to building capacity in PGRFA”.

*Crop perspective.* No guidance is provided by the provisions of the Treaty. However, taking into account the objectives of the Treaty, as well as general principles of effectiveness and efficiency, a focus on crops or crop gene pools whose diversity is threatened by genetic erosion should be an important factor.

*Activities perspective.* Other parties, in particular states and international organizations, may be expected to recognize the guidance provided by the rolling Global Plan of Action and further priorities if developed by the Governing Body, and other parties may assess planned funding activities against these priority activities.

*Beneficiaries perspective.* National funds for national and international programmes are included in this section. Beyond that, soliciting support mainly for activities in developing countries and countries with economies in transition appears to be in line with the provisions and the preamble of the Treaty.

**Recommendation 3.** The Governing Body may provide relevant information to relevant organisations regarding its policies, priorities and funding criteria in order to promote and facilitate funding of priority activities, plans and programmes, which take into account the priority activity areas of the Global Plan of Action.

#### 4.5 Secondary perspectives

A time perspective, geographic perspective, and stakeholder perspectives may further contribute to priority setting.

**Recommendation 4.** The Governing Body, in considering funding priorities, may also take into account the time perspective, facilitating balanced financial assistance for activities that result in products in the short term as well as projects with extended delivery time lines; the geographic perspective, implying a balanced attention to the different regions maintaining and utilizing PGRFA; and the stakeholder perspective, promoting the participation and collaboration of all relevant stakeholder groups in a particular activity.

#### 4.6 Activity areas qualifying for assistance under the Funding Strategy: a technical perspective

A major perspective not addressed above takes a technical view on options for funding. In discussing these options a distinction is made between efforts directed towards *ex situ* conservation, *in situ* conservation and management, and promoting utilization. The priorities discussed below fall within the Priority activity areas of the Global Plan of Action, but suggest further focussing based on the objectives and further provisions of the Treaty and recent developments since the adoption of the first Global Plan of Action in 1996.

Complementarity of *ex situ* and *in situ* approaches has formed the point of departure. The Treaty, as well as the Global Plan of Action, takes the view that *ex situ* and *in situ* approaches are complementary. Both are necessary and they must function together.

*Ex situ conservation activities.* Genetic erosion in genebank collections is a major threat, based on the information of the first Report on the State of the World's PGRFA (e.g. chapters 3.4 and 3.5, and Box 3.1). To cope with persistently insufficient budgets to maintain many global *ex situ* collections, the Global Crop Diversity Trust has been supporting the development of regional conservation strategies, and conservation strategies for crops listed in Annex I of the Treaty. Clearly, this process may facilitate and contribute to setting priorities under the Funding Strategy of the Treaty.

From the first Report on State of the World's PGRFA it can be concluded that insufficient funds for the proper storage and regeneration of PGRFA collections lie at the base of the threat of genetic erosion in genebanks (see chapter 3.5). At the same time, the State of the World Report and a more recent data analysis<sup>12</sup> indicate a substantial level of replication of germplasm among collections. Estimates of the number of distinct germplasm accessions within the more than 5 million samples stored in genebanks worldwide vary between one and two million. However, the level of replication has not been analysed in detail due to a lack of proper accession data that are easily accessible to facilitate identification of replications among genebanks. Once replications have been identified, this may contribute to a more rational global conservation system, either through physical elimination of unnecessary replicates from certain collections, or through virtual rationalization by exclusion of financial support for unnecessarily replicated accessions which were obtained from other well maintained and accessible collections. Such rationalization is of particular importance for vegetatively propagated crops that often require higher collection maintenance costs, such as root and tuber crops and perennial crops.

Many diverse activities are required to conserve PGRFA effectively *ex situ*, including sample processing, viability testing (for seeds), trueness-to-type verification (for clones), regeneration, phytosanitary measures, characterisation, evaluation, documentation and distribution. Many genebanks are not able to carry out all of these activities, making partnership and sharing of activities particularly important.

Lack of proper storage facilities has been identified as a weakness of the current global conservation system. In particular, there is a high need for easy-to-maintain and reliable storage facilities for collections of PGRFA that fit with local infrastructure, and are minimally sensitive to poor maintenance and uncontrollable electricity failures. These considerations refer to crops with orthodox seeds maintained at low temperatures. Crops that are maintained *in vitro* or in the form of field genebanks require other facilities and are exposed to different threats. The common feature of all conservation strategies is the need for safety duplication, either in the same form in a different location or in a different form, e.g. *in vitro* with a cryo-conserved back-up collection, or a field collection, backed by an *in vitro* collection, or seed or field collections at different sites.

The recommendation below has been based on these considerations, and in line with one of the proposals for a crop strategy for the Global Crop Diversity Trust. Emergency situations in which the full or partial loss of major collections is a realistic expectation and urgent measures are necessary require administrative procedures that allow for a timely response under the Funding Strategy. The Funding Strategy may promote the elaboration of contingency plans. Genebanks should develop a contingency plan that describes which actions are to be taken in the event of any unpredicted disasters happening in the genebank. A risk assessment should be part of such a contingency plan.

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<sup>12</sup> Fowler C, and T Hodgkin. 2004. Plant genetic resources for food and agriculture: Assessing global availability. *Ann Rev Environm Res* 29: 143-179

**Recommendation 5.** The Funding Strategy of the Treaty may accord particular priority to (a) improving documentation of collections in computerized databases made available through the internet, (b) rationalization of collections by eliminating unnecessary replication with the help of proper database information, and (c) regeneration of distinct germplasm threatened by genetic erosion, made available for utilization according to the provisions of the Treaty. Furthermore, the Funding Strategy may give priority to the establishment of proper storage facilities to maintain the conserved germplasm in the context of a conservation strategy that optimally ensures germplasm viability, appropriate in a given local infrastructure, and that can be sustained by the institution responsible for the maintenance of the PGRFA, working on its own or in partnership. The Governing Body may wish to develop procedures that will allow timely reporting on and responding to emergency situations regarding the status of *ex situ* collections.

*In situ conservation and management activities.* The Treaty distinguishes between on-farm management of local crop diversity and *in situ* management of crop wild relatives. In comparison with *ex situ* conservation activities relatively shorter experience has been gained with *in situ* conservation and management activities.

In contrast to *ex situ* conservation and *in situ* conservation of wild relatives, on-farm management of local diversity depends on farmers as central actors, rather than on the public sector. Support for and strengthening of on-farm management activities has been provided through a limited number of programmes and results have largely been anecdotal, although some programmes and projects (e.g. the IPGRI *in situ* project<sup>13</sup>, and the Community Biodiversity Development and Conservation programme) have now been active over a prolonged period of time and across regions. A major challenge appears to be scaling up the support activities for on-farm management. In this context, transferring many responsibilities and capacities for strengthening such efforts from professionals to farmers and other members of local communities is probably the only affordable and sustainable road to larger impact. In supporting activities that involve the active management and conservation of crop diversity on-farm, due attention should be paid to local and indigenous knowledge on cultivation, selection, storage and processing of PGRFA.

Many neglected and underutilized crops receive very limited or no attention from the private and public breeding sectors, hence these crops are often poorly represented in genebank collections, implying that their survival may depend in large part on their functions in small-scale production systems and local food culture.

During the last century, subsistence farming, as a system producing food only for one's own household, has virtually ceased to exist. All farmers, regardless their region, produce part of their crops for sale in the market, as a contribution to their livelihood security. The option to sell their produce in the market has become an important issue for all farmers. Local diversity will have better chances to survive if it is not only produced for home consumption but a local or urban market provides an outlet for such diversity as well. In developing support programmes for farmers and local communities to strengthen their on-farm management activities regarding PGRFA, the need to strengthen local or national market channels should be taken into account.

Active and directed *in situ* management of crop wild relatives is an approach for which currently few examples exist. As a first step, agreement is necessary on what constitutes a species as a crop wild relative, and furthermore, the geographic and genetic diversity distribution of wild relatives of potential use, and the extent to which their occurrence is threatened, should be documented to allow for rational management measures. Where wild relatives occur in nature reserves or other protected areas, a legal basis exists for their protection. Also, legislation for the protection of threatened species or the inclusion in the IUCN Red Lists may facilitate the protection of crop wild relatives. Monitoring

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<sup>13</sup> Jarvis DI, R Sevilla-Panizo, JL Chávez-Servia, and T Hodgkin. 2005. Seed systems and crop genetic diversity on-farm, Proceedings of a Workshop 16-20 September 2003, Pucallpa, Peru. IPGRI, Rome, Italy.

the size of populations, and trends in size and in geographic distribution forms an essential prerequisite for effective management of wild relatives, whether in protected areas or not.

**Recommendation 6.** In supporting efforts in *in situ* management, the Governing Body may consider as priority areas to scale up current support for farmers and local communities through novel approaches, and in addition to take into account the importance of creating or enhancing markets for the products of local diversity. Active support for the maintenance of associated local and indigenous knowledge should be included. Support measures for *in situ* management should focus in particular on those crops that are poorly represented in genebank collections, and that experience a decreasing social status and minor attention in breeding and selection programmes.

*Promoting utilization.* Three priority areas stand out. In the first place, proper and accessible documentation may be regarded a prerequisite. Without information on the germplasm that is held in genebank collections, use initiated by the prospective user is unlikely to occur. Not only passport data but also characterization data are important. The latter can almost invariably be obtained during regeneration, or in the case of clonally propagated crops from field genebank stands.

As a second priority, capacity building is essential. This may include education and training, but in particular also the establishment and further strengthening of networks and partnerships among users and between genebanks and users is vital for the promotion of utilization. Networks of germplasm holders including research institutions and civil society partners may be instrumental in undertaking joint evaluation schemes that through economies of scale can become more affordable and that through the use of common protocols can generate results that are directly comparable among germplasm holders.

Because different genebanks in different regions and institutional settings fulfil different roles and have different user groups, the partners in such partnerships and networks will also differ. Partnerships can take many forms, and may vary from strictly formalized long-term partnerships to *ad hoc* collaborative projects. Such networks may involve partners in the public and private sectors as well as community based partners.

The third priority is promotion of the transfer of technologies that facilitate the utilization of plant genetic resources. These include technologies and approaches that allow the inclusion of genetic resources in breeding materials by professional breeders as well as farmers, thus broadening the genetic base of the crops.

**Recommendation 7.** In promoting utilization the Governing Body may wish to consider supporting the strengthening of documentation and database systems with a view to better inform potential users on the properties of the germplasm maintained in genebanks, as well as capacity building and technology transfer. Partnerships between the public and private sector and civil society may be promoted in order to render activities most effective.

*Training.* Training is an essential component of capacity building. Increasingly, web-based approaches have become feasible, and didactic and logistical experience in establishing and running web-based training programmes has been gained over the last few years. One concept for such training systems would be to develop global course materials and other learning tools that can be directly applied in or readily adapted to local situations. Such training might take different forms and involve long-distance training with tutors and participants at different locations, or alternatively provide for ready and free access to training materials developed and managed at central locations but available for local use and freely accessible through the internet. Such types of training directly contribute to information exchange as well.

The centres of the CGIAR and several education and training institutions in industrialised and developing countries have for many years played a major role in capacity building and training,

providing support to many developing countries for many of the activities that are relevant to the Funding Strategy and crops included in Annex I of the Treaty.

**Recommendation 8.** The Governing Body is advised to promote training components in all the projects financially supported under the Funding Strategy. Such training programmes should preferably also suit other user groups at later points in time, and take advantage of modern communication tools.

*Guidelines and standards.* the absence of authoritative guidelines for the proper performance of the tasks described above, whether at the genebank management level (e.g. minimum conditions for storage facilities) or at the crop-specific level (regeneration procedures and protocols), as well as for optimal and sustainable support for the management of crop genetic resources on-farm and *in situ*, is a major weakness in global conservation. Guidelines should promote sustainability and contribute to fulfilling the targets of the Millennium Development Goals. Such requirements should be realistic in securing the sustainability of genebank operations by taking into account the considerable differences in context between genebanks and at the same time recognizing biological principles governing the viability and genetic integrity of the germplasm conserved, and in optimally enhancing the sustainable maintenance of crop diversity on-farm and *in situ* by farmers and local communities. A recommendation is made to address this issue. For detailed suggestions for genebank management guidelines, a reference is provided<sup>14</sup>.

**Recommendation 9.** The Governing Body may consider supporting the establishment of minimum requirements (standards) for general genebank management and for crop-specific genebank functions, as well as for on-farm management activities to be supported. Such minimum requirements should focus on physical security, biological security and availability of *ex situ* collections, on monitoring maintenance of crop diversity on-farm and *in situ*, and of contributions to the realisation of the relevant Millennium Development Goals, in particular goals 1 and 7.

## 5. Criteria and Priorities

### 5.1 A proposal for funding criteria following from the relevant policy elements identified above.

Criteria should be developed to allow selection of the most relevant proposals submitted for support under the Funding Strategy and priority setting should contribute to a focus of the Funding Strategy on those activity areas most in need of support. As such, both eligibility criteria (“absolute conditions”) and selection criteria (“weighing the degree to which a proposal meets a certain pre-determined need”) should assist the evaluation of project proposals submitted for financial assistance through the Funding Strategy from funds under the direct control of the Governing Body. Criteria should also be useful for monitoring and evaluating activities. Project proposals thus have to describe in detail what indicators are to be used to monitor the contribution to the objectives of that project. Such criteria may contain elements from all the factors listed in this Chapter above.

The following **eligibility criteria** can be recognized:

- Are the proposed activities addressing one or more areas encompassed in Articles 5 and 6 of the Treaty?

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<sup>14</sup> Engels JJM, and Visser L. 2003. A guide to effective management of germplasm collections. IPGRI Handbooks for genebanks no. 6. IPGRI, Rome, Italy.

- Will the germplasm for which conservation and management is to be supported be available under the conditions of the International Treaty (Annex I crops), or under similar conditions in line with the Treaty's objectives (other crops)?
- Is the proposer eligible for support under the Funding Strategy? This may relate to nationality and the legal status (for legal persons).

**Selection criteria.** Selection criteria are criteria that can be used to rank proposals for the funding of activities under the Funding Strategy. Whereas any proposal has to comply with all the eligibility criteria, the selection criteria are meant to weigh the value of different proposals. An approach may be employed by adding a certain value (A to E, or 1 to 5) to indicate to which level or degree certain criterion is met.

Selection criteria can be of various natures. Suggestions for selection criteria follow directly below. Not all selection criteria are relevant for all priorities and proposals.

#### *General selection criteria*

- **Project relevance.** Are the priorities of the Funding Strategy clearly incorporated and represented in the proposed goals and expected outputs of the proposal? Is the project contributing to a rational global conservation system? Is the project contributing to the Millennium Development Goals, in particular goals 1 and 7?
- **Feasibility.** Is the proposed activity feasible in terms of resources and timing?
- **Effectiveness.** Are the anticipated project costs warranted against the expected project results?
- **Beneficiaries.** Who are the immediate beneficiaries? Will the results of the proposed project, directly or indirectly, reach the proposed beneficiaries?
- **Team composition and capacity.** Can the capacity of the team be considered sufficient? Does the team include partners with different disciplines? What is the extent of collaboration promoted by the project proposal? How many partners from which regions and sectors will be involved and how does this influence the effectiveness and efficiency of the proposed project?
- **Planning and Monitoring.** Have proper milestones and indicators been incorporated in the project proposal? Does the proposal indicate how project progress will be monitored and its impact assessed?
- **Sustainability.** How sustainable are the activities and changes introduced by the project? Is technology transfer and capacity building realized? Has a training component been incorporated?
- **Geographic extension.** How wide is the geographic impact of the proposed project?

#### *Crop-specific selection criteria*

- What is the contribution of the crop, for which activities are proposed, to global food security and sustainable utilization?
- What is the relevance of the crop, for which activities are proposed, to regional food security, or to the quality and diversity of the human diet or animal feed?
- What is the contribution of the proposed project to conservation and utilization of the crop's gene pool?
- What is the extent to which the survival of the gene pool covered by the proposed project activities is threatened at a national, regional or global level?

For *ex situ* activities the following selection criteria can be added:

- How is the physical security of the germplasm to be conserved with the support of the Funding Strategy guaranteed (electricity backup; safety backup of collections; contingency plan)?
- How is the biological security of the germplasm to be conserved with the support of the Funding Strategy guaranteed (storage conditions; viability testing; genetic integrity; regeneration protocols)?

For *in situ* activities the following selection criteria can be added:

- Does the support requested under the Funding Strategy result in sustainable conservation and management of crop diversity on-farm or *in situ*?
- Does the support requested under the Funding Strategy result in an improvement of livelihood security of the farmers and local communities involved, or contribute to the proper and sustainable management or restoration of the environment?

For the promotion of utilization the following selection criteria can be added:

- Does the project proposal involve appropriate partners from user groups (private sector, research institutions, local communities, farmers, NGOs)?
- Do the proposed activities result in novel characterization and/or evaluation data?
- Do the proposed activities result in the establishment or strengthening of markets for diversity-rich products?

## 5.2 A proposal for priorities summarizing options presented above

The priorities proposed below fall within the scope of the Treaty, in particular Articles 5 and 6, as well as Articles 16 and 17. The priorities also fit the rolling Global Plan of Action and can be seen as a selection from its priority activity areas of those challenges that are currently most pressing, under the assumption that such needs will develop and change over time. Each of these options is considered to contribute to the development of a more rational global system for the conservation and utilization of PGRFA.

In selecting priorities from this list, the following factors may be considered.

- Either specific crops or crop groups, or types of activities may be taken as a point of departure. By taking a crop (group) perspective in defining the priorities for a call for proposals a more coherent support programme may be feasible.
- A logical connection exists between some of the conservation priorities. Whereas regeneration of threatened germplasm may be warranted, detailed insight regarding over-replication is needed, to avoid support for unnecessary efforts, and for such insight the development of compatible databases is a necessary condition. Functioning crop or regional networks may be instrumental in establishing such international or compatible national databases. Moreover, support for regeneration efforts only makes sense when sufficient adequate storage facilities are available.
- Each conservation project should give consideration to enhancing complementarity between *in situ* and *ex situ* methods. Across the portfolio, a balance needs to be struck between support for *ex situ* activities versus support for *in situ* and on-farm activities. Likewise a well-based balance between conservation efforts and efforts strengthening utilization is justified. Finally, for strengthening utilization, a balance in support for formal breeding efforts and participatory informal breeding efforts seems important, in the light of the references in the Treaty to the role of farmers.
- Since the priorities in the list below may regard the entire Funding Strategy, specific priorities might be adopted by other bodies such as the Global Crop Diversity Trust.

As the list below covers an ambitious set of priorities, it should be regarded as a basket of options rather than as a proposed descriptive list. In particular, attention may shift over time from some priority areas to others.

Priorities may be further selected either by focussing on the role of particular crops, and subsequently linking selected crops with the most effective activities. Alternatively, generic activities may be selected first and the most appropriate crops to benefit from such activities may then be identified.

Establishing further priorities on a crop basis may be effected using the selection criteria presented in 5.1 (the importance of the crop, the risk of genetic erosion, etc.), and national, regional and global data available. The resulting assessment requires a complementary assessment of ongoing programmes and available expertise regarding these crops. Such comparative analysis is likely to yield information on the key activities that are needed to promote effective conservation and sustainable use.

Alternatively, or in addition, generic activities may be prioritised, e.g. development of information systems, rationalization of collections, or capacity building in on-farm management of genetic resources. If such activity areas are prioritised, a focus on specific regions and/or crops may follow from or be integrated in such priorities.

In each of these approaches it seems imperative that the information base on which to rank and select priorities has to be developed through the involvement of a wide range of stakeholders and specialists. Clearly, in such approach the subsequent prioritisation remains the responsibility of the Governing Body itself.

- Conservation of neglected and underutilized crops. Conservation efforts have mainly focussed on staple crops. The status of genetic diversity of other crops, including some listed in Annex I, has remained threatened. In particular, so called neglected and underutilized crops (crops of regional importance) are generally poorly represented in *ex situ* collections, and their production acreages and market shares are much reduced, also endangering on-farm conservation and development of such crops. In particular, crops that cannot effectively be conserved in the form of seed should receive priority.
- Information systems. Development of electronic databases on *ex situ* collections, accessible through the internet and providing at least passport data, and in formats compatible with regional and international databases, can be regarded a first prerequisite for any further international cooperation, since it provides insights in gene pool coverage (filling gaps) and the need for rationalization (removing unnecessary replication). Connecting such databases may be regarded as a contribution to the development of a Global Information System for PGRFA.
- Rationalization of collections. Rationalization within and between collections, in particular for crops not maintained in the form of true seed, but *in vitro*, *in cryo* or *in vivo*, will reduce the financial burden of individual genebanks and the international system as a whole. Rationalisation of large seed collections of staple crops may also have a big impact, since much time, effort and money goes into processing, documenting and regenerating them, and there is a high level of replication.
- Regeneration of unique germplasm. A backlog in regeneration was reported in the first report on the State of the World's PGRFA. Regeneration of germplasm that is not readily available from other existing and well-established collections will reduce genetic erosion in genebanks and thereby safeguard threatened germplasm.
- Safety duplication. Safety duplication of collections in a foreign site, either or not under the conditions of a black box agreement, will reduce the risk of loosing germplasm due to infrastructure shortcomings or conflict. Black box agreements need to be followed up to ensure that fresh germplasm is provided when viability declines to a given threshold.
- Promoting breeding efforts. Breeding efforts that (1) allow breeding materials to be adapted to local circumstances and preferences, (2) broaden the genetic base of crops, or (3) revitalize the role of local crops may contribute to the further use, development and maintenance of a wide range of PGRFA.
- Scaling up the impact of on-farm support activities. On-farm management of PGRFA may focus on developing and employing novel approaches that maximise the involvement of members of local communities in training farmers and that minimize continuous expensive involvement of professionals, and allow for optimal access of farmers to PGRFA held elsewhere.



- Improving farmers' marketing options. On-farm support activities should incorporate components addressing the strengthening of markets for PGRFA maintained and developed on farm, recognizing that farmers will mainly, in the long run, maintain PGRFA that offer them a financial return on investment.
- Integrating conservation of wild relatives into wider programmes. Where such wild relatives are threatened, support for their management and conservation should focus on the sustainable management and use of such resources by the local population, and be integrated in wider nature or landscape management programmes, where possible.
- Standards development. Projects aiming to arrive at common standards and guidelines for standard operating procedures will facilitate task-sharing.
- Upgrading storage facilities. Proper storage facilities to maintain germplasm that is currently not well stored may be realised by establishing new facilities or upgrading existing facilities, preferably answering needs at the global, regional or sub-regional level, on the explicit premise that no proper storage facilities elsewhere are yet available. On the basis of cost-effectiveness it is argued that support for building new national facilities should not be the first priority. Cryo-preservation facilities should only be established where there is a cost-benefit advantage.
- Strengthening regional and crop networks. Regional and crop networks encompassing all relevant stakeholder groups may be instrumental to facilitate international cooperation.
- Developing appropriate agricultural policies. A major condition for initiatives in conservation and utilization of PGRFA to prosper is the support offered by an appropriate policy framework including landscape, seed system and rural development policies that encourage rather than discourage the maintenance of diverse farming systems,

## 6. Responsibilities and process

As general guidance, the Treaty, in Article 18.2, specifies that the Funding Strategy shall “enhance the availability, transparency, efficiency and effectiveness of financial resources to implement activities under this Treaty”. According to Article 13.4, the Governing Body is to consider, at its first meeting, relevant policy and criteria regarding the specific assistance in the framework of the MLS under the agreed Funding Strategy established under Article 18. In Article 18.4(f) it is noted that the “Governing Body shall consider modalities of a strategy to promote [such] (voluntary) contributions”. Article 19.3(c) specifies that the Governing Body should “adopt, at its first session, and periodically review the Funding Strategy”. In addition, provisions of Article 19.3 note, amongst others, that the functions of the Governing Body shall be to consider and establish “such subsidiary bodies as may be necessary, and their respective mandates and composition”; “to establish, as needed, an appropriate mechanism, such as a Trust Account, for receiving and utilizing financial resources that will accrue to it for purposes of implementing this Treaty”; “to establish and maintain cooperation with other relevant international organizations and treaty bodies, [...], on matters covered by this Treaty, including their participation in the Funding Strategy”; and “to consider modalities of a strategy to encourage voluntary contributions, ....”.

From the Treaty articles cited above, it becomes clear that, as part of its Funding Strategy, the Governing Body is to take responsibility for (1) establishing policy, funding criteria and priorities, including a process to select projects for financial support by the Treaty, (2) considering modalities to promote voluntary contributions under the Funding Strategy, (3) harmonizing its efforts with those of other relevant bodies, (4) utilizing accrued funds for the implementation of the Funding Strategy, (5) monitoring project implementation, (6) evaluating the impact of its financial support at the project level; and (7) evaluating the effectiveness and efficiency of the Funding Strategy itself. High-quality performance of such responsibilities may be regarded as helpful, if not an absolute condition, to attract and enhance voluntary contributions to the Funding Strategy, and – as part of the Funding Strategy – to provide influential information to other bodies, including Contracting Parties, seeking to implement their own plans and programmes in the area of PGRFA. Regarding the issue of soliciting and

evaluating project proposals, generally either of two major options is followed<sup>15</sup>. One alternative is to solicit proposals only posing eligibility criteria, the other option is to develop calls for proposals on specified themes or work areas only. Whereas the first alternative might be regarded as bottom-up, selection by evaluators of proposals to be granted is rather difficult by lack of clearly specified selection criteria. The second alternative might seem more top-down, but does make evaluation of proposals more straightforward and transparent. Taking into account suggestions above, in this background study, for priority areas of work, adoption by the Governing Body of either of these two options appears feasible.

Given the extent of these tasks and the necessary level of specialist expertise to carry them out under the responsibility of the Governing Body, it seems an appropriate measure to arrange that the secretariat of the Treaty acquire the necessary capacity to take up these tasks or to establish a technical working group to which the Governing Body can delegate their execution, or both, notwithstanding the final responsibility of the Governing Body itself. General experience indicates that such technical bodies function more effectively if their membership is limited and if transparency is optimal by allowing such bodies to have meetings open to other interested parties. Either way, it will be necessary to examine project selection and monitoring processes used in other organizations and bring these to the attention of the Governing Body for its decision.

**Recommendation 10.** The Governing Body may wish to take initiatives in its first meeting in order to establish policy, funding criteria and priorities, consider modalities to promote voluntary contributions under the Funding Strategy, and harmonies its efforts with those of other relevant bodies. In light of the volume of work and the required expertise to establish, implement and assess the performance of the Funding Strategy, the Governing Body may wish to arrange for sufficient capacity within the Treaty's secretariat and/or to establish a technical working group that is charged with the task to elaborate and implement the Funding Strategy under the guidance of the Governing Body.

## 7. Concluding remarks

The Funding Strategy is supposed to consist of distinct components that on the one hand relate to different funding sources and consequently to different targets, and on the other hand complement each other in order to maximize the volume of activities and impact of efforts. In establishing the Funding Strategy, recognition and thorough understanding of this complex set-up is essential in order to fulfil the Treaty's requirements and objectives.

Whereas funds resulting from sharing of monetary benefits of commercialization and voluntary contributions come under the direct control of the Governing Body, allowing the Governing Body to develop its own policy and priorities, the impact of the Funding Strategy may far exceed the allocation of its own resources by providing information and advice to third parties regarding an optimally effective set of priorities and a portfolio of well-implemented projects to realize the objectives of the Treaty. Those third parties include both developed countries and developing countries among the Contracting Parties, as well as other stakeholders in the public, private and civil sector. In addition, coherence of the Funding Strategy and collaboration of the Governments with other international agreements and bodies, in particular the Global Plan of Action and the Global Crop Diversity Trust, may further enhance the impact of the Treaty on the attainment of its own objectives. Such other agreements and bodies also include the Convention on Biological Diversity.

The Treaty provides clear guidance in determining the scope of activities to be supported by the Funding Strategy, and in various articles concerning its ultimate beneficiaries, in particular farmers in

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<sup>15</sup> See S. Johnston, Report on the types of funding and assistance and institutions with relevant mandates to the Funding Strategy of the International Treaty on Plant Genetic Resources for Food and Agriculture, Background study paper no. 29

developing countries and countries with economies in transition, and plans and programmes that should benefit farmers in all countries.

In developing policy for the Funding Strategy, in particular priorities and funding criteria, different perspectives can be taken, and the relative importance attached to these perspectives is of major relevance for the priority setting process and for the criteria that should assist in establishing an optimally composed project portfolio. Whereas many provisions of the Treaty will guide the setting of priorities, developments in the scientific and technical arena may also impact on the priority setting process.

Proper implementation of the Funding Strategy will require substantial capacity that will have to be allocated through establishment of a technical working group and/or a sufficiently staffed secretariat that will support development, implementation and evaluation of the Funding Strategy, under final responsibility of the Treaty's Governing Body.