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# COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

## Item 5 & 7 of the Provisional Agenda

### TEAM OF TECHNICAL AND LEGAL EXPERTS ON ACCESS AND BENEFIT-SHARING

#### First Session

Rome, 8 – 11 July 2014

### **PREPARATION OF *DRAFT ELEMENTS TO FACILITATE DOMESTIC IMPLEMENTATION OF ACCESS AND BENEFIT-SHARING FOR DIFFERENT SUBSECTORS OF GENETIC RESOURCES FOR FOOD AND AGRICULTURE***

## TABLE OF CONTENTS

	Paragraphs
I. Introduction .....	1-5
II. Guidance sought .....	6
<i>Annex: Draft Elements to facilitate domestic implementation of access and benefit-sharing for different subsectors of genetic resources for food and agriculture – Draft preliminary structure</i>	

## I. INTRODUCTION

1. The Commission on Genetic Resources for Food and Agriculture (the Commission), at its Fourteenth Regular Session, considered the need for and modalities of access and benefit-sharing arrangements for genetic resources for food and agriculture (GRFA), taking into account relevant international instruments on access and benefit-sharing. The Commission put in place a process the final output of which are to be *Draft Elements to Facilitate Domestic Implementation of Access and Benefit-Sharing for Different Subsectors of Genetic Resources for Food and Agriculture (Draft Elements)*.<sup>1</sup>
2. The Commission established a Team of Technical and Legal Experts on Access and Benefit-sharing (TTLE ABS) consisting of up to two representatives from each of the seven FAO regions. It mandated the TTLE ABS to:
  - Coordinate, with the assistance of the Secretariat, by electronic means as appropriate, to help prepare the intergovernmental technical working group meetings, and based on input from their regions prepare written materials and propose guidance for the intergovernmental technical working groups;
  - Participate in the relevant portions of the meetings of the intergovernmental technical working groups, to help inform and shape the intergovernmental technical working group discussions and output on access and benefit-sharing; and
  - Work after each intergovernmental technical working group meeting with the Secretariat to compile the intergovernmental technical working group outputs into the *Draft Elements*, and communicate the *Draft Elements* to their regions for information.
3. The elaboration of the *Draft Elements* and the work of the Commission's intergovernmental technical working groups will build upon inputs compiled at the Commission's request, namely:
  - Government submissions on the conditions under which specific GRFA are exchanged and utilized, for the Commission to take a decision on the collection of model contractual clauses for subsectors;<sup>2</sup>
  - Stakeholder submissions on voluntary codes of conduct, guidelines and best practices, and/or standards in relation to access and benefit-sharing for all subsectors;<sup>3</sup>
  - Explanatory notes to the distinctive features of GRFA, taking into account the specificities of the different subsectors;<sup>4</sup> and
  - A matrix illustrating international practices, initiatives and instruments of relevance to the subsectors in the context of access and benefit-sharing that are, or could form mutually supportive parts of the international regime on access and benefit-sharing<sup>5</sup>.
4. For subsectors where no intergovernmental technical working groups have been established, the TTLE ABS will collaborate closely with the Secretariat to identify exchange and use conditions and existing codes of conduct, guidelines and best practices, and/or standards in relation to access and benefit-sharing.
5. This document contains in its *Annex* a draft preliminary structure for the *Draft Elements* populated with some contents to illustrate the *type* of issues the *Draft Elements* could cover. The draft preliminary structure does not claim to be exhaustive and is not intended to prejudice the structure or contents of the *Draft Elements*, the TTLE ABS has been requested to provide to the Commission for its consideration.

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<sup>1</sup> CGRFA-14/13/Report, paragraph 40.

<sup>2</sup> CGRFA/TTLE-ABS-1/14/Inf.2.

<sup>3</sup> CGRFA/TTLE-ABS-1/14/Inf.3.

<sup>4</sup> CGRFA/TTLE-ABS-1/14/Inf.4.

<sup>5</sup> CGRFA/TTLR-ABS-1/14/Inf.5.

## II. GUIDANCE SOUGHT

6. The TTLE ABS may wish to:

- review and revise, as necessary, the draft preliminary structure, with a view to further develop the *Draft Elements* before its next meeting;
- use the draft preliminary structure or parts thereof for its discussions with the Commission's intergovernmental technical working groups on forest and plant genetic resources; and
- request the Secretariat to prepare *Draft Elements to Facilitate Domestic Implementation of Access and Benefit-Sharing for Different Subsectors of Genetic Resources for Food and Agriculture*, based on inputs received from the Commission's working groups on forest and plant genetic resources and on inputs and comments received from the TTLE ABS before its next session.

## ANNEX

### DRAFT ELEMENTS TO FACILITATE DOMESTIC IMPLEMENTATION OF ACCESS AND BENEFIT-SHARING FOR DIFFERENT SUBSECTORS OF GENETIC RESOURCES FOR FOOD AND AGRICULTURE

#### DRAFT PRELIMINARY STRUCTURE

##### I. OBJECTIVES

1. The overall objective of these *Elements to facilitate domestic implementation of access and benefit-sharing for different subsectors of genetic resources for food and agriculture* (ABS Elements) is to assist policy makers at the national level in developing access and benefit-sharing (ABS) measures that reflect the needs of the food and agriculture sector, while complying, as relevant, with international ABS instruments, including the International Treaty on Plant Genetic Resources for Food and Agriculture (Treaty) and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (Nagoya Protocol).

2. A central point of departure of ABS measures for genetic resources for food and agriculture (GRFA) is Article 8 of the Nagoya Protocol, which requires Contracting Parties to consider, in the development and implementation of their ABS measures, the importance of genetic resources for food and agriculture and their special role for food security. The ABS Elements aim to assist policy makers in translating Article 8 of the Nagoya Protocol into concrete domestic policy options for the different subsectors of GRFA. They describe options for fine-tuning national ABS legislation in line with the needs of the different subsectors of GRFA and for standardized domestic ABS approaches, which comply with relevant international ABS instruments. They also take into account that there already exists, under FAO, the Treaty, a legally binding international agreement addressing ABS in regard to plant GRFA.

##### II. PRINCIPLES FOR THE DEVELOPMENT OF ABS MEASURES FOR GRFA

3. In the development and implementation of ABS measures covering GRFA, Governments may wish to consider taking the following steps:

- (1) Assessment of the concerned subsectors of GRFA, incl. their activities, socio-economic environments and use and exchange practices;
- (2) Identification and consultation of relevant stakeholders holding and using GRFA, including farmers and local communities, genebanks and collections, research institutions and the industry;
- (3) Integration of ABS measures with broader food security and agricultural development policies and strategies;
- (4) Communication of ABS measures to potential providers and recipients of GRFA; and
- (5) *Ex ante* assessment as well as monitoring of the impact of ABS measures.

##### III. ELEMENTS FOR ABS MEASURES FOR GRFA

4. In designing legislative, administrative or policy measures for ABS, policy makers may wish to address a wide range of issues to facilitate the domestic implementation of ABS for the different subsectors of GRFA, *inter alia*:

- (1) Objectives of ABS measures;
- (2) Designation of competent authorities/ national focal point;
- (3) Access to genetic resources and traditional knowledge associated with it;
- (4) Fair and equitable sharing of benefits;
- (5) Monitoring and compliance.

(i) **Objectives of ABS measures**

5. There is agreement that the effective conservation of GRFA requires their continued use. Therefore ABS legislation aiming at the conservation of GRFA needs to also aim at facilitating the use of GRFA. Considering that GRFA are an integral part of agricultural and food production systems and therefore play an essential role for achieving food security and the sustainable development of the food and agriculture sector, and that the international exchange of GRFA is essential to the functioning of the sector, ABS measures may be instrumental in furthering the achievement of food security. They may aim at facilitating the use of agricultural biodiversity and at strengthening international cooperation for the sake of food security and agricultural development, both by enhancing research and development capacities through fair and equitable benefit-sharing and by facilitating the exchange of GRFA. Policy makers may consequently wish to consider food security and sustainable agricultural development as an objective of ABS legislation. Other possible objectives include: the recognition/protection of Farmers' Rights, as enshrined in Article 9 of the Treaty; the enhancement of research and development capacities through technology transfer and capacity-building<sup>6</sup>; access to and exchange of information; the facilitation of GRFA exchange; the strengthening of conservation and sustainable use of GRFA; the furthering of international cooperation and collaboration for food security and agricultural development.

6. Existing ABS measures refer to various objectives the most obvious of which are the conservation and sustainable use of genetic resources and the fair and equitable sharing of benefits derived from them. Some ABS instruments also reflect the importance of GRFA for food security.<sup>7</sup> The Treaty's objectives, for instance, include the sustainable use of PGRFA and the equitable sharing of benefits for food security and sustainable agriculture, in harmony with the CBD. One of the objectives of the *Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of Their Utilization*, for example, is "to contribute to poverty alleviation and be supportive to the realization of human food security, health and cultural integrity, especially in developing countries, in particular least developed countries and small island developing States among them."<sup>8</sup> The Protocol, as mentioned above, requires its Parties to consider the importance of GRFA and their special role for food security in the development and implementation of ABS legislation and regulatory requirements.<sup>9</sup>

7. Whether or not a measure achieves a given objective will usually not depend on whether this objective is explicitly stated, be it in the proposal for the policy measure or in the policy measure itself. Nevertheless, in some jurisdictions, statements of objectives may play an important role in the interpretation of rules and regulations and it may be for this reason that many of the existing ABS laws and policies include sections identifying specific objectives. Food security, as an objective of ABS measures, may therefore be a possible element to facilitate the domestic implementation of ABS for some or all the different subsectors of GRFA.

(ii) **Competent authorities/ National Focal Point**

8. Competent authorities are designated by governments and are responsible for granting access to genetic resources. Under the Protocol, Parties have to designate one or more competent national authorities, which shall be responsible, *inter alia*, for granting access and advising on applicable procedures and requirements for obtaining PIC and entering into MAT. In addition, Parties have to designate national focal points on ABS, which shall be responsible for liaison with the Secretariat and provide relevant information to applicants.<sup>10</sup> While in many countries multiple authorities are involved in the implementation of ABS measures, including the approval of access applications, Background Study Paper No. 42, commissioned by the Secretariat in 2009, noted that "in none of the laws [examined] was the direct approving state authority a ministry or agency involved in food and

<sup>6</sup> Background Study Paper No. 42, p. 21.

<sup>7</sup> Background Study Paper No. 42, pp. 21-22.

<sup>8</sup> Bonn Guidelines, section 11 (e).

<sup>9</sup> Nagoya Protocol, Article 8(c).

<sup>10</sup> Protocol, Article 13.

agriculture.”<sup>11</sup> Various domestic governance models exist for the implementation of ABS frameworks, such as a central approving authority or a system of delegation from the central authority to other entities, and these models may further be explored as to their advantages and disadvantages for ABS for GRFA.

**(iii) Access to genetic resources and traditional knowledge associated with it**

9. The Nagoya Protocol confirms the right of its Parties to require prior informed consent (PIC) for access to (some or all of) the genetic resources, which they have acquired in accordance with the CBD or of which they are the country of origin. However, it does not require its Parties to restrict access to their genetic resources. Parties that decide to require PIC for access have to take the necessary measures to provide, for example, for legal certainty, clarity and transparency of their ABS legislation and to provide for fair and non-arbitrary procedures on accessing genetic resources (“access standards”).

Scope of access measures

10. In defining the scope of access measures, policy makers are confronted with a number of issues specifically relevant to the food and agriculture sector, including: the distinction between genetic and biological resources; the definition of (“utilization”) activities requiring access authorization; the distinction between genetic resources which are in the public domain and those which are privately owned; the identification of the country competent for granting access to GRFA; access to genetic resources in areas beyond national jurisdiction; the dual use of genetic resources for food and agriculture and other purposes; and genetic resources covered by other agreements, in particular the Treaty.

• **Genetic versus biological resources /Genetic resources traded as commodities**

11. ABS frameworks may cover different types of resources. As many agricultural products reach the market place in a form in which they may be used both as biological resources and as genetic resources, ABS frameworks for GRFA might have to be clear on the important question of whether the use of a genetic resource as biological resource requires PIC. Genetic resources are defined by the Convention on Biological Diversity (CBD) as “genetic material of actual or potential value” and genetic material means “any material of plant, animal, microbial or other origin containing functional units of heredity.”<sup>12</sup> This definition is also mirrored by the Treaty, which defines “Plant genetic resources for food and agriculture” as any genetic material of plant origin of actual or potential value for food and agriculture.<sup>13</sup> Some countries seem to extend the coverage of their ABS laws to all biological resources, which could be interpreted as to cover even bulk agricultural commodities.<sup>14</sup> However, the use of genetic resources as bulk commodities, e.g. access to a forest for timber extraction, falls outside the scope of the Protocol and the scope of most ABS laws.

12. One of the challenges faced by the food and agriculture sector is that many agricultural products, including commodities, are sold in a form that potentially allows their use as a genetic resource, for instance in multiplication and breeding activities. Whether they are going to be used only as a biological resource (i.e. for production and consumption) or also as a genetic resource (i.e. for reproduction and further development) is not always clear and predictable at the time of the transaction. In addition, they are frequently used for both purposes. Consequently, it is often difficult to distinguish between exchanges of biological resources and exchanges of genetic resources.

• **Activities falling within or outside the definition of “utilization of genetic resources”**

13. Most countries limit the scope of their ABS measures to specific uses of genetic resources, i.e. to their use in research and development. Under the Nagoya Protocol, only “access to genetic

<sup>11</sup> Background Study Paper No. 42, p. 47.

<sup>12</sup> CBD, Article 2.

<sup>13</sup> Treaty, Article 2.

<sup>14</sup> See Background Study Paper No. 42, p. 23.

resources for their utilization” shall be subject to PIC. “Utilization of genetic resources” means “to conduct research and development on the genetic and/or biochemical composition of genetic resources, including through the application of biotechnology (...).”<sup>15</sup> Based on this definition, the harvesting of agricultural products for commodity is clearly not subject to PIC.

14. However, the question may arise whether selection and reproduction of genetic resources based on phenotypical traits and not entailing any genetic methods, qualify as "research and development on the genetic composition of genetic resources". Does, for example, fish farming constitute “genetic utilization” and therefore require PIC? Do provenance trials, a special type of plantation experiment that helps to understand how trees are adapted to different environmental conditions through genetic adaptation or phenotypic plasticity, require PIC? Does access to cattle embryos qualify as “utilization” if the intended use is limited to reproduction and does not aim at genetic improvement? Many GRFA are being shaped, developed and improved through their continued use in agricultural production. Where “research and development” and agricultural production occur in tandem, it may be difficult to distinguish “utilization” from activities related to production.

- **Privately owned versus publicly held genetic resources**

15. ABS measures may apply to genetic resources, which are in the public domain but also to privately owned GRFA. Given that a significant amount of GRFA is privately held, ABS laws covering privately held GRFA may have a significant impact on the exchange of GRFA. While the Treaty’s Multilateral System includes only plant GRFA “that are under the management and control of the Contracting Parties and in the public domain”<sup>16</sup> as well as materials brought within the purview of the Treaty by other holders,<sup>17</sup> the Protocol leaves the application of PIC to privately owned GRFA at the discretion of its Contracting Parties.

- **Identification of countries granting prior informed consent**

16. The Protocol limits the right to require PIC to countries that have acquired the genetic resources “in accordance with the CBD” and to “countries of origin” of the genetic resources, i.e. countries which possess the genetic resources in *in situ* conditions, meaning in conditions where genetic resources exist within ecosystems and natural habitats, and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties. The right to require PIC does thus not extend to a country’s *ex situ* genetic resources collected from other countries, nor does it extend to material collected prior to the entry into force of the CBD; such material could not be collected “in accordance with the CBD”.

17. For many GRFA it can be rather difficult to determine their countries of origin, applying the definitions of the CBD. In the course of many years of incremental improvement under frequent exchange, GRFA have often acquired their distinctive properties in several different surroundings, not just in the one where they are currently found.

18. As many genetic resources of special value for food and agriculture have been collected from their *in situ* environments and are stored and made available by *ex situ* facilities, the question arises whether they should be covered by access measures and under which modalities and conditions they should be made available.

19. For PGRFA that fall under the Treaty’s ABS provisions, the issue of country of origin and prior informed consent does not arise as countries have, in the exercise of their sovereignty, agreed that those PGRFA are to be governed in accordance with the special terms and conditions stipulated in the standard material transfer agreement adopted by the Treaty’s Governing Body.

20. An option to address this situation is offered by Article 10 of the Nagoya Protocol. It requires Parties to consider the need for and modalities of a global multilateral benefit-sharing mechanism to

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<sup>15</sup> Nagoya Protocol, Article 2(c).

<sup>16</sup> Treaty, Article 11.2.

<sup>17</sup> Treaty, Article 15.

address the fair and equitable sharing of benefits derived from the utilization of genetic resources and traditional knowledge associated with genetic resources that occur in transboundary situations or for which it is not possible to grant or obtain prior informed consent. The benefits shared by users of genetic resources and traditional knowledge associated with genetic resources through this mechanism shall be used to support the conservation of biological diversity and the sustainable use of its components globally.

- **Areas beyond national jurisdiction**

21. The Protocol only applies to genetic resources in areas over which States exercise sovereign rights. In accordance with the United Nations Convention on the Law of the Sea, genetic resources, including GRFA, in internal and territorial waters, exclusive economic zones and extended continental shelves are therefore covered by the scope of the Protocol. Areas beyond national jurisdictions do not fall under the Protocol. It should be noted, however, that this does not prevent Parties to the Protocol from regulating access to GRFA by their nationals in such areas.

- **Dual use of genetic resources for food and agriculture/ other purposes**

22. To the extent policy makers wish to distinguish between genetic resources and GRFA, for example in terms of procedural requirements, benefit-sharing standards or competent authorities, it will be important to clearly define GRFA. For instance, should ABS provisions addressing GRFA apply to the utilization of genetic resources for non-food/feed applications?

- **Genetic resources covered by other instruments**

23. The Protocol foresees that where a specialized international access and benefit-sharing instrument applies that is consistent with, and does not run counter to the objectives of the Convention and the Protocol, the Protocol does not apply for the Party or Parties to the specialized instrument in respect of the specific genetic resource covered by and for the purpose of the specialized instrument.<sup>18</sup> The Treaty, as a specialized international ABS instrument which is consistent with and does not run counter to the objectives of the CBD and the Protocol, will take priority whenever PGRFA governed under the Treaty's ABS system are exchanged between Contracting Parties of the Treaty for the purposes of the Treaty, i.e., for the purpose of utilization and conservation for research, breeding and training for food and agriculture, (excluding chemical, pharmaceutical and/or other non-food/feed industrial uses).

#### Modalities of access measures

24. PIC and MAT are at the core of ABS measures. PIC is granted by national competent authorities (or other designated entities) to a user prior to, or at the time of accessing genetic resources. MAT is an agreement reached between providers and users of genetic resources on the conditions of access and use of the resources, and the benefits to be shared. PIC, if granted by a competent authority, is usually an official, non-contractual act, whereas MAT will often form part of a private law contract, even though a public authority may be a party to this contract.

25. While PIC and MAT are based on the assumption that access and benefit-sharing are negotiated and implemented on a bilateral and case-by-case basis, the Protocol does not prevent its Contracting Parties from shaping these instruments in a different way. In the field of GRFA, policy makers may wish to adapt PIC and MAT to reflect some of the features of GRFA, such as:

- The innovation process for GRFA which is usually of incremental nature, meaning that genetic material is being improved over many successive generations with genetic resources from different providers and the gains are cumulative.
- The large numbers of germplasm samples that are exchanged among the different stakeholders along the value chain during research and development.
- The dual-use character of many genetic resources.

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<sup>18</sup> Nagoya Protocol, Article 4.4.

26. Regulatory approaches to address the legal challenges caused by these specificities of GRFA could aim at realizing economies of scale through standardization and at avoiding complex attribution processes.

- **Making use of economies of scale**

27. A typical regulatory response to the high number of transfers of GRFA and the recurrent exchange events in the food and agriculture sector could be the standardization of access procedures, terms and conditions. The Treaty already establishes a fully functioning precedent for this approach through the use of the standard material transfer agreement.

28. A good starting point for the use of standardized procedures and conditions could be already existing pools of GRFA, for instance in the form of collections and genebanks, provider and user communities and networks. Their established exchange practices may offer useful models to build upon, as they often include the use of an agreed set of conditions and modalities, sometimes even formalized in the form of code of conducts, guidelines or MTAs.

29. Standardization could be applied both to PIC and MAT and could also be combined with further procedural simplifications. For example, Parties to the Protocol may decide to grant implicit PIC by allowing access to (all or certain categories of) GRFA to take place upon the expiry of a certain period of time after the receipt of a notification, on the understanding that the notifier will comply with a set of pre-defined ABS conditions. In such cases an explicit PIC would not be required.

30. Standardization of MAT would typically include the development and use of model contractual clauses or even standard MTAs for certain sets of genetic resources, types of uses and users.

- **Enabling partnerships**

31. As the international exchange of genetic material is a longstanding practice in the food and agriculture sector, many stakeholders rely on it and business practices have been structured accordingly, often characterized by transnational specialization and division of labour. The different stakeholders managing and using GRFA are interdependent and GRFA are often exchanged in the framework of close working collaborations and partnerships, with many stakeholders acting rather as intermediaries in the value chain, being neither the original provider nor the end user of a specific GRFA.

32. To manage the frequent and extensive exchange of genetic material in the context of those partnerships, GRFA could be exchanged on the basis of a framework agreement that defines the terms and conditions for future exchanges of (certain types) of GRFA between the partners. Alternatively, a system of certified recipient institutions could be established with the aim to facilitate access to GRFA for those institutions under a pre-defined set of ABS conditions.

- **Enabling customary uses**

33. Policy makers may find certain existing configurations of customary use of GRFA already satisfactory with regard to the generation and sharing of benefits. In those cases, they may decide that there is no further need to modify ABS conditions and could therefore waive the requirement to obtain PIC or else grant PIC automatically and implicitly upon the fulfilment of certain criteria. Cases of satisfactory customary uses could for example include: the exchange of genetic resources among indigenous and local communities; access to genetic resources for private, non-commercial utilization; use of genetic resources by small scale farmers, livestock keepers and breeders; common pools and research networks; research and development projects for national interests.

- **Avoiding tracking**

34. Tracking of individual genetic resources through the value chain may be difficult and costly. Policy makers may therefore wish to explore ways of sharing the benefits that create no need to track

the use of an individual genetic resource. Options for benefit-sharing provisions of MAT that reflect such an approach could include:

- Up-front benefit-sharing at the time of the transaction and independently from the further use of the exchanged material;
  - Establishment of research cooperation and technology transfer agreements triggered by the initial exchange of the genetic resources and being implemented independently of the downstream destiny of the genetic resource;
  - Establishment of benefit-sharing systems, in which users share benefits based upon certain use activities in general and in turn receive free access to all concerned individual genetic resources.
- **Special modalities for GRFA covered by the MLS of the Treaty**

35. Contracting Parties to the Treaty will have to provide for special access measures for all PGRFA covered by the Multilateral System of the Treaty, in line with Treaty obligations and including the use of the Treaty's Standard Material Transfer Agreement (SMTA).

- **Access to traditional knowledge associated with GRFA and to GRFA held by indigenous and local communities**

36. According to the Nagoya Protocol, Parties shall take measures, as appropriate, with the aim of ensuring that traditional knowledge associated with genetic resources that is held by indigenous and local communities is accessed with the prior informed consent or approval and involvement of these communities and that MAT have been established.<sup>19</sup> Considering that GRFA are held and used by a broad range of very diverse stakeholders, including indigenous and local communities, these stakeholders should be involved in the development of ABS measures for GRFA.

37. The Nagoya Protocol also requires Parties, in accordance with their domestic law, to take measures with the aim of ensuring that PIC or approval and involvement of indigenous and local communities is obtained for access to genetic resources where the communities have the established right to grant access to such resources.<sup>20</sup>

*(iv) Fair and equitable sharing of benefits*

38. The fair and equitable sharing of benefits arising from the utilization of genetic resources is a key component of ABS measures. Benefits may include monetary and non-monetary benefits. With regard to monetary benefits, it may be relevant that the innovation process for GRFA is usually of incremental nature and based on contributions made by many different people in different places at different points of time, and that most products are not developed out of an individual genetic resource, but with the contributions of several genetic resources at different stages in the innovation process. Such situations may not easily be manageable under the typical bilateral ABS scheme. Various options could be envisaged to better accommodate the incremental nature of the innovation process typical to many GRFA. Benefits could, for example, be decoupled from individual providers or accessions, pooled in a national benefit-sharing fund and be distributed in line with agreed policies and disbursement criteria.

39. Considering the important non-monetary benefits of GRFA, such as the sharing of research results, capacity-building and technology transfer, ABS measures for GRFA could identify non-monetary benefits which are of particular relevance to the food and agriculture sector. The Protocol lists research directed towards food security, taking into account domestic uses of genetic resources in the country providing genetic resources, as well as food and livelihood security benefits as possible non-monetary benefits.<sup>21</sup>

<sup>19</sup> Nagoya Protocol, Article 7.

<sup>20</sup> Nagoya Protocol, Article 6.2

<sup>21</sup> Protocol, Annex, sections 2(m); 2(o).

40. Many stakeholders and user communities perceive facilitated access to GRFA as a major benefit in itself, as it enables them to improve the genetic material in use for agricultural production, to adapt to changing environmental conditions and to ensure the conservation of genetic diversity. However, facilitated access in itself cannot be sufficient because of the unequal distribution of capacities to benefit from access to genetic material. Thus, it would have to go hand in hand with strong efforts towards increased and more equitably distributed use capacities. Other non-monetary benefit-sharing mechanisms, such as technology transfer and joint research and development projects, as well as an increased cooperation across actors and regions could play a crucial role in this regard.

(v) ***Monitoring and compliance***

41. User country measures, *i.e.* measures of a country that ensure that users of genetic resources within the jurisdiction of that country have accessed the resources in accordance with PIC and that MAT have been established are at the core of the Nagoya Protocol. The Protocol requires each Party to take appropriate, effective and proportionate legislative, administrative or policy measures to provide that genetic resources utilized within its jurisdiction have been accessed in accordance with PIC and that MAT have been established, as required by the domestic ABS legislation or regulatory requirements of the other Party. Parties to the Protocol shall also take measures to address non-compliance with user country measures and cooperate in cases of alleged violations.<sup>22</sup> To support compliance, Parties to the Protocol shall also take measures, as appropriate, to monitor and to enhance transparency about the utilization of genetic resources, which shall include the designation of one or more checkpoints.<sup>23</sup>

42. User country measures, as required by the Protocol, as well as the monitoring requirement, which all Parties to the Protocol have to implement, may pose significant challenges to the food and agriculture sector. Considering the sheer number of transboundary transfers of GRFA, users of GRFA might at least initially struggle with the requirement that all their material acquired after the entry into force of the Protocol is of “good legal status”. Countries may wish to consider measures that do not discourage the use of GRFA, given that the sustainable utilization of GRFA in research, development and production is an important means of ensuring their conservation. Arrangements that facilitate compliance and simplify monitoring should be explored. An opportunity in this regard is offered by already existing monitoring systems for GRFA, for instance in the form of quality control systems, good laboratory/research practices or sanitary requirements.

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<sup>22</sup> Protocol, Article 15.

<sup>23</sup> Protocol, Article 17.