ASSESSMENT OF PROGRESS TO MAKE THE MULTILATERAL SYSTEM FUNCTIONAL

Incentives and challenges at the country level

Isabel López Noriega, Peterson Wambugu and Alejandro Mejías

Introduction

Almost 20 years after the adoption of the Convention on Biological Diversity (CBD), we are still learning how to translate countries’ sovereign rights over genetic resources into workable laws and regulations that lead to the objectives of conservation and sustainable use of genetic resources. The international recognition of countries’ capacity to regulate the access to their genetic resources and the obligation of genetic resources users to share the benefits with provider countries represented a paradigm change to which we are still adapting. The vast literature on the development and implementation of international, regional and national access and benefit-sharing (ABS) regulations highlights the difficulties involved in getting such regulations developed in the first place and then known, understood and accepted by a broad range of genetic resources users who were used to collecting, exchanging and using genetic material without any relevant interference from public policies (Carrizosa et al., 2004; Glowka, 1998; Lewis-Lettington and Mwanyiki, 2006; Nnadozie et al., 2003; Pisupati, 2008).

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) proposes an ABS system that, based on the CBD’s general principles, has been designed taking into account the particular characteristics of plant genetic resources for food and agriculture (PGRFA) and the particular needs of PGRFA users. This system is based on the multilateral facilitated access to a pool of genetic resources of certain crops (listed in Annex 1 of the Treaty) and the multilateral sharing of the monetary and non-monetary benefits arising from the use of such genetic resources in research and breeding for food and agriculture (see Chapter 7 by Daniele Manzella in this volume for a detailed description of the multilateral system on access and benefit sharing and its rationale).

The exchange of PGRFA within the Treaty’s multilateral system is subject to the terms and conditions set out in a Standard Material Transfer Agreement (SMTA),
whose text was negotiated and adopted by all of the Treaty members at the first session of the Governing Body of the ITPGRFA in June 2006.³ Technically speaking, the movement of germplasm within the multilateral system could not have taken place before the SMTA was adopted. Therefore, the multilateral system has been in operation for four-and-a-half years at the time this chapter was written.

How far have countries gone in the implementation of the multilateral system? Have PGRFA users worldwide adopted it as the adequate ABS regime for PGRFA? What are the incentives that encourage PGRFA users to become full participants in the multilateral system? And what are the main disincentives or challenges they face to implement the system? In this chapter, we will try to answer these questions by describing the progress made so far and analysing the opportunities and challenges that the implementation of the multilateral system at the country level implies.

**Methodology**

This chapter relies on information that the authors have been gathering during the last two years. The main sources include the documents prepared by the Secretariat of the ITPGRFA with submissions from countries and international organizations for the last three sessions of the Governing Body of the Treaty; the national reports submitted to the Food and Agriculture Organization (FAO) for the preparation of the *Second Report on the State of the World’s Plant Genetic Resources for Food and Agriculture* as well as the *Second Report* itself (FAO, 2010); four country case studies (Kenya, Morocco, Peru and the Philippines) developed as part of the project entitled Global Public Goods, Phase 2 (SGRP, 2010) of the Consultative Group on International Agricultural Research (CGIAR), and the questionnaires and internal reports prepared in the context of the FAO/ITPGRFA Secretariat/Bioversity Joint Capacity Building Programme for Treaty Implementation (which took place from 2007 to 2010). Published records have been completed using informal interviews with a number of the ITPGRFA’s national focal points and continued communications with stakeholders in various countries, individuals in the Treaty Secretariat and experts in the International Agricultural Research Centres (IARCs) of the CGIAR as well as other international agricultural research centres. In addition, in order to put into context our analysis of the advances, or lack thereof, in the implementation of the Treaty, we have consulted relevant literature on the conservation and use of PGRFA and, in particular, the policy and legal issues involved.

An important limitation that we have faced is the scarcity of official published documentation about countries’ activities related to the implementation of the multilateral system. Bearing in mind that issues around the conservation and use of PGRFA are highly politicized these days, the authors did not always feel comfortable using information obtained from unofficial sources and/or presenting individuals’ impressions and opinions that could not be backed up by publicly available records.

The preparation of this chapter involved a second important difficulty, which derives from the dynamic nature of the subject matter. The implementation of the multilateral system of the ITPGRFA is a process where the elements change almost
every day (as well as the available information about the changes). Some of the facts we present in the following sections may be different when this volume is eventually published or shortly thereafter. Some of the difficulties and opportunities for the implementation of the multilateral system might not be so relevant in some countries in a few years’ time. The purpose of this chapter is to describe the advances made so far and to document the challenges at this point in time.

Overview of the national measures for the implementation of the multilateral system

Treaty members have made progress in putting the system into action, yet the efforts and practical results differ greatly from one country to another.

Designation of the focal point and the national authority in charge of the implementation of the Treaty and the multilateral system

According to the information available on the ITPGRFA’s website, 92 out of 127 countries have designated the national focal point for the Treaty. Often, the focal points are in ministerial bodies or research institutes under the Ministry of Agriculture (or the equivalent). Heads of gene banks, directors of genetic resources institutes and specialized personnel from plant variety protection and seed quality offices are abundant in the list of focal points. Brazil is the only party in which the focal point belongs to the Ministry of External Relationships.

The leading and coordinating role of a given national authority in the implementation of the Treaty is either explicitly stated or implicitly recognized by the national legislation, based on the body’s traditional responsibilities with regard to PGRFA. In some countries, however, there is still confusion around who should lead and facilitate the implementation of the ITPGRFA at the national level. In Peru, for example, the National Institute for Agricultural Research (INIA), which is the natural leading authority, is still waiting for the Ministry of Agriculture to officially sanction its mandate. This circumstance has not prevented the INIA from taking action towards implementing the Treaty, but the uncertainty has hindered the institution from moving ahead confidently (personal communications with Manuel Sigüeñas in 2009 and 2010). Changes in the structure and duty of various ministries have also caused important delays in some countries, such as Morocco, where the long process of restructuring the Ministry of Agriculture in 2008 and 2009 led to a situation where the originally designated focal point and leading authority for the implementation of the Treaty was not sure about its actual role for more than one year (personal communications with Amar Tahiri, 2009). The lack of clarity around the actual mandate of national focal points with regard to Treaty implementation is one of the most limiting factors in the operation of the multilateral system at the country level, and it can be easily overlooked by representatives of countries where the mandate, capacity and resources of the national focal point are already well ironed out. In the process of drafting the necessary legislation for the implementation of the Treaty in the Philippines, one of
the biggest concerns of the authorities in charge of such process was to reinforce its own mandate and capacity to coordinate the implementation activities. Getting the draft law considered and approved by governmental organizations and research institutes involved in PGRFA conservation and use has been a necessary step for the Philippines’ Treaty focal point to move ahead with the practical implementation of the multilateral system (Bioversity International, 2011).

**Awareness raising and training activities**

Many countries, including Benin, Brazil, Canada, Ethiopia, Germany, Ghana, Guatemala, Kenya, Madagascar, the Netherlands, Peru, the Philippines, Spain, Switzerland, Sudan and Zambia, have arranged workshops and meetings to raise awareness about the ITPGRFA among a diversity of stakeholders and to discuss actions to advance the implementation of the multilateral system. In some developing countries, international agencies such as the FAO and Bioversity International have assisted national authorities by channelling funds provided by donor countries and international organizations, inviting international experts to the workshops and preparing guidelines and learning modules for training activities. These workshops have proved to be helpful in setting the foundations for further implementation activities. However, some of these initiatives have ended up being isolated events with no continuation, and they have not had an impact in the long term.

**Establishment of consultative intersectoral bodies**

In a number of countries, the leading authorities have established consultative interdepartmental bodies to discuss and coordinate actions leading towards the implementation of the ITPGRFA. In Kenya, for example, the Ministry of Agriculture has created the National Plant Genetic Resources Committee, a multidisciplinary and multisectoral body where a range of public institutions, as well as some private ones, are represented. The committee is in charge of domesticating the Treaty by engaging relevant national programmes and stakeholders (Wambugu and Muthamia, forthcoming). The Department of Agriculture in the Philippines has also established a Technical Support Working Group for the Treaty’s implementation, which includes representatives from national gene banks and academia (personal communications with Amparo Ampil, 2010). Similar bodies have been established in Madagascar, Guatemala, Egypt, Jordan and South Arabia (surveys conducted by the Joint Capacity Building Programme, 2008; personal communications with focal points, 2009). The experience of these consultative bodies has evidenced the need of involving officials from the ministries of environment in the implementation of the multilateral system, particularly in those countries where, since the negotiation and adoption of the CBD, the development of laws and regulations on access to genetic resources has traditionally been considered a duty of the governmental branches that deal with the conservation and use of biodiversity and (wild) genetic resources. Getting the ministries of environment (or analogous national bodies) to recognize the particularities of PGRFA and the need to respect and support a
specialized ABS regime for such resources is still a pending task in many countries (Lewis-Lettington and Mwanyiki, 2006, 1).

**Adoption of legislative and administrative measures**

Determining whether there is legal space within the national policy and legal landscape for implementing the ITPGRFA is one of the first important issues that governments need to consider. Particular attention needs to be paid to the existing national ABS legal framework, as it may contradict, or not sufficiently recognize, access and benefit-sharing rules under the multilateral system. A study recently published by the FAO Commission on Genetic Resources for Food and Agriculture shows that most ABS laws do not apply specialized rules to different types of resources (plant, animal, microbial and so on) and do not differentiate between the sectors that make use of such resources (agriculture and pharmacy/cosmetics, for example) and the final purpose of the use (fundamental research, applied research, development of commercial product and so on) (Nijar et al., 2009). However, the number of countries that provide for a particular treatment for PGRFA in their ABS frameworks is increasing. Shortly before or after their ratification of the Treaty, several countries, such as Australia, Brazil, Ethiopia, Peru, the Philippines and Spain passed ABS laws and regulations that exempt, implicitly or explicitly, PGRFA from the general rules of ABS.6 The scope of such an exemption differs from country to country. For some, it applies to PGRFA of crops listed in Annex 1 of the Treaty, while, for others, it applies to PGRFA conserved in *ex situ* conditions. In some cases, the exclusion refers, in general, to genetic resources whose access and use is explicitly regulated by international instruments to which the country is a party. So far, there are no instances of national legislation that set out detailed procedures for dealing with ABS under the multilateral system (FAO, 2010, 173), but some countries such as Peru, the Philippines, Sudan and Syria are in the process of drafting legal provisions in this regard, either as part of their general laws on (plant) genetic resources or in the form of regulations that include specific processes and responsibilities.

Some governments consider that the implementation of the multilateral system within their countries does not require adopting national legislation or amending the existing one, and they have dealt with the different issues involved in the implementation through administrative measures coordinated by the implementing authority. This is the approach adopted, for example, by Germany, the Netherlands, Spain and Switzerland (FAO, 2010, 172; personal communications with Luis Ayerbe and François Pythoud, 2009).

**Identification of PGRFA included in the multilateral system of the ITPGRFA**

According to Article 11.2 of the Treaty, PGRFA that are automatically included in the multilateral system are those of the crops listed in Annex 1 that are (1) under the management and control of contracting parties and (2) in the public domain. It is not
very clear whether all of the country members have gone through the exercise of identifying which national PGRFA collections are automatically included in the multilateral system according to Article 11.2, but, for those who have, the interpretation of these two criteria does not seem to have been particularly problematic. In the opinion of the ad hoc technical advisory committee on the SMTA and the multilateral system, ‘under the management and control of the contracting party’ refers to materials for which the central national administration has ‘the power to undertake acts of conservation and utilization’ (ITPGRFA, 2010a, 10). The notifications sent to the Secretariat of the Treaty on the inclusion of PGRFA in the multilateral system (ITPGRFA website) as well as the studies conducted during the Joint Capacity Building Programme for the Treaty’s implementation (Nijar, 2012; Sigüeñas Saavedra et al., 2011) suggest that there is a general understanding that germplasm collections held by national agricultural research institutes and by other research organizations that are subject to a ministry’s policy guidelines and/or budget are ‘under the management and control of the contracting party’ and therefore automatically included in the multilateral system. Regarding the second criteria, not all countries have adopted the same meaning of ‘in the public domain’. A number of parties have interpreted the term in the context of intellectual property rights and, therefore, have concluded that it applies to PGRFA that are not subject to such rights. This view is in accordance with the technical advisory committee’s opinion (ITPGRFA, 2010a, 11). Other countries have translated ‘in the public domain’ to mean public property. The United Kingdom, for example, has qualified as ‘public domain’ the germplasm conserved in collections that are entirely or partially supported by public funds (ITPGRFA, 2010b).

For PGRFA of the crops and forages listed in Annex I that are not ‘under the management and control’ of the government and ‘in the public domain’, the ITPGRFA states that contracting parties agree to take appropriate measures to encourage natural and legal persons responsible for such PGRFA to put them in the multilateral system (Article 11.3). In countries with a federal system of government, such as Australia, Brazil, Germany and Spain, collections that are not under the administration of the central government fall under Article 11.3 of the Treaty – that is, they are not automatically included in the multilateral system. Countries’ notifications and reports indicate that, in general, germplasm collections held by public conservation and research institutions such as universities and botanical gardens have not yet been identified as part of the multilateral system. Unless this situation is revised, it will leave outside the multilateral system a number of PGRFA collections that may be crucial because of their size, diversity or uniqueness. Representatives from many countries have reported successful experiences in getting federal and autonomous public institutions’ germplasm collections included in the multilateral system. For example, in Switzerland, as part of the national action plan for the conservation of PGRFA, all of the organizations that are involved in the plan and that hold Annex 1 PGRFA must put their material in the multilateral system. These organizations include a number of institutions that are not under the management and control of the Swiss government (European Regional Group, 2011).
Getting accurate information about the material currently available in the multilateral system is not easy because many countries have not formally confirmed which PGRFA collections are included in the system according to Article 11.2 of the ITPGRFA. Public records, including countries’ notifications to the Treaty’s Secretariat, indicate that around 460,000 accessions of germplasm held by national entities are available through the multilateral system (Argumedo, 2009; ITPGRFA website; European Regional Group, 2011). However, much more material may be available, practically speaking. Out of the 460,000 accessions, countries in the European regional group have contributed 319,000, or around 70 per cent, of the total. Most of these accessions are documented in EURISCO, a web-based catalogue that provides information about ex situ plant collections maintained throughout Europe. The catalogue has been recently amended to include information about the accessions’ status with regard to the multilateral system. Germany, with 108,675 accessions, the United Kingdom, with 42,722, Switzerland, with 33,926, and the Czech Republic, with 32,616, are the largest European contributors. With more than 62,000 accessions each, the collections of wheat and barley are larger than any other crops included by countries in the European region (European Regional Group, 2011). Canada

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<tr>
<th>International Gene Banks and Research Centres</th>
<th>Approximate number of accessions</th>
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<tr>
<td><strong>CGIAR Centres</strong></td>
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<tr>
<td>Africa Rice Center</td>
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<td>Bioversity International</td>
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<tr>
<td>International Centre for Tropical Agriculture (CIAT)</td>
<td>693,000</td>
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<tr>
<td>International Centre for Agricultural Research in the Dry Areas (ICARDA)</td>
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<tr>
<td>International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)</td>
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<td>International Institute for Tropical Agriculture (IITA)</td>
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<td>International Livestock Research Institute (ILRI)</td>
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<td>International Potato Center (CIP)</td>
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<td>International Rice Research Institute (IRRI)</td>
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<tr>
<td>World Agroforestry Centre</td>
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<tr>
<td>Centre for Pacific Crops and Trees (CePaCT)-SPC Community</td>
<td>15,000</td>
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<tr>
<td>Tropical Agricultural Research and Higher Education Center (CATIE)</td>
<td>11,400</td>
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<tr>
<td>Mutant Germplasm Repository of the FAO/IAEA Joint Division</td>
<td>2,500</td>
</tr>
<tr>
<td>International Cocoa Gene Bank</td>
<td>2,000</td>
</tr>
<tr>
<td>International Coconut Gene Banks</td>
<td>158</td>
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FIGURE 11.1 Number of accessions held by international gene banks and research centres.
has notified that the collections maintained by the Department of Agriculture and Agri-Food Canada are included in the multilateral system. These represent around 110,000 accessions or almost 25 per cent of the total number of national accessions identified so far.

To date, the inclusion of collections held by private institutions has been modest. In addition to the Swiss associations and foundations mentioned earlier, two French associations have put a total of 2,300 accessions of maize and bread wheat into the multilateral system, and the ANDES association, on behalf of the Potato Park in Peru, has declared that the park’s germplasm collection (representing around 1,300 varieties of potato, according to ANDES) has also been included (Argumedo, 2009). The private seed industry has made no contribution to the multilateral system so far.

In addition to public and private national collections, the multilateral system includes PGRFA held by international organizations. Various international institutes, including 11 IARCs under the CGIAR, have signed agreements with the Governing Body of the Treaty to put their germplasm collections into the multilateral system (see Figure 11.1 above).

For some countries’ representatives, PGRFA found in situ are not automatically included in the multilateral system, but this interpretation is in contradiction with the provisions of the ITPGRFA, which do not exclude in situ PGRFA from the multilateral system as long as they meet the criteria defined by Article 11.2 (Correa, 2008; ITPGRFA, 2010a, 10). In some countries, such as Malaysia, legal experts are currently conducting studies on how the criteria ‘under the management and control of the contracting parties’ apply to PGRFA found in national parks and natural reserves, with the aim of identifying possible multilateral system germplasm held in situ, but, as of today, there is no evidence that any government or public or private entity has identified in situ germplasm as being included in the multilateral system of the Treaty, except for the Potato Park mentioned earlier. The actual accessibility of the park’s PGRFA is still not clear though.

The material currently included in the system according to publicly available records is close to 23 per cent of the almost 5 million accessions of Annex 1 crops.

![Figure 11.2](image_url)

**FIGURE 11.2** Location of PGRFA identified as included in the multilateral system, 2011.
that have been calculated to be conserved in more than 1,240 gene banks worldwide, and around 35 per cent of the approximately 3 million conserved in national gene banks of the current ITPGRFA contracting parties and the IARCs (FAO, 2010, 55). These figures give us an idea of the total number of accessions potentially available in the multilateral system.

Countries and organizations are not obliged to formally report on the PGRFA collections included in the multilateral system, but the actual functioning of the system depends, to a great extent, on the information available to PGRFA users about which materials are actually included in the system. The Governing Body has stressed this point several times (ITPGRFA, 2009c, Appendix A, 20, 2011c, para. 2). With the purpose of facilitating information flow between PGRFA providers and users in the multilateral system, the Treaty’s Secretariat has formulated and made available a sample notification letter that institutions can use to inform about the germplasm collections they have put into system. Whenever the Secretariat receives notifications from governmental agencies and research institutions, it posts them on the Treaty’s website. The information available at the moment refers to collections maintained by national institutions in 20 countries. The amount and quality of the information that potential PGRFA users can get through this means varies a lot from country to country. While for the Nordic countries and the Czech Republic, for example, the institutions’ websites provide, at least, complete passport data for most of the germplasm accessions they hold, for other countries, such as Brazil and Zambia, there is no information available online. In practice, this limitation greatly restricts the use of such collections by scientists, breeders and farmers abroad.

Use of the benefit-sharing fund

Those who commercialize a PGRFA that incorporates genetic material from the multilateral system are required to transfer 1.1 per cent (minus 30 per cent) of the sales of such PGRFA to a benefit-sharing fund managed by the governing body of the Treaty, whenever the commercialized PGRFA is not available for research and breeding. Alternatively, the recipient can pay 0.5 per cent of sales of any PGRFA that
are of the same crop as the germplasm received from the multilateral system. So far, the benefit-sharing fund has not received any contribution through this channel, and it would be unrealistic to expect that this will happen for the next few years as the development of a marketable plant variety takes from 5 to 15 years (Halewood and Nnadozie, 2008). The money currently available in the benefit-sharing fund comes from voluntary contributions from countries (Australia, Italy, Norway, Spain and Switzerland) as well as from the United Nations Development Programme, totalling approximately US $13.4 million. The aim of the fund is to support conservation and crop improvement efforts, especially in developing countries and economies in transition. The ITPGRFA’s governing body establishes priorities, criteria and conditions for the use of the benefit-sharing fund and selects projects for funding. So far, there has been one round of projects funded, while the second round of projects is expected to be approved in the near future. In the first round, which started in December 2008, the fund provided a total of US $580,000 to 11 projects, which were selected from several hundred proposals, whose total cost would have been approximately US $20 million. The second round of projects was opened in December 2010, with much more money in the fund and with a target of US $10 million invested in the projects. The participation of the various countries in both rounds has been impressive. The enormous number of proposals submitted demonstrates the need for such a fund, its success as a multilateral financial mechanism and its effectiveness in making the multilateral system known among national actors. However, the functioning of the fund is hindered by some serious weaknesses. In the first place, the fund is entirely dependent on countries’ and international organizations’ voluntary contributions. So far, member countries’ donations to the fund have been quite limited. Second, it does not have a clear mechanism to evaluate how the funded projects are actually contributing to PGRFA conservation and food security. The fund has been the target of critics from civil society and farmers’ organizations, who have expressed their discontent about how the Governing Body selects the projects to be funded (Kastler et al., 2009) (we will address this issue later in this chapter). All of these elements confirm that the benefit-sharing tool of the Treaty can certainly be improved.

Analysis of the use of the SMTA

The number of SMTAs issued to exchange germplasm and the amount of different SMTA users are critical indicators of the level of implementation of the multilateral system. In order to assess the level of utilization of the SMTA, we have analysed the information provided by the member countries and international research institutions in reports submitted to the second, third and fourth sessions of the Governing Body of the Treaty regarding the implementation of the multilateral system and the use of the SMTA (ITPGRFA, 2007a, 2009a, 2009b, 2011a, 2011b; European Regional Group, 2011). It is important to note that, so far, only the European Regional Group has submitted a report detailing the use of the SMTA by organizations in the European member states. In addition, we have gathered publicly available information
from other national and international centres and gene banks, including NordGen, the international cocoa gene bank and one of the international coconut gene banks.14

When analysing the available data, we have to bear in mind that the sources we have used do not provide a complete picture of the situation. A number of PGRFA transfers within the multilateral system remain outside these records because countries do not publish or share the information about how national institutions are using (or not using) the SMTAs. In informal communications with members of the delegations of Iran, Jordan and Zambia, we have been told that some national institutions have started to transfer PGRFA using the SMTA but that detailed information has not yet been made publicly available. Similarly, in their submissions to the Governing Body, Canada has indicated that the SMTA started to be used in the country in July 2008, but it has not provided details about how much it has been used (ITPGRFA, 2009d). In addition, a number of sources from national research institutes (who we prefer to treat anonymously) have confirmed that the SMTA has not been used by organizations or individuals in their countries, except on those occasions in which they have been invited to do so by the provider or the requester of the PGRFA under transaction, commonly a centre of the CGIAR.

The available information is therefore insufficient to conduct a systematic analysis of the use of the SMTA as well as the typology of providers and recipients of PGRFA within the multilateral system. That said, we can extract some interesting figures and present some preliminary conclusions. According to the sources mentioned earlier, around 1,222,000 samples of accessions of PGRFA have been transferred using the SMTA between January 2007 and December 2010.15 Approximately 95 per cent of the samples were transferred by the IARCs, and the majority of these were sent to developing countries (around 85 per cent) (ITPGRFA, 2007a; 2009a; 2011a). About 60,000 samples were distributed by national institutions, mainly European ones. This amount represents less than 5 per cent of the total germplasm distributed in the multilateral system and a very small portion of the samples that are regularly distributed by countries outside the multilateral system, according to the information about germplasm distribution available in the Second Report on the State of the World’s Plant Genetic Resources for Food and Agriculture (FAO, 2010). However, the most recent data show that countries’ distributions under the SMTA tend to increase.

The figures on germplasm acquisition presented by the CGIAR IARCs’ reports to the Governing Body show that the use of the SMTA by national institutions when distributing their PGRFA is still modest. According to such figures, roughly 24,000 samples have been acquired without the SMTA during 2007–9. This amount triples the quantity of PGRFA that the centres have acquired under the SMTA from countries for the same period. These figures have to be interpreted with caution, taking into consideration that much of the PGRFA that the IARCs receive come from countries that are not parties to the Treaty. It is also important to note that some of the materials transferred to the IARCs’ gene banks are done without an SMTA but, rather, with the understanding that the centre may distribute it under the SMTA (ITPGRFA, 2011b). At least one national institution has had a similar experience. In a collecting mission on wild spinach conducted by the Dutch gene
bank CGN in Uzbekistan and Tajikistan (which are not parties to the ITPGRFA), the countries’ representatives agreed with CGN that the collected material would be shared between the countries and the CGN and that the Dutch gene bank could transfer such materials under the conditions of the SMTA (Van den Hurk, 2011). In this context, it is interesting to mention the experience of the International Network for the Genetic Evaluation of Rice (INGER). In the mid-1990s, shortly after the IARCs (including the International Rice Research Institute (IRRI)) signed agreements with the FAO to put their PGRFA collections in trust for the world community, the national research institutes that were part of INGER decided that they would only exchange rice germplasm through the network on the condition that it was not included in the gene bank of the IRRI, where it would be made available for international distribution under the IARC’s material transfer agreement pursuant to the FAO-CGIAR agreements. After the Governing Body of the ITPGRFA adopted the SMTA in 2006, and after the IRRI signed its agreement with the Governing Body, putting the IRRI’s rice collection under the Treaty’s multilateral system, INGER members decided to reverse the decision they made in the 1990s, welcoming the benefit-sharing provisions of the SMTA. Since 2006, the INGER countries have made contributions of national germplasm to the network again, allowing the IRRI to deposit such material in the gene bank and distribute it to other countries using the SMTA (see Chapter 5 by Michael Halewood et al. in this volume). All of these examples show that there is support for using the SMTA for PGRFA exchange, even among stakeholders in countries that are not parties to the Treaty.

Following the decision adopted by the Treaty’s Governing Body on the material transfer agreement to be used for the transfer of non-Annex 1 PGRFA by international organizations that have signed agreements with the Governing Body, these international gene banks and research centres began to use the SMTA to transfer the germplasm of crops and forages not included in Annex 1, extending, in this way, the multilateral system’s terms and conditions to genetic material beyond the initial scope of the system. The IARCs distributed approximately 15,000 accessions of non-Annex-1 materials between August 2007 and December 2009 (ITPGRFA, 2009a, 2011a). The Tropical Agricultural Research and Higher Education Centre (CATIE), the Centre for Pacific Crops and Trees and the International Cocoa Genebank have used the SMTA to transfer samples of cacao, coffee, taro, capsicum, cucurbits and other crops that are not included in Annex 1 (ITPGRFA, 2011b; personal communication with Pathmanathan Umaharan, December 2010). At the country level, the government of the Netherlands has officially stated that non-Annex 1 PGRFA conserved in one of the national collections will be also made available through the SMTA (Netherlands Ministry of Agriculture, Nature and Food Quality, 2008). At the regional level, the European institutions involved in the European Genebank Integrated System (AEGIS) have committed to make both Annex 1 and non-Annex 1 PGRFA available under the SMTA.16

Germplasm in the multilateral system is being sent to non-parties of the ITPGRFA. For example, according to the information provided by the IRRI on the
Treaty’s website, in the first five months of 2009 around 19,500 samples of rice were sent using the SMTA to countries that were not parties to the Treaty, including the United States (10,185 samples), China (4,300 samples), Thailand (2,095 samples), South Korea (1,170 samples), Japan (900 samples) and Sri Lanka (870 samples) (all amounts are approximate only). Before the Treaty was adopted, access to germplasm conserved in trust by the IARCs was already subject to facilitated access, through the material transfer agreement whose text had been agreed upon by the FAO’s Commission on Genetic Resources. The main difference is that now all of the recipients, both those in contracting parties and those in non-contracting parties, are subject to the benefit-sharing conditions of the multilateral system (see Chapter 6 by José Esquinás-Alcázar, Angela Hilmi and Isabel López Noriega). By using the SMTA to transfer materials to non-parties to the Treaty, the IARCs are extending the multilateral system’s terms and conditions to PGRFA users in such countries, increasing in this way the possibilities of getting monetary benefits flowing back to the benefit-sharing fund. On the other hand, this non-discriminatory treatment may have the effect of discouraging countries from becoming parties to the Treaty or from implementing it effectively, as we will explain later in this chapter.

Around 75 per cent of the PGRFA distributed by the IARCs are materials that the centres had been involved in improving (ITPGRFA, 2007a, 2009a, 2011a). This figure confirms the observed general trend that improved materials and breeding lines are exchanged more frequently than materials held in gene banks (FAO, 2010, 96).

The ITPGRFA’s Governing Body has stressed the importance of documenting the use of the SMTA (ITPGRFA, 2011c, para. 16). During the third session of the Governing Body, member countries agreed on the reporting schedule and the format for PGRFA providers using the SMTA to notify the third party beneficiary, pursuant to Article 5.e of the SMTA (see Chapter 8 by Gerald Moore in this volume). Although this information would be extremely useful to evaluate the functioning of the multilateral system across countries and PGRFA users worldwide and, in general, to analyse how the system actually contributes to food security in different countries, the Governing Body has decided to treat such information as confidential, which means that the information gap will continue to exist at least until the moment countries decide to publish or make available their records on the use of the SMTA (ITPGRFA, 2009c, Appendix A, 25–32).

**Incentives and challenges in the implementation of the multilateral system**

**Incentives**

All countries rely on PGRFA coming from abroad to adapt crops to the different variables that intervene in the food production and supply chain – from the environmental conditions in the production fields to the crop transportation and storage capacities and the consumers’ preferences (Flores Palacios, 1998; Gepts, 2004; Kloppenburg and Kleinman, 1987). The multilateral system of the ITPGRFA
provides for facilitated access to a diverse pool of PGRFA that scientists and farmers can use to develop plant varieties suited to the existing conditions. Such facilitated access is the greatest and most obvious incentive for countries to join the Treaty and implement the multilateral system.

Countries’ consciousness that their agricultural production depends on genetic resources conserved in other countries tends to increase when they face episodes of devastating pests and climate conditions threatening the whole national production of staple crops (Joshi et al., 2010; Taylor, 2011). Enhancements to national research and breeding capacities have contributed to raising countries’ awareness of the importance of having access to other countries’ reserves of plant diversity. The steady rise in research on the most important crops in developed and developing countries during the last decades (rice, wheat and maize) and the rapid distribution of new varieties of these crops have evidenced the extent to which national agriculture production relies on genetic resources coming from other countries (Evenson and Gollin, 2003, 7–38). Representatives from China and Brazil, two countries that have experienced a rapid economic growth and that have made impressive investments in agricultural research in the last 10–15 years, have repeatedly declared that their crop improvement programmes rely heavily on germplasm coming from abroad (Brazil, 2009, 8; Nature Editorial, 2010; People’s Republic of China, 2008, 55). Another factor that helps national actors recognize the need for having access to other countries’ genetic resources is their involvement in regional and international networks and initiatives for plant genetic resources conservation and use. Networks that facilitate the exchange of germplasm between their members show that only by sharing their own germplasm can countries have access to other’s genetic resources. This is the case in regional networks such as the European Cooperative Programme for Plant Genetic Resources and the Pacific Agricultural Genetic Resources Network (Taylor, 2011) as well as crop networks such as the INGER.

For many national experts, the multilateral system represents an opportunity for countries to improve their national genetic resources systems and to become more visible among decision makers. The actions needed to effectively implement the ITPGRFA, and the multilateral system in particular, are closely related to the enhancement of different components of the national systems on genetic resources, such as ex situ collections, breeding programmes, PGRFA documentation systems and coordination tools among different entities working on genetic resources. In the course of developing mechanisms to implement the Treaty, stakeholders can contribute to ‘putting things in order’ in their own genetic resources systems and strengthening national capacities to conserve and use genetic resources. In Peru, for example, one of the results that has developed from identifying PGRFA conserved by national institutions that could be included in the multilateral system has been that the INIA has recognized and classified almost 8,000 accessions that were held by public research entities (including the INIA’s decentralized stations) and that had not been clearly included in the INIA’s records until now (Sigüeñas Saavedra et al., 2011).

Another important motivation for countries to become active members in the multilateral system is the possibility of getting support from different financing
mechanisms, such as the Global Crop Diversity Trust (GCDT) and the benefit-sharing fund of the ITPGRFA. The former provides funds for countries to upgrade valuable PGRFA collections through regeneration and safety backups of germplasm under the condition that such germplasm will be made available in the multilateral system of the Treaty (GCDT, 2010, 11). So far, over 100 institutions in more than 80 countries have received support from the GCDT to improve the conservation and management of PGRFA collections (ibid., 9). It is predicted that around 90,000 accessions of at-risk, unique germplasm will be made publicly available under the SMTA as a result of the GCDT-supported regeneration work (Fowler and Hawtin, 2011). The fact that money is actually available in the Treaty’s benefit-sharing fund and that it is being distributed among various national projects has increased members’ trust in the system’s ability to balance access to genetic resources and access to the financial support necessary to conserve and use the genetic resources (see Chapter 12 by Godfrey Mwila in this volume).

In addition, PGRFA listed in Annex 1 of the Treaty resulting from projects funded by the benefit-sharing fund shall be made available according to the terms and conditions of the multilateral system, and information generated by such projects shall be made publicly available within one year of the completion of the project (ITPGRFA, 2009c, Appendix A, 4).

In general, countries appreciate the clarity and legal certainty that the ITPGRFA provides for the exchange of PGRFA within the multilateral system. Many governments have struggled to develop and approve access and benefit-sharing regulations. In a number of countries, the legal status of genetic resources and how they can be accessed and used is not clear and both potential users and providers get lost in the complexity of laws, regulations and authorities involved in the process of granting access permits. More than 35 national reports submitted to the FAO for the preparation of the Second Report on the State of the World’s Plant Genetic Resources for Food and Agriculture state that governments lack the necessary multidisciplinary scientific, institutional and legal capacity to develop a satisfactory system of ABS, given the inter-related dimensions of access, benefit-sharing possibilities, protection of local community rights and traditional knowledge, and connected issues of intellectual property. In some countries, the national authorities are reluctant to negotiate and grant access permits because they are afraid of doing things incorrectly (Lapeña et al., 2010; Wambugu and Muthamia, forthcoming). In this scenario, the availability of a standard ABS contract (the SMTA) that is agreed upon internationally, that can be signed without the intervention of governmental agencies and that saves providers and recipients the risk of writing inappropriate clauses has relieved many actors.

Finally, national stakeholders – in particular, those in developing countries – have big hopes that the multilateral system will give them access to knowledge and technologies, including those protected by intellectual property rights. Active participation in the multilateral system has been identified as an avenue for opening up greater regional and international collaboration and partnerships in various areas of germplasm conservation and use. These partnerships are important for germplasm exchange and access to scientific information and technology.
**Challenges**

Probably the biggest challenge in the implementation of the ITPGRFA in many countries is the lack of awareness and knowledge of the Treaty. National policy makers lack an appreciation for the national dependence on foreign germplasm and are not aware of the benefits that the country can gain by becoming an active member in the multilateral system. Without the support of their governments, Treaty focal points find it difficult to move the implementation agenda ahead (Altoveros et al., forthcoming; Lapeña et al., 2010; Sadiki et al., forthcoming; Wambuugu and Muthamia, forthcoming).

In various countries, such a lack of awareness is a problem not only among high level decision makers but also among the PGRFA users themselves. The multilateral system has started to operate in an environment where genetic resource issues are highly politicized. In the last few decades, public attention has been more and more fixated on the activity of private companies that increasingly concentrate seed commercialization worldwide as well as by how these companies commercialize new varieties under very strict schemes of intellectual property rights. Civil society organizations and governmental entities have evidenced cases in which genetic resources found in developing countries have been misappropriated by industry in the developed world. There have been an increasing number of media reports about alleged cases of bio-piracy especially levelled against Western countries. While, at times, it is clear that these reports are founded on shaky factual foundations, such assertions resonate with the public and create a misleading and incorrect impression about the prevalence of this activity (Finston, 2005). In addition, they have contributed to shaping the perceptions about the potential value of germplasm, making scientists, policy makers and civil society organizations feel that all germplasm has a high potential economic value and that they need to guard against losing control over their germplasm and, thus, should protect their capacity to negotiate the conditions of access to every single sample of germplasm (Tumushabe and Mugoya, 2004).17 Policies on access to genetic resources have been the target of politics, misconceptions and negative publicity (Carriazosa et al., 2004), and bilateral access and benefit-sharing agreements that were initially formulated in a collaborative and transparent manner have ended up being controversial due to the political context in which they have taken place (Rosenthal and Katz, 2004). With this background of mistrust and misunderstanding, it is not surprising that some sectors see the multilateral system of the ITPGRFA as a tool for industrialized countries to get easy access to poor countries’ germplasm (Egziabher et al., 2011). The implementation of the multilateral system will be hard until this and other similar opinions are overcome, and it can only take place if, in turn, the multilateral system is put in place effectively. These difficulties are aggravated in those countries where there was very little consultation before the decision to ratify the Treaty was made. Now, at the implementation stage, focal points realize that they have to begin to raise awareness from scratch.

Many actors have repeatedly stated that the implementation of the multilateral system should take place in a balanced way, meaning, first, that the different elements
of the ITPGRFA (the multilateral system, farmers’ rights, the conservation of PGRFA, the sustainable use of PGRFA and so on) should be paid equal attention at both the Governing Body and individual country levels (Chapter 12 by Godfrey Mwila in this volume; Egziabher et al., 2011). Second, it means that, together with PGRFA, parties to the Treaty should put financial resources into the multilateral system to support developing countries’ efforts to implement the Treaty (ITPGRFA, 2007b, para. 49; 2009c, Appendix A, 21–22). Third, it means that the sharing of non-monetary benefits such as information, knowledge, capacities and technology should be considered as important as the monetary benefit sharing and should be properly addressed by both the Governing Bodies’ and the member countries’ work plans for the implementation of the multilateral system (ITPGRFA, 2011c). Some governments’ lack of will to make their PGRFA available in the multilateral system is partially because they feel that developed countries have neither submitted enough funds to the Treaty’s funding strategy nor adopted any clear measure to share information, technologies and capacities for PGRFA conservation and use with developing countries (Chapter 12 by Godfrey Mwila in this volume).

Another element that limits some countries’ motivation to implement the multilateral system is that it is difficult to comprehend its potential benefit for poor farmers. Many perceive the multilateral system to be focused mostly on ex situ conservation and meeting the needs of gene bank managers and plant breeders. They feel that it pays little attention to in situ conservation and the needs of other actors who play an important role as conservers and generators of crop diversity – that is, the farmers and, in particular, the low income farmers in developing countries. These perceptions are based on different facts. First, the majority of national delegations that were involved in the negotiations of the Treaty and that are currently involved in the Treaty’s Governing Body come from agricultural research institutes and are naturally biased by their own institutes’ reality and problems, which are not necessarily the same as farmers’. Some non-governmental organizations representing farmers’ interests were very active during the Treaty negotiations and some national delegations were strongly committed to supporting farmers’ interests, but their efforts focused on getting farmers’ rights included in the Treaty, rather than bringing the multilateral system closer to farmers’ priorities and modus operandi (Chapter 6 by José Esquinas-Alcazar, Angela Hilmi and Isabel López Noriega in this volume; Egziabher et al., 2011). For these reasons, the negotiations have resulted in a multilateral system on ABS that seeks to serve poor farmers’ well-being in the long run but whose operative elements (ex situ collections, 22 page-long standard material transfer agreement, funding strategy, international benefit-sharing fund, third party beneficiary and international arbitration) are considerably removed from the reality of most farmers in developing countries.

Second, many if not most of the rural communities in developing countries continue to use traditional or informal sources to meet their seed needs. Common figures suggest that the formal seed production and distribution system provides for around 15 per cent of the total seed used by farmers in developing countries (Cooper, 1993; FAO, 1998, 2010; Hodgkin et al., 2007), although the situation varies by crop
and region. Recent studies show that in Morocco, for example, the rate of certified seed used by farmers in grain and legume production ranges from 1–13 per cent (Sadiki et al., forthcoming). The rest may have been selected from the farmers’ own crop in the preceding season, exchanged or purchased from other farmers or institutions or be a mixture of seeds from a combination of sources (Bellon and Risopoulos, 2001; Jarvis and Ngung’u-Silton, 2000; Sperling and McGuire, 2010).

Only a certain number of improved varieties produced by breeders enter into these informal circuits of seed production and distribution, for different reasons that include weak or non-existent formal seed production and distribution mechanisms (such as extension services, seed industry and seed market) and farmers’ lack of trust in seed sources that are different from traditional ones (Jarvis et al., 2011; Lapeña et al., 2010).

In addition, it has been recognized that modern improved varieties released by breeders do not often meet environmental conditions and production techniques of farms in remote and marginal areas (Cooper, 1993; Jarvis et al., 2011). Taking into account that, at the present time, the main users of PGRFA in the multilateral system are public sector breeders aimed at producing new varieties that farmers can acquire largely through formal seed production and distribution systems, we can understand why some stakeholders feel that the multilateral system does not properly meet the needs of farmers. The multilateral system’s benefits for such farmers may continue to be uncertain until the linkages between formal and informal research, development and seed distribution systems are enhanced in ways that allow farmers to benefit from modern varieties as much as they benefit from the traditional ones. The tasks of establishing and maintaining appropriate seeds systems are beyond the scope of the multilateral system, but we cannot ignore the fact that the ability of the Treaty to achieve its final objectives of sustainable agriculture and food security depend, to a great extent, on the accomplishment of such tasks.

In regard to monetary benefit sharing, international farmers’ organizations have expressed their disappointment about the way the money in the benefit-sharing fund is being spent. After the first round of projects was approved, they complained about the fact that the bulk of the fund went to governmental and non-governmental organizations, instead of farmers, and that most of the selected projects were not for on-farm conservation (Kastler et al., 2009). One of the challenges being posed to the parties to the ITPGRFA and international organizations from civil society organizations is to find ways to facilitate farmers’ access to germplasm in the multilateral system and to monetary and non-monetary benefits arising from its use. The apparent distance between the multilateral system and farmers is seen as a disincentive for the Treaty’s implementation, but it can also be taken as an opportunity for countries and international organizations to revisit the role and recognition of farmers in plant conservation, research and development schemes to elevate their profile.

Another stakeholder group that has expressed dissatisfaction with the multilateral system is the private sector. Although the seed industry strongly supports the multilateral system’s principles and the adoption of standard procedures for facilitated access
to germplasm, they complain about various terms and conditions in the SMTA. These include the fact that the multilateral system does not cover all crops that are important for food and agriculture; the absence of a threshold for the level of incorporation of accessed material in the final product; and the ambiguity in regard to the duration of mandatory benefit sharing in the case of restrictions for further research and breeding (International Seed Federation, 2007). In addition, some companies have expressed concern with regard to the non-harmonized and slow adoption of the multilateral system by countries (Lambalk, 2009). For all of these reasons, it is possible that the most likely candidates for making mandatory payments according to the benefit-sharing provisions of the Treaty and the SMTA may seek PGRFA from sources outside the multilateral system, at least for the time being (Halewood and Nnadozie, 2008).

Figures show that there has been an increase in the number of breeding programmes, particularly in the private sector. However, the allocation of resources to plant breeding has not increased substantially in the last decade, and stakeholders from all of the regions, except Europe, report constraints in human resources, funds and facilities (FAO, 2010, 98–101; GIPB, 2011). There is a common understanding that improved research and breeding capacities in developing countries would lead to an increased demand for genetic materials and, subsequently, would develop a greater interest in the multilateral system among PGRFA users in those countries (Altoveros et al., forthcoming; Lapeña et al., 2010; Sadiki et al., forthcoming; Wambugu and Muthamia, forthcoming). On the other hand, breeders’ uses of PGRFA conserved in national gene banks is limited, largely because of the difficulty of transferring traits from non-adapted environments and the fact that germplasm collections often lack useful characterization or evaluation data. They tend to get their parental materials from their own or others’ working collections and from nurseries supplied by international institutions such as the IARCs (FAO, 2010, 96). Since such international institutions provide materials to PGRFA users in any country – whether or not they are parties to the ITPGRFA and whether or not they have made materials available under the multilateral system – there is not much incentive for countries to ratify the Treaty or become providers of PGRFA under the multilateral system.

Through informal consultations with countries’ representatives (we prefer not to cite the sources), we have learned of some people’s reluctance to share PGRFA through the multilateral system because the system does not allow providers of high quality PGRFA to negotiate some type of bilateral benefit sharing. In some countries, including developed countries in south and eastern Europe, resources are scarce, and public institutions have to make an enormous effort to be able to maintain international gene bank standards and to provide PGRFA with high rates of viability that are accompanied by useful information, such as the data resulting from initial characterization and evaluation activities. Representatives of those institutions find it discouraging and frustrating to see their materials transferred to countries with much greater conservation and research capacities without the possibility of obtaining some kind of financial compensation for the efforts they have made under difficult circumstances.
The use of the SMTA represents a big change in many PGRFA users’ usual modus operandi, and it is understandable that the general reaction to the long and complex text of the SMTA has been negative. This tendency is exacerbated in a number of institutions where germplasm has always been transferred without any formal material transfer agreement and on the basis of individual’s personal relationships. Uncertainties around some SMTA provisions and the practical enforcement of its conditions make some providers feel uncomfortable when using it. There have been cases in which the access to PGRFA in the multilateral system has been denied on the basis that the SMTA contains a number of loopholes. It is reasonable to expect that ambiguities in the text of the SMTA and doubts about the efficiency of the third party beneficiary as the main tool for monitoring whether PGRFA users observe the multilateral system’s rules may be clarified as the multilateral system continues to operate. Outstanding questions such as that of Article 6.2 (on the obligation to not get intellectual property rights over the PGRFA in the form received from the multilateral system) could be addressed by arbitration courts in the context of particular cases of intellectual property claims over PGRFA acquired from the multilateral system (Gerstetter et al., 2007; Halewood and Nnadozie, 2008). Monitoring and enforcement issues in general, and the role and actual capacities of the third party beneficiary in particular, will hopefully become more clear when PGRFA users gain more experience in exchanging germplasm in the multilateral system. It may be possible that some of the principles and procedures that were initially established need to be revised in order to increase transparency.

Responsibilities with regard to the signing and archiving of SMTAs are not always clear. This is particularly true in those countries where the legislation on access and benefit sharing has deposited all of the responsibilities to grant access in a unique public authority or where such legislation is so confusing that the public authorities and their capacities are not clear any more. In such a scenario, institutions with the mandate to conserve and distribute PGRFA feel uncertain about their own capacities to sign SMTAs.

Finally, many countries’ representatives have reported a general lack of human, financial and technical capacities needed to effectively implement the multilateral system. Some focal points that have a very broad mandate and count on very limited resources feel discouraged by the long list of complex tasks they have in front of them, including appointing the authorities that will be in charge of the implementation and those that will be responsible for signing the SMTA; clearing sufficient legal space for the operation of the Treaty by clarifying the relationships between different ministries’ mandates and capacities; identifying the collections and materials in the multilateral system; developing the capacity of gene bank curators and scientists working with PGRFA; amending or developing the necessary laws and regulations; and enhancing PGRFA documentation systems and making information on PGRFA available. This last aspect is crucial for making the multilateral system work. One of the most significant obstacles for the greater use of PGRFA is the lack of adequate characterization and evaluation data and the capacity to generate and manage such data (FAO, 2010, 96).
Box 11.1 Capacity development needs

In 2007, the Secretariat of the Governing Body of the ITPGRFA conducted a survey on capacity-building needs among 64 different countries. The survey was distributed to key national stakeholders. The vast majority of the responses were provided by representatives from the government, national research institutes and national gene banks (82 per cent), followed by universities (6 per cent) and the private sector (2 per cent). This synthesis of results reflects the major common needs on these fields in ranked order:

- Assessment of existing laws, administrative practices and their conformity with the ITPGRFA.
- Human resources development, research and studies. Technical assistance is essential to strengthen this need.
- Holding comprehensive consultations among key stakeholders.
- Establishment of a comprehensive legal framework.
- Establishment of functional and administrative measures.


Conclusions

Since the text of the SMTA was adopted in Madrid in 2006, there has been relevant progress in the implementation of the multilateral system, but the commitment, efforts and resources to make the multilateral system work varies considerably from country to country. Publicly available data show that both the amount of PGRFA in the system and the amount of PGRFA exchanged under the SMTA are increasing. However, much more effort has to be made to engage the variety of national actors involved in germplasm conservation and use in the day-to-day implementation of the multilateral system. On the benefit-sharing side, advances have been made to feed the benefit-sharing fund and to make it work effectively, but the exclusive focus on monetary benefit sharing has minimized the attention given to other types of benefit sharing such as information exchange, technology transfer and capacity building, despite the fact that these benefits are of equal or more importance for the effective conservation and use of PGRFA for sustainable agriculture and food security.

Making the ITPGRFA’s multilateral system fully operational requires fundamental changes in the mindset of those stakeholders who continue to be anchored by the relaxed rules that governed the access and use of genetic resources several decades ago and also of those who feel that a fierce control over every sample of PGRFA is the only way to protect countries’ sovereign rights over their genetic resources and the farmers’ rights to have access to the benefits arising from the use of the resources.
Despite the difficulties involved in the implementation of the system where financial and human resources are scarce and where dealing with genetic resource issues is a risky business, a number of developing countries have made impressive advances and have shown a high level of faith in, and commitment to, the multilateral system. The presence of individuals that are knowledgeable about, and devoted to, the Treaty within the national institution in charge of the multilateral system implementation is key to moving things ahead.

The success of the multilateral system relies on the combination of supportive and determined actions at the policy level, effective awareness-raising and capacity-building activities and the adoption of appropriate supporting technology. Ultimately, individual countries’ advances in the implementation of the multilateral system at the national level, together with progress made by countries collectively at the international level through the Governing Body of the Treaty, should build trust in the multilateral system among national PGRFA conservers and users and increase the number of PGRFA users who are confident enough to exchange genetic material within the multilateral system. Only at such a stage can the multilateral system start to function as a central component of a global system of PGRFA conservation and use where different stakeholders in different countries can collaborate with each other in sharing genetic resources, knowledge, technical capabilities and funds.

Notes

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5 See, for example, the recently launched Learning Module on the Treaty on Plant Genetic Resources for Food and Agriculture, Bioversity International, www.bioversityinternational.org/training/training_materials/international_treaty/treaty_module.html (last accessed 15 May 2011).
6 Australia, Environment Protection and Biodiversity Conservation Amendment Regulations 2005 (No. 2), 10 November 2005 (Provision 8A.05); Brazil, Medida Provisoria no. 2 186–16, 23 August 2001 (Article 19, para. 2); Ethiopia, Proclamation no. 482/2006 on Access to Genetic Resources and Community Knowledge, and Community Rights, 27 February 2006 (Article 15); Peru, Reglamento de Acceso a Recursos Genéticos, aprobado por Resolución Ministerial No. 087–2008 y ratificado por Decreto Supremo 003–2009 MINAM, 31 December 2008 (Article 5.c); Philippines, Joint DENR–DA–PCSD–NCIP Administrative Order No. 1 Series of 2005, Guidelines for Bioprospecting Activities in the Philippines, 14 January 2005 (Section 3.1.g); Spain, Ley 30/2006, de semillas y plantas de vivero y de recursos fitogenéticos, 26 July 2006 (Article 45.3).
7 Authors’ communications with focal points and members of the delegations of Canada, Kenya, the Philippines, Poland, Spain and Switzerland in 2009 and 2010 and the reports of the Joint Capacity Building Programme from 2008 to 2011 have confirmed this impression.

8 Such as ProSpecieRara, FRUCTUS Association Suisse pour la Sauvegarde du Patrimoine Fruitiere and the Association de l’Arboretum du Vallon de l’Aubonne, among others.

9 Composition of the European regional group: Albania, Armenia, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Slovakia, Sweden, Spain, Switzerland, Turkey, United Kingdom (countries in italics are those that have reported that they have put PGRFA in the multilateral system).


11 Association pour l’Etude et l’Amélioration du Maïs (Pro-Maïs) and Association Française des Semences de Céréales à paille et autres espèces Autogames (May 2009).


13 Of these proposals, 31.7 per cent came from Africa, 28.3 per cent from Asia, 23.6 per cent from Latin America and the Caribbean, 7.5 per cent from the Near East, 6.2 per cent from Europe, 1.5 per cent from the southwest Pacific and 1.1 per cent from North America.

14 NordGen (Tilander, 2009), International cocoa genebank (personal communication with Path Umaharan, December 2010) and the international coconut gene bank for Africa and the Indian Ocean (personal communication with Jean Luis Konan, February 2011).

15 The reports of the IARCs and CATIE do not cover transactions in the year 2010 and do not include all distributions and acquisitions by all of the centres. The report of the European Regional Group provides information about the number of accessions for Germany only, while for the other countries it presents the number of SMTAs signed only, not the number of samples of accessions transferred. The reader must also bear in mind that, on the other hand, this figure might include some duplication. For example, a transaction of germplasm between CATIE and a CGIAR centre could have been reported twice – as a transfer by CATIE and as an acquisition by the CGIAR centre. This situation would be rare though.

16 To date, the following are member countries of the European Gene Bank Integrated System (AEGIS): Albania, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Georgia, Germany, Iceland, Ireland, Lithuania, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Switzerland, United Kingdom and Ukraine. See AEGIS, www.aegis.cgiar.org (last accessed 5 June 2011).

17 This principle was in many country representatives’ minds during the Treaty negotiations on the Annex 1 list. See Chapter 14 by Bert Visser in this volume.

18 As Article 6.2 states, ‘[t]he Recipient shall not claim any intellectual property or other rights that limit the facilitated access to the Material provided under this Agreement, or their genetic parts or components, in the form received from the Multilateral System.’

References


