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IMPLEMENTING 'MUTUALLY SUPPORTIVE' ACCESS AND BENEFIT SHARING MECHANISMS UNDER THE PLANT TREATY, CONVENTION ON BIOLOGICAL DIVERSITY, AND NAGOYA PROTOCOL

Michael Halewood, Elsa Andrieux, Léontine Crisson, Jean Rwihaniza Gapusi, John Wasswa Mulumba,
Edmond Kouablan Koffi, Tashi Yangzome Dorji, Madan Raj Bhatta and Didier Balma

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INTRODUCTION

The objectives of the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) are basically identical – to promote the conservation and sustainable use of the biological diversity and the equitable sharing of benefits derived from its use.¹ However, the access and benefit-sharing systems to which these international agreements commit their member states in pursuit of these common objectives are very different. One system, under the ITPGRFA, is designed to support the international pooling and sharing of genetic resources for agricultural research and food security. The other system, under the CBD, is designed to allow each country to carefully control access to its sovereign resources, subject to individually tailored benefit-sharing agreements.

Progress in domestic implementation of both systems has been considerably slower than expected. One factor contributing to this delay is that national policy makers are uncertain about how to address the interface between these two access and benefit-sharing systems. This challenge is exacerbated by the fact that, in most countries, departments of agriculture have responsibility for domestic implementation of the ITPGRFA, and departments of environment are responsible for the CBD, and these agencies are often not coordinating sufficiently their policy development concerning access and benefit-sharing issues. Another factor contributing to delay is that, so far, no comprehensive guidelines or decision-making tools have been created to assist countries to implement the ITPGRFA's multilateral system of access and benefit sharing. Such guidelines

do exist with respect to access and benefit-sharing norms under the CBD, most notably in the form of the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of their Utilisation (Bonn Guidelines), which were adopted by the sixth Conference of the Parties to the CBD in 2002. That said, the Bonn Guidelines do not address the interface with national systems implementing the ITPGRFA.²

This article seeks to respond to these challenges. The article sets out the fundamental issues that need to be addressed and the steps that national policy-makers need to follow, when implementing ITPGRFA's multilateral system of access and benefit sharing. The article identifies the main points of intersection, at the national level, between the ITPGRFA's multilateral system, and laws to implement access and benefit-sharing norms under the CBD. It analyses the hazards that can result from the mismanagement of that interface and offers recommendations for overcoming these hazards, to ensure that access and benefit-sharing systems under the ITPGRFA and CBD are mutually supportive. To set the scene for this analysis, the article begins with a brief overview of the most salient (and contrasting) elements of the access and benefit-sharing systems anticipated by the CBD (including the recently adopted Nagoya Protocol³) and the ITPGRFA.

This article is based on research conducted (and practical lessons learned) in a number of countries supported by the Genetic Resources Policy Initiative (Phase 2) (GRPI-2), an international project designed to support domestic implementation of the ITPGRFA's multilateral system of access and benefit

1 Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, 31 *Int'l Leg. Mat.* 818 (1992) [CBD]; International Treaty on Plant Genetic Resources for Food and Agriculture, Rome, 3 November 2001, available at <http://www.planttreaty.org/content/texts-treaty-official-versions> [ITPGRFA].

2 Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising Out of Their Utilisation, Decision VI/24, Adopted by the Conference of Parties at its sixth meeting held in the Hague, April 2002 [Bonn Guidelines].

3 Nagoya Protocol on Access and Benefit Sharing and the Fair and Equitable Sharing of Benefits Arising from their Utilisation, Adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting held in Nagoya on 29 October 2010, [Nagoya Protocol].

sharing.⁴ The steps proposed by the article to implement the multilateral system were developed with the leaders of eight national project teams supported by GRPI-2 and are being 'piloted' in those countries.

1

TWO VERY DIFFERENT VISIONS: MULTILATERAL AND BILATERAL ACCESS AND BENEFIT SHARING

1.1 The ITPGRFA's Multilateral System of Access and Benefit Sharing (Multilateral System)

The ITPGRFA creates the multilateral system, whereby contracting parties agree to virtually pool a subset of the genetic resources of 64 crops and forages to be used for 'utilisation and conservation for research, breeding and training for food and agriculture' (Article 12.3(a)). The main attraction of the multilateral system is that it allows participants

to enjoy a multiplier effect. In exchange for putting plant genetic resources for food and agriculture (PGRFA) of the listed genera in the system, they get facilitated access to the pooled PGRFA of all the other (currently 127) member countries with minimal transaction costs. A number of studies confirm that countries have proactively taken advantage of other, closely related systems of facilitated access to receive a wide diversity of plant genetic resources, often considerably more than they put in.⁵ The multilateral system operates using the first-ever internationally agreed upon formula for sharing benefits associated with the use of PGRFA. Monetary benefits derived from commercialisation (or voluntary donations) are directed to an international benefit-sharing fund, which dispenses funds under the direction of the ITPGRFA's governing body.

Not all of the PGRFA of the 64 crops and forages listed in Annex 1 of the ITPGRFA are included in the multilateral system. The negotiators of the ITPGRFA appreciated that it would be difficult, if not impossible, for most countries to agree to put *all* of the genetic resources of these genera in the multilateral system. Consequently, they adopted a formula whereby some subsets of the PGRFA of the listed genera are automatically included, with

4 To complement the authors' country-specific research and expert knowledge, a literature review was conducted concerning progress implementing access and benefit-sharing mechanisms in the 127 countries that are parties to both the ITPGRFA and the CBD. Surveys were sent to 33 countries that were identified as making the most substantial progress implementing the multilateral system, to see how, among other things, they addressed the interface with CBD-inspired access and benefit-sharing laws. Efforts in the first phase of the GRPI project (2002–08) to create multi-stakeholder, multi-disciplinary, and multi-sectoral (3M) research platforms to support development of national agrobiodiversity-related policies were analysed by E. Wale, N. Chishakwe & R. Lewis-Lettington, 'Cultivating Participatory Policy Processes for Genetic Resources Policy: Lessons from the Genetic Resources Policy Initiative', 18 *Biodiversity Conservation* 1 (2009), and by E. Wale, 'Challenges in Genetic Resources Policy Making: Some Lessons from Participatory Policy Research with a Special Reference to Ethiopia', 17 *Biodiversity Conservation* 21 (2007). The GRPI-2 project maintains a project blog at <http://grpi2.wordpress.com/about/grpi-2/>.

5 System-wide Genetic Resources Programme (SGRP), *Experience of the International Agricultural Research Centres of the Consultative Group on International Agricultural Research with the Implementation of the Agreements with the Governing Body, with Particular Reference to the SMTA for Annex I and non-Annex I crops*, Doc IT/GB-4/11/Inf. 10 (2011), available at <http://www.planttreaty.org/content/gb4>; I López Noriega et al, Flows under Stress: Availability of Plant Genetic Resources in Times of Climate and Policy Change (Copenhagen: CCAFS, Working Paper 18, 2012), available at <http://hdl.handle.net/10568/21225>; M. Halewood et al, Germplasm Flows in and out of Kenya and Uganda through the CGIAR: A Case Study of Patterns of Exchange and Use to Consider in Developing National Policies, in *Report on Bellagio Meeting on Plant Genetic Resources in East and Central Africa: Protecting and Enhancing the Ability of Public Sector Scientists to Freely Access Germplasm* (Washington, DC: Meridian Institute, 2004); C. Fowler, S. Gaiji & M. Smale, 'Unequal Exchange? Recent Transfers of Agricultural Resources and their Implications for Developing Countries', 2 *Dev. Policy Rev.* 181 (2001).

the rest remaining outside the multilateral system unless/until they are voluntarily included.⁶

According to the ITPGRFA, access to genetic resources in the multilateral system will be provided 'expeditiously' and either free of charge or for 'minimum costs involved' (Article 12.3(b)) using the standard material transfer agreement (SMTA) adopted by the governing body of the ITPGRFA (Article 12.4).⁷ The SMTA includes non-negotiable terms related to the permitted uses of the supplied resources, benefit sharing, prohibitions regarding intellectual property rights, reporting, information sharing, dispute resolution, and enforcement by a representative of the third party beneficiary interests

of the multilateral system.⁸ The SMTA legally binds both providers and recipients to the fundamental terms of the multilateral system and sets the stage for the enforcement of those terms. Interestingly, the SMTA, which is a private contract between individual providers and the recipients, is relied upon as the principle mechanism for the operation of the multilateral system – which is a creation of international public law.⁹ Not surprisingly, it took the parties to the ITPGRFA a number of years to negotiate the SMTA.¹⁰

Now that the SMTA has been adopted (and its terms are unalterable), one could argue that the hardest task – agreeing upon access and benefit-sharing

6 A third source of materials included in the multilateral system are international institutions that have signed agreements with the governing body of the ITPGRFA, placing collections they manage under the ITPGRFA framework. In 2006, the eleven CGIAR centres hosting international plant genetic resources for food and agriculture (PGRFA) collections signed such agreements. To date, those collections (approximately 750,000 accessions) represent the majority of the PGRFA that is confirmed as being within the multilateral system. Since the focus of this article is on countries' implementation of the multilateral system (and not international organisations'), this article does not deal with material held by international institutions.

7 The Ad Hoc Technical Advisory Committee (TAC) of the Standard Material Transfer Agreement (SMTA) and the Multilateral System of the Treaty has recently opined that 'minimum costs involved' should be interpreted narrowly, limited to the costs of shipping and handling the samples concerned, *see* TAC of the SMTA, Report of the Fourth Meeting of the Ad Hoc Advisory Technical Committee on the Standard Material Transfer Agreement and the Multilateral System, 6 (Rome: FAO, 2012), available at <http://www.planttreaty.org/sites/default/files/ACSMTA4Re.pdf>.

8 According to the SMTA, in addition to the genetic resource, providers will also make available, non-confidential information about the transferred resource (Article 5b). Recipients are not allowed to seek intellectual property rights over materials in the multilateral system that would restrict access to the same resource by others in the form it was received by the recipient (Article 6.2). Users of materials accessed from the multilateral system must choose between two mandatory monetary benefit-sharing options. The default benefit-sharing schema is that the recipient will pay 1.1 per cent of gross sales to the international benefit-sharing fund established under the ITPGRFA if they commercialise new PGRFA products that incorporate materials accessed from the multilateral system and restrict its availability to others to use for training research or breeding (Article 6.7). Alternatively, recipients can opt for a benefit-sharing formula whereby they pay .5 per cent of gross sales on all PGRFA products of the species they accessed from the multilateral system, regardless of whether the products incorporate the material and regardless of whether or not the new products are available without restriction (Article 6.11). Materials received and conserved by one recipient under the SMTA must be passed on using the SMTA. If a recipient incorporates PGRFA received under the SMTA into a new PGRFA under development (by cross breeding, for example) the newly developed materials must also be passed on using the SMTA.

9 D. Manzella, 'The Design and Mechanics of the Multilateral System of Access and Benefit-Sharing', in M. Halewood, I. López Noriega, S. Louafi (eds), *Crop Genetic Resources as a Global Commons: Challenges in International Law and Governance* (London: Routledge, 2013).

10 E.S. Lim, 'El proceso de elaboración del acuerdo normalizando de transferencia de material', in Recursos Naturales y Ambiente (ed), *El sistema multilateral de acceso y distribución de beneficios del Tratado Internacional sobre los Recursos Fitogenéticos para la Alimentación y la Agricultura* (Turrialba: Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), 2008).

conditions – has been done. Contracting parties are now left with the task of putting systems in place to support the use of the SMTA when a request is made for access to multilateral system PGRFA in their country. In this regard, contracting parties have undertaken to 'take the necessary legal or other appropriate measures to provide [facilitated] access to other contracting parties, including natural and legal persons within their jurisdictions' (ITPGRFA, Article 12.2). Part 2 of this article sets out nine issues that countries need to address and the steps they should follow to assess and implement related measures.

1.2 Bilaterally Oriented Access and Benefit-sharing Regulations Under the CBD and the Nagoya Protocol

National implementation of the multilateral system does not take place in a policy vacuum. Requests for PGRFA that are not included within the multilateral system (or that are requested for purposes other than those set out in the SMTA) will be subject, by default, to whatever other laws or policies apply in the country. All of the 127 contracting parties to the ITPGRFA have also ratified the CBD, so, in theory, the national access and benefit-sharing norms that apply to materials outside the multilateral system will be inspired by, and consistent with, the CBD.¹¹

A great deal has already been written about national level implementation of access and benefit-sharing laws created pursuant to the CBD.¹² We limit

ourselves here to highlighting some of the most salient factors, particularly those that stand in contrast to the multilateral system under the ITPGRFA, to help readers appreciate why the interface between the two systems is potentially complicated. Article 15 of the CBD underscores the sovereign right of national governments to regulate access to genetic resources. It specifies that such access should be subject to the prior informed consent of national competent authorities, upon mutually agreed terms. It is theoretically possible for countries to construct multilateral access and benefit-sharing schemes upon this legal foundation – indeed, that is what the ITPGRFA has done. However, to date, national strategies to implement Article 15 have generally focused on creating systems to facilitate case-by-case applications for access, resulting in individually tailored benefit-sharing agreements, after negotiations between applicant, providers, and competent national authorities.¹³ National legislation and regulations to promote this approach create processes for applying for access, negotiating agreements, and obtaining authorisation from competent authorities. They are designed to ensure that no loop holes exist whereby unauthorised access can be obtained.¹⁴ The Bonn Guidelines, adopted by the Conference of the Parties to the CBD, reinforce this bilaterally oriented approach. So too have a number of guidelines and decision-making tools developed by organisations that provide technical assistance to countries implementing the CBD.¹⁵ The access and benefit-

11 The CBD has 198 member states.

12 J. Cabrera, F. Perron-Welch & O. Rukundo, *Overview of National and Regional Measures on Access to Genetic Resources and Benefit-Sharing: Challenges and Opportunities in Implementing the Nagoya Protocol* (Montreal: Centre for International Sustainable Development Law, 1st ed. 2011); G.S. Nijar et al, *Framework Study on Food Security and Access and Benefit-Sharing for Genetic Resources for Food and Agriculture* (Rome: Commission on Genetic Resources for Food and Agriculture, Background Paper No. 42, 2009); R.J. Lewis-Lettington and S. Mwanyiki (eds), *Case Studies on Access and Benefit Sharing* (Rome: International Plant Genetic Resources Institute (IPGRI), 2006); K. Nnadozie et al, *African Perspective on Genetic Resources: A Handbook on Laws, Policies and Institutions Governing Access and Benefit-Sharing* (Washington, DC: Environmental Law Institute, 2003).

13 M. Halewood, I. López Noriega & S. Louafi, 'The Global Crop Commons and Access and Benefit-Sharing Laws: Examining the Limits of International Policy Support for the Collective Pooling and Management of Plant Genetic Resources', in Halewood, López Noriega & Louafi, note 9 above.

14 M. Ruiz and R. Vernooij, *The Custodians of Biodiversity: Sharing Access to and Benefits of Genetic Resources* (London: Routledge and Ottawa: International Research Development Centre, 2012); See Cabrera, Perron-Welch & Rukundo, note 12 above and Nijar et al, note 12 above.

15 J. Cabrera, *ABS Management Tool: Best Practice Standard and Handbook for Implementing Genetic Resources Access and Benefit Sharing Activities* (Winnipeg: International Institute for Sustainable Development, 2007); R.J. Lewis-Lettington et al., *Methodology for Developing Policies and Laws for Access to Genetic Resources and Benefit Sharing* (Rome: IPGRI, 2006); L. Glowka, *A Guide to Designing Legal Frameworks to Determine Access to Genetic Resources* (Bonn: International Union for the Conservation of Nature (IUCN), 1998).

sharing clearing house maintained by the CBD Secretariat lists 57 countries as having implemented some form of access and benefit-sharing measures. Many more countries are in the process of developing/considering related legislation. Some countries – mostly developed countries – have taken the position that they are able to regulate access and benefit sharing to the extent they desire pursuant to the CBD without creating specialised legislation.

While the Nagoya Protocol to the CBD concerning access and benefit sharing has not yet come into force, it is important to consider it in this context. The Nagoya Protocol goes further than the CBD in terms of the obligations it places on member states vis-à-vis measures to obtain prior informed consent from indigenous and local communities prior to accessing genetic resources and associated traditional knowledge. The Nagoya Protocol also goes much further than the CBD by obliging member states to put mechanisms in place to monitor compliance with foreign access and benefit-sharing laws and agreements and to facilitate enforcement of them in cases of suspected non-compliance.

A growing number of countries are ratifying the Nagoya Protocol, and some are already considering policies and laws to implement it. Some of the countries that did not feel the need to have legislation to implement Article 15 of the CBD now consider it advantageous/necessary to develop legislation to implement at least some aspects (user measures, if not access measures) under the Nagoya Protocol.¹⁶

1.3 Very Different, But 'Mutually Supportive' Nonetheless

Despite the fact that their approaches to access and benefit sharing are very different, the negotiators of the CBD, the Nagoya Protocol, and the ITPGRFA felt it was important to communicate that these agreements are meant to be in harmony with one another. Both the ITPGRFA (Article 1.1) and the Nagoya Protocol (preamble) confirm that the

multilateral system is in harmony with the CBD. Article 4 of the Nagoya Protocol concerning its 'relationship to other agreements' does not explicitly mention the multilateral system but clearly operates to recognise it and exempt it from being affected by the Nagoya Protocol. The same article affirms that the protocol will be 'implemented in a mutually supportive manner' with other international instruments, including presumably the ITPGRFA. The text of the COP decision adopting the text of the Nagoya Protocol affirms that the ITPGRFA, along with the Bonn Guidelines, the Nagoya Protocol, and the CBD are all components of an overarching international regime on access and benefit sharing.¹⁷

Notwithstanding these assertions, national policy-makers in many countries are uncertain about where and how to draw a line between the multilateral system under the ITPGRFA and national access and benefit-sharing laws pursuant to the CBD and Nagoya Protocol and how to manage the interface between those two systems. The third part of this article will identify those situations in which the frontier with, and relationship to, the Convention on Biological Diversity (and the Nagoya Protocol) has proven to be particularly relevant in countries that are 'piloting' mechanisms for implementing the ITPGRFA's multilateral system. The authors will also identify factors at or near the interface of those systems that are contributing to some implementation challenges and suggest practical mechanisms whereby the agencies responsible for the implementation of the two agreements can work together to develop mutually supportive mechanisms.

¹⁶ European Commission, Proposal for a Regulation of the European Parliament and of the Council on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising from their Utilisation in the Union (Brussels: European Commission, 2012).

¹⁷ Conference of the Parties to the Convention on Biological Diversity, Decision X.1 on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation, Doc UNEP/CBD/COP/DEC/X/1 (29 October 2010), available <https://www.cbd.int/decisions/cop/?m=cop-10>. Indeed, this was the explicit assumption from the beginning of the negotiations of the ITPGRFA. The Nairobi Final Act, 1992 (Secretariat of the CBD, 2005), which adopted the text of the CBD called upon the international community to resolve outstanding issues related to PGRFA in conformity with the CBD. In 1993, the FAO Council called for the renegotiation of the International Undertaking on Plant Genetic Resources for Food and Agriculture (a non-legally binding instrument) to be in line with the CBD. Those re-negotiations led to the creation of the ITPGRFA.

2 NATIONAL LEVEL IMPLEMENTATION OF THE MULTILATERAL SYSTEM

While the governing body of the ITPGRFA has not endorsed guidelines for the implementation of the multilateral system, over the years since the Treaty came into force there has been a slow evolution (informal, unwritten) of agreement regarding the requirements or issues that countries need to address as part of their implementation of the multilateral system. This informal agreement is based partly on a common sense, plain reading of the ITPGRFA and partly on the body of shared knowledge and experiences that has developed over recent years. The Ad Hoc Technical Advisory Committee on the SMTA and Multilateral System of the Treaty (TAC), which was created by the ITPGRFA's governing body, has provided non-binding opinions on a number of issues related to national-level implementation of the multilateral system.¹⁸ International research and conservation organisations and universities have developed introductory instructional guides,¹⁹ training materials,²⁰ and scholarly interpretations of key Treaty provisions.²¹

They have also conducted studies assessing the state of implementation of the multilateral system.²² Some countries are working on their own to develop procedures and following steps that they determine are appropriate.²³

Based on these precedents, research teams headed by the national ITPGRFA focal point (or higher-level competent authority) in eight countries supported by the GRPI project, working together with technical experts from Bioversity International, have developed common terms of reference for research and capacity building to support national implementation of the multilateral system.²⁴ They include the investigation of what the researchers considered core issues related to the implementation of the multilateral system. In the ensuing period, based on country experiences and research, the authors have identified a set of nine common, practical, legal, and administrative issues that countries need to address when implementing the multilateral system. Of course, countries have considerable latitude in how they approach domestication of the multilateral system. They can exceed the steps we propose in the following sections, to add value to their contributions to the

18 TAC of the SMTA, note 7 above. Their reports are available at <http://www.planttreaty.org/inter-sessional>.

19 G. Moore and W. Tymowski, Explanatory Guide to the International Treaty on Plant Genetic Resources for Food and Agriculture (Bonn: IUCN, 2005).

20 G. Moore and E. Goldberg, International Treaty on Plant Genetic Resources for Food and Agriculture: Learning Module (Rome: Bioversity International, 2010), available at http://www.bioversityinternational.org/training/training_materials/international_treaty.html.

21 C. Correa, 'Recursos fitogenéticos bajo la administración y control de las partes contratantes y en el dominio público: ¿cuán rica es la canasta del sistema multilateral?' in Recursos Naturales y Ambiente (ed), *El sistema multilateral de acceso y distribución de beneficios del Tratado Internacional sobre los Recursos Fitogenéticos para la Alimentación y la Agricultura* (Turrialba: CATIE, 2008); C. Correa, 'Plant Genetic Resources under the Management and Control of the Contracting Parties and in the Public Domain: How Rich is the ITPGRFA's Multilateral System?', in Halewood, López Noriega & Louafi, note 9 above; G.S. Nijar, Malaysia's Implementation of the Multilateral System of Access and Benefit-Sharing (Rome: Bioversity International and Kuala Lumpur: Malaysian Agricultural Research Development Institute, 2012).

22 I. López Noriega, P. Wambugu & A. Mejias, 'Assessment of Progress to Make the Multilateral System Functional: Incentives and Challenges at the Country Level', in Halewood, López Noriega & Louafi, note 9 above; G. Mwila, 'From Negotiations to Implementation: Global Review of Achievements, Bottlenecks and Opportunities for the Treaty in General and the Multilateral System in Particular', in Halewood, López Noriega & Louafi, note 9 above; M. Halewood et al., 'Changing Rates of Acquisition of Plant Genetic Resources by International Genebanks: Setting the Scene to Monitor an Impact of the International Treaty', in Halewood, López Noriega & Louafi, note 9 above.

23 FAO, Review of the Implementation of the Multilateral System, Doc IT/GB-3/09/13 (1-5 June 2009), available at <http://www.planttreaty.org/content/gb3>; FAO, Compilation of Submissions by Contracting Parties on the Implementation of the Multilateral System, Doc IT/GB-4/11/Inf. 09 (14-18 March 2011), available at <http://www.planttreaty.org/content/gb4>.

24 R. Vernooy and M. Halewood, Strengthening National Capacities to Implement the International Treaty on Plant Genetic Resources for Food and Agriculture: Report of the Research Planning and Training Workshop (Rome: Bioversity International, 2012), available at [http://www.bioversityinternational.org/index.php?id=19&user_bioversitypublications_pi1\[showUid\]=6930](http://www.bioversityinternational.org/index.php?id=19&user_bioversitypublications_pi1[showUid]=6930).

system, and their own constituents' ability to take advantage of it. We note some such options in passing. However, the purpose here is to propose the minimum steps that countries can take to meaningfully implement the multilateral system.

2.1 Issue 1: Is There 'Legal Space' to Implement the Multilateral System?

Member states must be able to provide facilitated access to PGRFA in the multilateral system under the terms of the ITPGRFA using the SMTA. One fundamental issue that all member states need to address is whether there are policies or laws in force in the country that would impede their ability to do so. Access and benefit-sharing laws passed to implement the CBD are particularly important in this context. Many countries with specialised access and benefit-sharing legislation developed those laws before they ratified the ITPGRFA, so they do not include procedures related to the multilateral system.²⁵ In such cases, it is necessary to investigate means by which these laws can be amended, or powers established by them can be exercised, to create the requisite 'legal space' to provide facilitated access to the multilateral system using the SMTA (see Box 1 for examples of such laws). In the absence of such accommodation, full implementation of the multilateral system will not be possible.

Box 1: National access and benefit-sharing laws limiting the implementation of the multilateral system

India's *Biological Diversity Act, 2002 (BDA)* and *Biological Diversity Rules, 2004 (BDR)* establish standards for requesting and granting access to biological resources and associated knowledge. They also establish a National Biodiversity Authority (NBA) to consider requests. The *BDA* and the *BDR* include PGRFA within their combined scope. There is a provision exempting

genetic resources that are exchanged as part of projects that are approved by the national government. This exemption has been used in some cases to approve the transfer of a relatively small number of samples of PGRFA out of India using the SMTA.²⁶ However, this exemption does not appear to be broad enough, on its own, to create the requisite space for the full implementation of the multilateral system. One option to address the situation would be to exercise the power provided under Article 40 of the *BDA* for the central government to declare that the *BDA* does not apply to PGRFA under the Treaty or the multilateral system.²⁷

Pursuant to powers conferred by the *Environmental Management and Co-ordination Act, 1999*, the Kenyan Minister for Environment and Natural Resources issued the *Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit-sharing) Regulations, 2006, Legal Notice No. 160*. These regulations require parties seeking access to genetic resources in Kenya – including most PGRFA that would otherwise fall under the multilateral system²⁸ – to apply to the National Environment Management Authority for an access permit. The regulations include processes for applying for access, fees, and a list of mandatory terms

²⁵ Most countries' national access and benefit-sharing legislation passed in the spirit of implementing the CBD does not include special consideration for plant genetic resources for food and agriculture, see Nijar et al, note 12 above.

²⁶ S.K. Datta, A. Lal & V. Tyagi, 'Major Patterns of Germplasm Flow within, into and out of India', in M. Halewood et al. (eds), *A Road Map for Implementing the Multilateral System of Access and Benefit-Sharing in India* (Rome: Bioversity International and New Delhi: Indian Council of Agricultural Research and National Bureau of Plant Genetic Resources, 2013).

²⁷ R.C. Agrawal, P. Brahma & P.L. Gautam, 'A Note on the State of Implementation of the MLS in India', in Halewood et al., note 26 above; S. Arora, 'Fostering Collaboration between National Implementation of CBD and ITPGRFA: Challenges and Opportunities', in Halewood et al., note 26 above.

²⁸ The regulations extend to all PGRFA in Kenya except those 'derived from plant breeders in accordance with the Seeds and Plant Varieties Act,' that are part of 'approved research activities intended for educational purposes within recognised Kenyan academic and research institutions,' or that are exchanged between local communities 'for their own consumption' (Article 3).

that must be included in all access agreements that are inconsistent with providing facilitated access to multilateral system materials using the SMTA. While Kenya acceded to the ITPGRFA in 2003, there is no mention of the ITPGRFA or the multilateral system in the 2006 regulations. The need to make space for the implementation of the multilateral system has been the subject of national workshops and interagency meetings.²⁹

More recent access and benefit-sharing legislation, developed since the ITPGRFA came into force, address this situation by either (1) exempting PGRFA in the multilateral system from the applicable legislation (see Box 2) or (2) anticipating the passage of specialised regulations, pursuant to the same legislation, to implement the multilateral system (see Box 3). The former approach is currently more common than the latter. As far as the authors are aware, no country with legislation that anticipates developing specialised multilateral system-related regulations has actually put such regulations into force.

With very few exceptions, almost all countries that have made progress in implementing the multilateral system vis-à-vis the metrics identified later in this article either (1) do not have access and benefit-sharing legislation or (2) have national access and benefit-sharing legislation that explicitly excludes PGRFA in the multilateral system from its scope. In those countries, the absence of a legal impediment to providing materials (legal space negatively defined) appears to have been a sufficient condition-precident to start implementing the multilateral system. As far as the authors are aware, no additional laws, executive orders, or high-level policies were deemed necessary, at least to make as much progress as they have to date.

It is important, however, to qualify this observation. As shall be seen later in this article, in some other countries the mere absence of legal impediments to

providing facilitated access under the ITPGRFA has not been sufficient to make significant progress in implementing the multilateral system. In those countries, it is considered necessary to have positive legal enactments (for example, in the form of legislation, regulations, executive orders, or official guidelines) to put measures in place and empower actors involved in implementing the multilateral system. It is also important to note that, even in countries where it has been possible to make significant progress to date (for example, confirming a wide range of *ex-situ* PGRFA that is automatically in the multilateral system), those countries may still need to amend or develop new laws or policies or administrative guidelines to provide access to particular collections or to *in-situ* materials under the ITPGRFA. Situations where countries have felt (or not felt) the need for new, positive legal enactments are highlighted in the following sections.

Box 2: Provisions exempting operation of the multilateral system from national access and benefit-sharing laws

The Peruvian *Reglamento de Acceso a los Recursos Genéticos* (Ministerial Resolution 087-2008-MINAM), which implements Andean Pact Decision 391 concerning access and benefit sharing, excludes the crops and forages included in Annex 1 of the ITPGRFA.

The *Biodiversity Act of Bhutan*, Water Sheep Year 2003, which establishes access and benefit-sharing rules for genetic resources exempts 'plant and animal genetic resources access, which will be governed by Special Rules and Regulations or Conditions such as those established by multilateral systems for access and benefit-sharing, especially in the case of plant genetic resources for food and agriculture, in accordance with the international law'. The Guidelines for Accessing Genetic Resources and Benefit-sharing in Uganda, 2007, Article 3.2 states that:

There are some activities that lead to access of the country's genetic resources which are exempted from the requirement of an Access Permit [as otherwise required by the Guidelines].

²⁹ P. Wambugu and Z. Muthamia, 'Incentives and Disincentives for Kenya's Participation in the Multilateral System of Access and Benefit-Sharing', in I. López Noriega, M. Halewood & I. Lapena (eds), *The Multilateral System of Access and Benefit-Sharing: Case Studies on Implementation in Kenya, Morocco, Philippines and Peru* (Rome: Bioversity International, 2013).

These include: ... Access to plant genetic resources for food and agriculture shall be done in accordance with existing relevant laws and international conventions e.g. the International Treaty on Plant Genetic Resources for Food and Agriculture (Acceded to by Uganda in March 2003).³⁰

Box 3: Provisions in national access and benefit-sharing legislation creating space to develop regulations to implement the multilateral system from national access and benefit-sharing laws

Costa Rica's *Ley de Biodiversidad* (Law No. 7788), 1998, does not mention the ITPGRFA. Nor does the 2003 Decree No. 31514, issued by the President and Minister of Environment, *Normas Generales para el Acceso a los Elementos y Recursos Genéticos y Bioquímicos de la Biodiversidad*. However, Decree No. 33697 *Reglamento para el Acceso a los Elementos y Recursos Genéticos y Bioquímicos de la Biodiversidad*

en Condiciones ex-situ, adopted in 2007 by the Ministry of Agriculture and Environment, acknowledges that access to PGRFA should be provided pursuant to the ITPGRFA and states that regulations (may) still need to be developed to implement the ITPGRFA. There is an ongoing process to design a strategy and institutional mechanisms tailored for the implementation of the ITPGRFA, including confirming the institution that will be the long-term focal point and possibly developing a multi-stakeholder committee to help coordinate access and benefit sharing and ITPGRFA issues. In the meantime, however, the decree states that access to PGRFA will be provided subject to the ITPGRFA (without any details) and consistent with the *Ley de Biodiversidad* and Decree No. 31514, by the authority responsible for all other genetic resources under the *Reglamento* – that is, the *Comisión Nacional para la Gestión de la Biodiversidad*.

Norway's Act No. 100 of 19 June 2009 relating to the Management of Biological, Geological and Landscape Diversity (Nature Diversity Act), section 59 states: 'With regard to the removal of genetic material covered by the International Treaty on Plant Genetic Resources for Food and Agriculture of 3 November 2001 or by another international agreement, the standard conditions laid down under the agreement shall apply'. Section 60 states: 'When genetic material covered by the International Treaty on Plant Genetic Resources for Food and Agriculture of 3 November 2001 is utilised in Norway for research or commercial purposes, it shall be accompanied by information to the effect that the material has been acquired in accordance with the Standard Material Transfer Agreement established under the treaty'. Section 61, entitled 'Implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture' states: 'The King may make regulations regarding the implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture of 3 November 2001 in Norwegian law. The regulations may make further clarifications and exemptions from the provisions of this chapter'.

³⁰ The model text of an exemption as developed by the TAC of the SMTA is as follows: 'Pursuant to the obligations established by the International Treaty on Plant Genetic Resources for Food and Agriculture, access to and the transfer of plant genetic resources for food and agriculture covered by the Treaty, and sharing the benefits arising from their utilisation, should be subject only to the conditions set out in or consistent with the said Treaty, as applicable.', see TAC of the SMTA, Report of the Fourth Meeting of the Ad Hoc Advisory Technical Committee on the Standard Material Transfer Agreement and the Multilateral System 5 (Rome: FAO, 6-7 November 2012), available at <http://www.planttreaty.org/sites/default/files/ACSMTA4Re.pdf>. See also Australia's Environment Protection and Biodiversity Conservation Amendment Regulations, 2005 (No. 2), the purpose of which are to 'provide for the control of access to biological resources in the Commonwealth'. These regulations provide that the 'Minister may declare that this Part does not apply to specified biological resources or a specified collection of biological resources (including future additions to the collection) if ... use of the resources is required to be controlled under any international agreement to which Australia is a party. Example: The International Treaty on Plant Genetic Resources for Food and Agriculture, to which Australia is a signatory, obliges signatories to control access.'

2.2 Issue 2: What Genetic Resources are Automatically Included in the Multilateral System?

The PGRFA of the 64 crops and forages listed in Annex 1 of the ITPGRFA that are 'under the management and control' of the national government and 'in the public domain' are automatically included in the multilateral system by virtue of a country ratifying or acceding to the Treaty. Commentators and the TAC have provided interpretations of key terms in this formulation.³¹ The TAC opined that 'under the management' refers to a contracting party's 'capacity to determine how the material is handled and not to the legal rights to dispose of the PGRFA', while control refers to the 'legal power to dispose of the material'. 'Contracting party' refers to national governments, not to provincial or municipal governments. The TAC and commentators consider that 'public domain' should be interpreted as referring to the state of not being subject to intellectual property rights.³² Commentators and the TAC also largely agree that *in-situ* materials may also be 'under the management and control' of the national government and 'in the public domain' and as a result be included in the multilateral system.³³ *In-situ* PGRFA in the multilateral system is considered in more detail below.

31 See Correa, 'Recursos fitogenéticos', note 21 above; Correa, 'Plant Genetic Resources,' note 21 above; Moore and Tymowski, note 19 above and TAC of the SMTA, Report of the First Meeting of the Ad Hoc Advisory Technical Committee on the Standard Material Transfer Agreement and the Multilateral System (Rome: FAO, 18-19 January 2010), available at <http://www.planttreaty.org/content/first-meeting-ad-hoc-technical-advisory-committee-standard-transfer-agreement-and-multilater>.

32 See TAC of the SMTA, note 31 above at 10-11 and Moore and Tymowski, note 19 above.

33 See Moore and Tymowski, note 19 above; TAC of the SMTA, Report of the First Meeting, note 30 above and TAC of the SMTA, Report of the Second Meeting of the Ad Hoc Advisory Technical Committee on the Standard Material Transfer Agreement and the Multilateral System, (Rome: FAO, 2010), available at <http://www.planttreaty.org/content/second-meeting-ad-hoc-technical-advisory-committee-standard-transfer-agreement-and-multilater>.

In most cases, it is fairly obvious when PGRFA are, or are not, under the management and control of the national government and in the public domain. The archetypal example of PGRFA that are clearly automatically 'in' the multilateral system are Annex 1 PGRFA held in a national gene bank, which are not subject to intellectual property rights or restricted contractual agreements. Indeed, thus far, materials of this description constitute the vast majority of materials that have been confirmed by contracting parties as being in the multilateral system. And this will almost certainly continue to be the case, given the way national programs are established and run, with public gene banks hosting the majority of materials that are automatically included.

Equally clear cases of PGRFA that are not 'in the management and control' of the national government and 'in the public domain' are PGRFA on land, or in collections, controlled by provincial or municipal governments, in farmers' fields, in community gene banks, in companies' collections, or subject to plant breeders' rights or patents. Another example of PGRFA that are clearly not in the control of the national government is material that a natural or legal person has deposited in the gene bank, under contract, which stipulates that the gene bank will not regenerate or redistribute the material (referred to as 'black box' conditions). This is a relatively well-established practice in some gene banks, providing conservation services when depositors do not have the capacity to conserve and store the materials themselves. The gene banks are more likely to engage in such agreements when the genetic diversity of the resources concerned is unique and might otherwise be lost or when a depositor pays a fee for the service provided.

However, there are some cases where it may not be obvious if Annex 1 PGRFA is automatically in or out of the multilateral system. For example, questions have been raised about whether collections held by parastatal corporations or national public universities are under the management and control of the national government. In this case, in the context of Malaysia's implementation of the multilateral system, Gurdial Singh Nijar analysed the legislation used to establish the organisations in question to ascertain whether they are able to

establish their own policies and practices regarding the management and disposal of the collections concerned or if they are subject to the overriding authority of national government (see Box 4).³⁴ His analysis is being followed in countries supported by the GRPI-2 project – for example, Rwanda and Uganda – where national policy-makers are uncertain about the status of materials held by parastatal organisations.

Box 4: Interpreting ‘management and control’ in the Malaysian context

A number of different organisations hold plant genetic resources collections in Malaysia, including universities and parastatal organisations with their own governing boards. In some cases, it is not clear whether or not these organisations are themselves under the management and control of the national government, and by extension, the collections they host. To address this question, Nijar analysed the legislative acts that were used to create the Malaysian Agricultural Research and Development Institute (MARDI) and a number of national public universities. Ultimately, he determined that since MARDI exercises essential governmental functions and has little independence (from the Minister of Agriculture) to set its own policies or practices vis-à-vis plant genetic resources collections, that it was itself under the management and control of the government, despite having its own board of directors. Having established this threshold, the next steps are to determine whether any of the materials in the collection is subject to contractual forms of control by non-governmental depositors or subject to intellectual property rights. Nijar’s analysis was the subject of a national workshop with representatives of all relevant ministries, research organisations, and farmers associations.³⁵

In light of these earlier considerations, a basic three-part process to identify Annex 1 materials under management and control and in the public domain is as follows:

- first, identify the collections of Annex 1 PGRFA held by national public organisations. Identify lands owned or controlled by the national government where there may be *in-situ* populations of Annex 1 crops;
- second, if there is any reason for doubting that material held by the organisation is under the management and control of the national government, examine evidence such as the legislation or executive order creating the organisation (or protected area), to ascertain whether or not the organisation is independent to set its own policies regarding the management of the collections concerned or if they are subject to the overriding authority of national government; and
- third, once it is confirmed that a collection or *in-situ* population is under the management and control of the national government, consider whether materials in that collection are subject to intellectual property rights (and therefore not in the public domain).

To date, a number of contracting parties have gone through exercises to confirm the identity of at least some portion of the PGRFA within their borders that are automatically included in the multilateral system. As of March, 2013, thirty-three contracting parties had sent notices to the ITPGRFA Secretary confirming the identity and content of collections that are in the multilateral system. In most of these cases, the materials are explicitly identified as being under the management and control of contracting parties (the corollary being that an extremely small proportion is identified as voluntarily included PGRFA – see next section). Two additional countries – Ireland and Latvia – have publicised information in the EURISCO catalogue concerning PGRFA that they will make available through the multilateral system material (despite the fact that

³⁴ See Nijar, note 21 above.

³⁵ *Id.*

they did not notify the Treaty Secretary). It is safe to infer that in most of these cases, some assessment process was followed within the country concerned, involving competent authorities, ensuring that the PGRFA transferred were automatically included in the multilateral system or could legally be included voluntarily by whoever was transferring them.

As far as the authors are aware, these actions were taken by the relevant competent authorities exercising discretion that already existed within the framework of mandates, powers, decision making, and practices in the countries concerned. Creating new, or amending existing, legislation or regulations was not necessary in these cases. On the other hand, it is important to recognise the potential impact, in some countries, of lingering uncertainty in the minds of government officers about the 'management and control' and 'public domain' status of PGRFA collections or *in-situ* populations they manage. As Nijar notes, such uncertainty 'may impede the exchange of materials ... clearly under the country's management and control'.³⁶ In such cases, even though it is not legally necessary, 'it may be prudent for the Government, in consultation with the institution holding Annex 1 materials' to clearly state that the materials in question are in the management and control of the national government, thereby allowing 'managers to make materials immediately available through the multilateral system'.³⁷

The level of government from which such a statement would need to be issued, and in what form, depends upon the political and legal culture of each country. In this context, Nijar raises the possibility that it might be worthwhile to address lingering doubts on behalf of a national public university, to amend the act that established the university, clarifying that materials held by that organisation are presumed to be under the management and control of the national government. In Peru, the *Instituto Nacional de Innovación Agraria* has been negotiating agreements with public national organisations, including La Molina National University, to confirm that Annex 1 collections are

included in the multilateral system.³⁸ As far as the authors are aware, no country has created executive orders, ministerial decrees, new or amended legislation, or regulations as part of the process of confirming what PGRFA in the countries is under the management and control of the contracting party and in the public domain.

It is not necessary to have all of the PGRFA within the country that is 'under the management and control' of the national government 'and in the public domain' exhaustively identified before taking steps to make the easier-to-confirm PGRFA available under the ITPGRFA, using the SMTA. Indeed, countries that have made progress appear to be taking pragmatic approaches, dedicating energy and resources to confirming the fairly obvious instances of PGRFA that are automatically in the multilateral system first (and publicly sharing information about those materials – see discussion below), and then working on resolving more difficult cases, if there are any, later on.

2.3 Issue 3: Encouraging Voluntary Inclusion of Genetic Resources by Natural and Legal Persons

Under the ITPGRFA, member states 'agree to take appropriate measures to encourage natural and legal persons within their jurisdictions' to include Annex 1 PGRFA in the multilateral system (Article 11.3). As of March 2013, there was not much information in the reports from contracting parties to the ITPGRFA governing body about materials that have been voluntarily included in the multilateral system. Six countries – France, Germany, Netherlands, Peru, United Kingdom, and Switzerland, have provided such details.³⁹ There is also little information documented to date about the measures that member states are taking to encourage such inclusions. The Swiss national government requires recipients of

³⁶ *Id* at 35.

³⁷ *Id* at 35.

³⁸ I. Lapeña, M. Sigüeñas, I. López Noreiga & M. Ramirez, *Incentivos y Desincentivos para la Participación del Perú en el Sistema Multilateral del Tratado Internacional sobre Recursos Fitogenéticos para la Alimentación y Agricultura* (Rome: Bioversity International, 2010).

³⁹ See FAO, *Compilation of Submissions*, note 23 above.

national financial support for research involving plant genetic resources to make those materials available through the multilateral system.⁴⁰ The national gene bank of the Republic of Korea routinely pays research organisations to duplicate and deposit desirable materials in the gene bank on the understanding that the gene bank will be able to redistribute the materials freely (Dr. Hyun-jin Baek, personal communication). It is useful to consider the kinds of incentives that countries' national gene banks and research organisations have traditionally provided to encourage natural and legal persons to deposit materials in the gene banks or to participate in or permit collecting activities that culminate in materials being deposited in public gene banks. A number of countries have conducted collecting activities in recent years – since the Treaty came into force – with a large number of deposits into national gene banks as a result.⁴¹

The ITPGRFA is silent regarding the means by which natural and legal persons can place PGRFA in the multilateral system. One possibility, discussed earlier, is that a natural or legal persons make agreements to deposit material in a collection maintained by an organisation that has an established practice of (and funds for) maintaining and providing samples under the ITPGRFA – for example, a national gene bank. In this way, they would be converting 'voluntarily included' materials into PGRFA that is 'under the management and control' of the national government. Another possibility is that natural and legal persons provide the material themselves using the SMTA.⁴² A third possibility would be to deposit them in an international collection hosted by an international institution that has signed an agreement with the governing body of the ITPGRFA undertaking to make those collections part of the multilateral system. These approaches are not mutually exclusive; all three could potentially be accommodated and encouraged in a national implementation strategy.

Most contracting parties appear to be giving priority, for the time being, to the exercise of confirming which Annex 1 PGRFA are automatically in the multilateral system. This approach is likely in response to the combined facts that such a confirmation is directly within their control. Developing new mechanisms or incentives for natural and legal persons is one step further removed.

2.4 Issue 4: Informing Potential Users About Genetic Resources That are Included in the Multilateral System

PGRFA that are automatically or voluntarily included in the multilateral system are only useful if people know they exist and have access to information about them, including passport information and characterisation and evaluation data. Sharing such information is absolutely necessary for the multilateral system to be able to function. The Treaty anticipates (in Article 13.3(a)) that such information will be made available by contracting parties through a global information system that will eventually be developed and strengthened by the contracting parties under the ITPGRFA framework. The global information system could eventually take many forms, from highly centralised to radically federated, based on networked connections of various strengths between existing systems. However, to date, there has not been agreement at the level of the governing body concerning the shape, components, or function of a global information system. As a result, there is not yet a commonly agreed-upon set of protocols and/or places for sharing information about materials in the multilateral system. To address this situation, the ITPGRFA Secretary circulated a request to national Treaty focal points requesting information about the collections that are included in the multilateral system. To date, 33 countries have provided such information, and more are planning to do so relatively soon. That information is posted on the Treaty website, including, in most cases, links to databases containing accession level passport, characterisation, and evaluation data (which is non-confidential).

Some parties who provided notifications were not able to provide links to additional information as

⁴⁰ See López Noriega, Wambugu & Mejias, note 22 above.

⁴¹ FAO, Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture (Rome: FAO, 2010), available at <http://www.fao.org/docrep/013/i1500e/i1500e00.htm>.

⁴² See TAC of the SMTA, *Report of the Second Meeting*, note 33 above.

they do not have accession-level information systems in place. In some of those cases, the notification indicates that the party intends to make such information available in the future. It is important to underscore that it is not necessary to have digitalised accession-level information to provide notice to the secretary about collections in the multilateral system. That said, in the longer term, countries will be significantly boosting the potential utility of the materials they do include in the multilateral system by developing such systems. The US Department of Agriculture has developed GRIN-Global, a plant genetic resource information management system, which a number of countries are experimenting with or have adopted. Organisations such as Bioversity International, the Global Crop Diversity Trust, and the Treaty Secretariat have provided technical backstopping to countries considering such systems.

The Treaty website is not, of course, the only way to share information about materials in the multilateral system. Many of the organisations hosting the collections about which the Secretary has been notified host their own websites, where the same information is also available. Similarly, notice can be provided through regional genetic resource networks. Many countries complain that they do not have resources to characterise and evaluate the materials that they already possess. One important value-added activity that countries can engage in (and seek support for) is to generate such information about materials in the multilateral system and make that information available.

2.5 Issue 5: Who has the Authority to Consider Requests and Provide Materials in the Multilateral System?

The ITPGRFA is silent with respect to who should be empowered within member states to (1) consider/approve requests for PGRFA in the multilateral system and (2) physically provide those resources. As noted earlier, PGRFA that is automatically included in the multilateral system may be spread across a number of national governmental research organisations, gene banks, and protected areas. PGRFA that is voluntarily included in the multilateral system may reside in community gene

banks, companies' collections, farmers' fields, or hobbyists' gardens. In theory, as noted earlier, all such organisations or individuals could be empowered to consider/approve requests for multilateral system PGRFA as well as to physically provide the resource.

Alternatively, the authority to consider/approve/reject requests could be limited to a smaller number of persons or organisations or just one central national governmental authority to make final decisions on all requests. Likewise, physical provision of the requested resources could be limited to a small number of providers or possibly just one ultimate provider, who acts as a meta-conduit for all would-be providers in the country. This approach would involve natural and legal persons agreeing to voluntarily place the PGRFA they want to include in the multilateral system under the management and control of the national government as a first step. Thereafter, it would be up to the national competent authority to manage requests and supply the material concerned. There is, of course, the danger that such centralised systems can be difficult to implement and result in procedural bottlenecks.

In this context, it is important to recall that, within the ambit of the multilateral system, what needs to be considered/approved is relatively narrowly constrained. Conditions concerning access and benefit sharing, reporting, dispute resolution, and so on have already been decided and are contained in the immutable SMTA. The few issues that remain to be considered in each case would include whether the provider:

- has adequate supplies of the PGRFA in question to be able to provide samples;
- wants to provide the samples for free or for minimal costs involved in shipping and handling;
- has available, non-confidential information about the resource to provide at the same time and how they will provide it;
- could consider rejecting a request on the basis that it comes from country that is not a member of the ITPGRFA (if the provider

or provider's country has a policy to not send materials to non-member states);⁴³ and

- actually knows the materials will not be used for the purposes specified in the SMTA, in which case they should decline to provide or use another appropriate transfer instrument with requisite authorisation.⁴⁴

The actual custodian of the resources in question will be in the best position to address the first three issues. The fourth issue – whether or not providers may send materials to recipients in non-member states – could be addressed at higher policy levels, for decentralised providers to follow. As a consequence, countries may be more comfortable distributing the authority to consider/approve requests for materials in the multilateral system than they would be if there was a bigger role for a competent national authority to play, such as the role that is anticipated in most national access and benefit-sharing legislation that has been passed pursuant to the CBD.⁴⁵

Regardless of what approach to this issue is eventually adopted, it is essential that all interested actors in the country clearly understand the applicable policy and the steps that must be taken to comply with it. If organisations or individuals have the discretion to

consider requests and provide materials themselves, it is essential in many countries that they be supported through clear policy statements from the relevant authorities. Otherwise, these actors may be reluctant to engage in the multilateral system as providers for fear of being accused, *post facto*, of impropriety.⁴⁶ Likewise, if a request to a natural or legal person must ultimately be approved by a central authority, the process for referring requests to that authority must also be clearly established and understood by everyone involved and easy to follow. In the absence of such clarity, requests will frequently reach dead-ends, with no decision being made and no one taking responsibility. What Peterson Wambugu and Zachery Muthamia call 'fear of the unknown' about access and benefit-sharing processes and decision-making authority will lead to inactivity and system failure.⁴⁷

Again, the level of government from which such clear policy statements must come, and the form in which they are delivered (ranging from a description of the system on a government website to a revised act by parliament) will depend upon the political and legal culture of each country. Box 5 includes examples of different countries' approaches to this issue.

Box 5: Who can consider requests for PGRFA in the multilateral system?

In the Netherlands, the authority to consider requests and transfer PGRFA using the SMTA is widely distributed. Natural and legal persons – for example, the two Dutch non-governmental organisations that were reported to the governing body (in 2011) as voluntarily including materials in the multilateral system – can send those materials anywhere in the world using the SMTA without seeking authorisation from, or informing, a centralised governmental authority.

In Canada, only one institution holds and provides samples of PGRFA 'under the management and control' of the national government, and 'in the public domain'. That institution is Plant Gene Resources of Canada

43 The ITPGRFA creates a positive obligation to provide facilitated access to other member states. However, it does not prevent providers from voluntarily making materials in the multilateral system available to non-members states using the SMTA. This is a matter to be decided by each country.

44 Providers are not under positive obligations to ascertain how the recipient will use the requested material. However, if they know that the intended use is not consistent with the SMTA, they should refuse, or use another instrument. See TAC of the SMTA, Report of the Third Meeting of the Ad Hoc Advisory Technical Committee on the Standard Material Transfer Agreement and the Multilateral System (Rome: FAO, 2012), available at <http://www.planttreaty.org/sites/default/files/ACSMTA3re.pdf>. The SMTA includes an undertaking on the part of the recipient that they will use it only for the prescribed purposes.

45 Most existing national access and benefit-sharing legislation passed pursuant to the CBD requires that a single, centralised authority approves all access and benefit-sharing agreements. See Nijar, note 12 above. Empowering natural and legal persons to independently receive and decide upon requests for materials in the multilateral system would represent a significantly different approach.

46 See Wambugu and Muthamia, note 29 above.

47 *Id* at 29.

(PGRC), within the federal government department of Agriculture and Agri-Food Canada. Its main gene bank is located in Saskatoon, Saskatchewan, a clonal gene bank in Harrow, Ontario, and a potato gene bank in Fredericton, New Brunswick. The government of Canada does not have an explicit policy to channel requests to the PGRC as a single, competent national authority that takes responsibility for a final decision. Instead, this role of the PGRC reflects the fact that there is just one institution that holds PGRFA that is considered to fall automatically within the multilateral system. The mechanism most used by natural or legal persons to contribute PGRFA to the multilateral system in Canada is to make a donation of germplasm to the PGRC. In addition to being simple and direct, and cost efficient for the depositor, it also makes the PGRFA more widely available to the global community through the PGRC online catalogue. That said, there is nothing preventing a natural or legal person who wants to include PGRFA in the multilateral system from making it available directly using the SMTA (Brad Fraleigh, personal communication).

A draft Peruvian decree to establish an institutional framework for the national implementation of the ITPGRFA anticipates that the national Treaty focal point will receive and centralise requests for access to genetic material under the multilateral system.⁴⁸ A more recent draft directive provides additional details about the focal point's responsibilities, stating that the focal point will have responsibility for considering requests for access to materials that are under the management and control of the national government and in the public domain, leaving open the question of whether natural and legal persons can provide

materials directly, if they want to include them voluntarily in the multilateral system.⁴⁹ This approach is consistent with the announcement that the communities that manage the Potato Park in Peru are voluntarily including *in-situ* materials in the multilateral system.

While the policy development process is not yet complete, in Uganda it is anticipated that one or two institutions will be designated to play the role as 'provider' of multilateral system materials that are 'under control and management' of the national government, particularly in reference to *ex-situ* collections. This approach is informed by the fact that most of the collections in Uganda are housed in organisations that operate under the overall umbrella of the Uganda National Agricultural Research Organisation and public universities. Concerning *in-situ*, on-farm, PGRFA (not automatically included in the multilateral system) the existing Ugandan access and benefit-sharing legislation and regulations give individuals and communities the space to negotiate matters on their own, with local councils empowered to take the role of 'lead agencies'. To address the interface between the national access and benefit-sharing law and the multilateral system – particularly with respect to voluntary inclusions of materials in the multilateral system through deposits to the national gene bank (as discussed in the third part of this article) – it may be useful to develop model clauses/instruments/procedures for use by the potentially hundreds of lead agencies.

48 Proyecto de Decreto Supremo por el que se Designa al Ministerio de Agricultura a través del Instituto Nacional de Innovación Agraria como el Sector y la Institución Encargada de la Implementación del Tratado Internacional de los Recursos Fitogenéticos para la Alimentación y la Agricultura in his Artículo 2° states: 'Funciones del Punto Focal 2. Recibir y centralizar las solicitudes de materiales genéticos en el marco del Sistema Multilateral de Acceso Facilitado del Tratado Internacional.'

49 Propuesta de Directiva No. XXX-2010-INIA-DIA/SUDIRGEB, *Responsabilidades y Obligaciones de INIA como Punto Focal Nacional del Sistema Multilateral del Tratado Internacional*, in particular, Article 5.2, which states: 'De aplicación en todos los casos donde se solicite la transferencia de material genético de los recursos fitogenéticos bajo el Sistema Multilateral del Tratado Internacional y que se encuentren bajo la administración y dominio del Estado Peruano, el cual se hará bajo el Acuerdo Normalizado de Transferencia de Material (ANTM).' Here the reference is limited to materials under the management and control of the contracting parties and in the public domain. The question of natural and legal persons as providers of Annex 1 materials that they want to voluntarily include is not mentioned.

2.6 Issue 6: Supporting the Transition to Using a New Legal Instrument (The SMTA) for International and Domestic Transfers

While actual use of the SMTA follows naturally from the issues discussed in the previous sections, our collective experience suggests it is worth dedicating a section in this article to the issue of when to use the SMTA, for both international and domestic transfers. The ITPGRFA Secretariat has coordinated the development of some useful tools to help ease organisations' transition to the use of the SMTA – for example, 'Easy SMTA' a software that any provider can use to generate filled-in SMTAs and send reports to the governing body. National authorities responsible for ITPGRFA implementation can promote use of these tools within the country and request technical assistance from the Treaty Secretariat if necessary.

It is important to underscore that the SMTA should be used for domestic, as well as international, transfers of multilateral system PGRFA. The benefit-sharing (and other) terms and conditions established under the ITPGRFA must be transferred along an unbroken chain, from providers to recipients, until a final new PGRFA product is developed. If the national gene bank sends material to a university researcher in the same country without using the SMTA, he or she could, or the university could, commercialise it themselves or pass it on to nationally based companies or branches of international companies (which could then transfer it internally to other branches in other countries) without the SMTA's benefit-sharing conditions.

2.7 Issue 7: How to Address Requests for Access to *In-situ* Genetic Resources Included in the Multilateral System

In-situ PGRFA of Annex 1 crops and forages under the management and control of the national government and in the public domain are included

in the multilateral system,⁵⁰ for example, wild relatives of Annex 1 crops in national government protected areas.⁵¹ Many countries will already have laws and guidelines in place concerning access to, and collecting materials from, protected areas – rules that seek to protect the habitat, for example, by limiting the numbers of people who visit, proscribing how they conduct themselves on the site, and limiting the amount of material they can collect. Usually responsibility for implementing those rules will lie with ministries of environment. As a result, coordination between the agricultural agency with responsibility for implementing the ITPGRFA and the agency responsible for protected areas will be essential.⁵² Given the need to organise collecting within countries to gain access to *in-situ* materials, the Treaty states (in Article 12(3)(h)) that *in-situ* PGRFA 'will be provided according to national

50 See J. Santilli, *Agrobiodiversity and the Law: Regulating Genetic Resources, Food Security and Cultural Diversity* (London: Routledge, 2012). Also consider that the Philippine Joint Guidelines for Bioprospective Activities in the Philippines, Doc DENR-DA-PCSD-NCIP Administrative Order No. 1, which creates an exemption for 'ex situ collections currently accessed under international agreements to which the Philippines is a party.' This would cover the operation of the multilateral system as far as *ex-situ* collections are concerned, but not *in-situ* materials. See Guidelines for Bioprospecting Activities in the Philippines, Joint DENR-DA-PCSD-NCIP Administrative Order No. 1, 2005, available at <http://www.cbd.int/doc/measures/abs/msr-abs-ph2-en.pdf>. Reglamento para el Acceso a los Elementos y Recursos Genéticos y Bioquímicos de la Biodiversidad en Condiciones ex-situ, Costa Rican Decree No. 33697, which was adopted in 2007 by the Ministry of Agriculture and Environment, available at <http://www.cbd.int/doc/measures/abs/msr-abs-cr3-es.pdf> anticipates *ex-situ* materials in the multilateral system being made available under the ITPGRFA and the MLS. There is no equivalent *Reglamento* anticipating providing access to *in-situ* materials that are in the multilateral system under the terms of the ITPGRFA.

51 It is possible that people living in government-protected areas play an active role in cultivating and maintaining Annex 1 crops and forages. We do not want to suggest that those materials are 'under the management and control' of the national government. For this reason, we provide the example of wild relatives.

52 See TAC of the SMTA, *Report of the First Meeting*, note 31 above.

legislation or, in the absence of such legislation, in accordance with such standard as may be set by the Governing Body'. The TAC noted that many countries likely 'already have the capacity within their domestic frameworks to provide facilitated access in accordance with the Multilateral System' and that 'national legislation is not a pre-condition precedent in order to provide facilitated access, in accordance with the provisions of Article 12'.⁵³ As far as the authors are aware, to date, no country has developed specifically targeted laws or regulations or guidelines for access to *in-situ* materials in the multilateral system. Nor has the governing body set any standards in this regard.

As already noted, countries are first addressing the lower threshold issues of putting systems in place for *ex-situ* material before they focus on *in-situ* specific strategies. Some of the urgency that one might think would be associated with the lack of visible progress vis-à-vis access to *in-situ* PGRFA is mitigated by the way national plant genetic resources programs actually work. It is within the mandate of most national gene banks to collect particularly interesting or vulnerable *in-situ* materials and conserve them *ex situ*. Yesterday's *in-situ* resource may become tomorrow's *ex-situ* resource (and vice versa in a dynamic program). Where the *in-situ* materials are, *ab initio*, 'under the management and control' of the national government 'and in the public domain' (for example, a wild relative in a national public protected area), their status vis-à-vis the multilateral system is not altered by being collected and deposited, *ex situ*, in a national gene bank. The situation vis-à-vis collections of *in-situ* materials that are, *ab initio*, outside the multilateral system and deposited in a national *ex-situ* collection is more complex and will be examined in more detail in the third part of this article.

2.8 Issue 8: Reporting Transfers to National and International Authorities

The SMTA states that all providers must report information about their transfers directly to the governing body. This information is kept in an encrypted data store in Geneva. The Easy-SMTA

referred to earlier can assist in making that reporting easier. A number of countries have expressed interest in developing additional mechanisms whereby providers in their countries also send information about transfers to a centralised authority within the provider country. In this way, it will be possible to maintain an overall record of all of the materials distributed within, and outside, the country concerned. Such initiatives are not called for by the ITPGRFA, nor have they been endorsed by the governing body; they should not inadvertently create impediments to facilitated access.

2.9 Issue 9: Building Capacity to Take Advantage of the Multilateral System

A wide range of PGRFA users can benefit from access to the genetic diversity and related information that is available through the multilateral system. However, some users, such as community and farmer organisations, may not have the capacity to take advantage of it. While working through options for domestic implementation of the multilateral system, policy-makers should consider mechanisms by which the capacities of farmers and other groups can be strengthened to take advantage of the multilateral system. The national gene bank, for example, could conduct outreach with farmers and conservation groups, informing them about the multilateral system and providing technical back-up to groups seeking to locate, request, and receive germplasm from both domestic and international sources. National agricultural research organisations and national gene banks are being engaged in pilot projects in Nepal, Bhutan, Uganda, Rwanda, Côte D'Ivoire, Burkina Faso, India, and Papua New Guinea to work with farmers to identify materials that are adapted to changing climate conditions in those farmers' areas. These exercises have involved providing training, technical back-up, and service provision, using climate analogue tools, crop modelling, accession-level information systems, seeking access to useful material through the multilateral system, and participatory evaluation of the performance of the materials used.

⁵³ *Id* at 14.

3

ISSUES ARISING AT THE INTERFACE BETWEEN THE MULTILATERAL SYSTEM AND ACCESS AND BENEFIT SHARING UNDER THE CBD (INCLUDING THE NAGOYA PROTOCOL)

In the second part of this article, the importance of the frontier between the multilateral system and national access and benefit-sharing laws under the CBD was evident in a number of places. In this part, we examine a number of these 'frontier situations' in more detail. These situations exist because many PGRFA users, conservers, providers, and recipients (including farmers, gene banks, plant breeders, and national parks) do not operate exclusively under one regime or the other. Many of their actions and decisions cut across the interface between the access and benefit-sharing rules under the ITPGRFA and the CBD. The analysis of each of these situations will highlight why coordination between the two agencies responsible for implementation of the CBD and ITPGRFA is critical. In many countries, these agencies still are not coordinating their access and benefit sharing-related policy development activities closely; we will analyse some of the factors that are contributing to this state of affairs.

3.1 Voluntary Inclusions of PGRFA in the Multilateral System: Moving Materials from One Regulatory System to Other

The diversity of PGRFA that is available through the multilateral system was not meant to remain fixed at the number of accessions in national and international *ex-situ* collections (and *in-situ* populations on national government controlled lands) when a country ratifies the ITPGRFA. The multilateral system was developed with the idea that it would continually be refreshed with new diversity that could be the source of desirable traits to meet biotic and abiotic stresses in agricultural systems around the world, including those associated with climate change. However, as pointed out in the introduction and in the second part of this article, a

lot of plant genetic diversity is not automatically included in the multilateral system. It has to be included voluntarily by the farmers, gardeners, hobbyists, and commercial and provincial plant breeders and researchers who play key roles in its development and conservation.

Voluntary inclusion of PGRFA in national and international collections, on the understanding that such material may subsequently be redistributed, is not new. It is the principal means by which all such collections have been developed, and it is a key component of national and international genetic resource conservation and sustainable use strategies.⁵⁴ Indeed, between 1996 and 2007, national programs coordinated the collection and deposit in national gene banks of 240,000 accessions of crops and forages.⁵⁵ Between 2007 and 2010, the Consultative Group on International Agricultural Research (CGIAR) gene banks received deposits of materials collected from *in-situ* conditions (immediately beforehand) from seventeen countries based on the understanding that the centres could redistribute that material internationally using the SMTA.⁵⁶

In this context, however, it is important to underscore two important developments in recent years. The first is the formal legal requirement, in some countries at least, to obtain prior informed consent (PIC), on mutually agreed terms, from farmers before collecting PGRFA samples from them and doing anything with those resources, including depositing them in a national gene bank. Such laws currently exist in Uganda, Philippines, and Costa Rica. Even where national access and benefit-sharing laws require only the consent of the competent national authority – the CBD does not oblige countries to include additional requirements for access seekers to obtain PIC from indigenous and local communities – there is a growing sense of responsibility to ensure that collectors from national programs (usually the main points of contact) fully

54 FAO, Second Global Plan of Action for Plant Genetic Resources for Food and Agriculture (Rome: FAO, 2012), available at <http://www.fao.org/docrep/015/i2624e/i2624e00.htm>.

55 FAO, Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture (Rome: FAO, 2010), available at <http://www.fao.org/docrep/013/i1500e/i1500e00.htm>.

56 See Halewood et al., note 22 above.

explain the purpose of their collecting activities to local peoples and obtain their consent. National implementation of the Nagoya Protocol should clarify any grey areas that exist within national frameworks in this regard, as it goes further than the CBD regarding states' obligations to protect the rights of indigenous and local peoples vis-à-vis the use of their knowledge and genetic resources under their control. National strategies to promote farmers' rights as per Article 9 of the ITPGRFA could also contribute clarity (and would benefit from coordinated policy development).

The second important development is regarding the geographical scope of distribution that member states are committing themselves to under the ITPGRFA. Previously, most countries (including their national gene banks, with some notable exceptions) limited themselves to transferring materials domestically. By becoming ITPGRFA members, they are undertaking to provide access to multilateral system material to recipients all over the world. Natural and legal persons considering collection requests (or considering making direct deposits into a national gene bank) need to understand this expansion in the potential use of the materials concerned.

The interface between the CBD (including the Nagoya Protocol) and the ITPGRFA is very important in this context. PGRFA collectors seeking to enrich the diversity of materials included in the multilateral system have a responsibility to promote knowledge about, and comply with, national access and benefit-sharing norms governing access to PGRFA that is outside the multilateral system. They need to proactively engage competent local and national authorities responsible for regulating access and benefit sharing under both the CBD/Nagoya Protocol and the ITPGRFA to ensure that the rights and interests of farmers as potential providers are understood and complied with. On the other side of the equation, access rules and procedures under the CBD/Nagoya Protocol must be clearly articulated and easy to follow so that farmers and others who are interested in including materials in the multilateral system are able to do so without incurring high transaction costs. Officials and agencies supporting implementation of those laws must also let farmers and others know about their options vis-à-vis the multilateral system.

Article 17 of the Nagoya Protocol sets out the minimum information to be included in an internationally recognised certificate of compliance. Agreements with farmers, indigenous and local communities, and other persons or organisations to voluntarily include PGRFA in the multilateral system (via deposit in a gene bank, for example) could/should include those minimum fields, to be recognised in jurisdictions where the Nagoya Protocol is implemented. Our cursory analysis suggests that the SMTA includes those fields and could be used also for the initial transfer/deposit of such materials.⁵⁷ Alternatively, another instrument could be used as long as it includes the minimum fields and specifies that the recipient institution could subsequently make the material available using the SMTA.⁵⁸ Information about that initial voluntary transfer into the multilateral system would need to be shared, as is set out in the Nagoya Protocol. Once the PGRFA is included in the multilateral system in this way, it could subsequently be transferred using the SMTA under the ITPGRFA framework, based on the recognition of the multilateral system subject to Article 4 of the Nagoya Protocol.⁵⁹

This raises other very important questions, which are largely beyond the scope of this article, but clearly need to be addressed on an urgent basis. They are: what incentives do farmers and farming communities need to voluntarily include materials in the multilateral system?; what incentives or

57 SGRP, A De Facto Certificate of Source: The Standard Material Transfer Agreement under the International Treaty (Rome: Bioversity International, 2007).

58 The newly founded national gene bank in Nepal has initiated collecting *in-situ* materials from farmers and community seed banks for conservation. It is developing agreements, which are registered as evidence of mutual agreed terms with depositors, recognising their contribution and issuing an accession number. The CGIAR centres have received deposits of PGRFA from countries under contracts that specify they may conserve and distribute the materials through the multilateral system using the SMTA. See SGRP, note 5 above.

59 One issue that needs to be clarified is the situation of recipients of PGRFA under the SMTA in states that are not parties to the ITPGRFA (but are parties to the Nagoya Protocol). Can they pass on that material as anticipated by the SMTA, without obtaining additional authorisation from a competent authority? Countries might consider making such allowances based on Nagoya Protocol. See Nagoya Protocol, note 3 above, Article 4.3.

benefits can national or international gene banks (as the main repositories of materials in the multilateral system) or other interested actors make available, on an ongoing, sustainable basis, for farmers and other possible access providers to voluntarily include materials in the multilateral system?⁶⁰

60 While it is beyond the scope of this article to analyse this question in detail, we include a few observations here. There is evidence that many would-be voluntary depositors of materials are not 'holding out' for large cash payments. Organisations in over twenty countries agreed to send safety back-up copies of unique PGRFA (that were previously held only in national collections) in return for relatively small amounts of money from the Global Crop Diversity Trust to support the regeneration of those materials. The depositors agreed to send samples of the regenerated materials to gene banks in other countries on the understanding that those gene banks could redistribute them using the SMTA. Halewood et al., note 22 above. Similarly, as part of relatively low budget research and capacity-building activities supported through the ITPGRFA benefit-sharing fund, national programs, indigenous and local peoples, and individuals have agreed to deposit new PGRFA that is the subject of their funded activities in the multilateral system. These developments indicate that many of the individuals, peoples, communities, and organisations who could potentially share PGRFA through the multilateral system are willing to do so if their own efforts at conserving and enhancing the value of those resources are simultaneously supported ... and recognised. This reflects the reality that the multilateral system is not a self-perpetuating system (at least not in terms of attracting new diversity in a sustained way over time). At least at the present time, it appears that sustained rates of new materials being voluntarily included in the multilateral system will likely depend upon corollary forms of support, often internationally coordinated and supported. Another point worth underscoring is that would-be depositors want credit and recognition for their contributions; they do not want to disappear from the records as soon as they allow materials to be collected from them or as soon as they voluntarily contribute them. Mechanisms for recording the identities of contributor and publicising their contributions (both within the country and internationally) need to be developed. Good working relations between gene banks and communities are also essential. If a gene bank is proactively engaged with communities, making germplasm readily accessible to a community and supporting community efforts to improve their skills in management of genetic resources, farmers will be more likely to identify with the objective of 'internationally linked-up conservation and use' that the multilateral system supports. As such, they will be more likely to see the rational for, and benefit of, including their material in the multilateral system.

3.2 Requests for PGRFA (Otherwise in the Multilateral System) for Non-food/non-feed Purposes or Direct Use in Cultivation by Farmers

Under the ITPGRFA, contracting parties undertake to provide facilitated access to multilateral system PGRFA 'solely for the purpose of utilisation and conservation for research, breeding and training for food and agriculture, provided that such purpose does not include chemical, pharmaceutical and/or other non-food/feed industrial uses' (ITPGRFA, Article 12.3(a)). Where a request is made for access to such materials for other purposes, it would have to be considered pursuant to national access and benefit-sharing laws or policies that are applicable with respect to genetic resources outside the multilateral system. Gene banks dedicated to PGRFA conservation occasionally receive requests for materials that will be used for non-food/non-feed uses, such as biofuel-related research and production. Indeed, such requests appear to be increasing in number. The managers of these collections need to be equally conversant with the rules governing the implementation of the multilateral system and whatever other access and benefit-sharing rules apply. They need to understand if and when they need to seek approval from a different authority and what that process is, and what material transfer agreement they should use, if they are able transfer the materials for the non-food/non-feed related purposes.

Requests for materials in the multilateral system for direct use in cultivation by farmers raise many of the same issues. Direct use in cultivation – that is, placing materials received through the multilateral system directly into production, without any form of alteration/improvement – is not an included use of material in the multilateral system. From the point of view of the interface of the ITPGRFA and CBD, the most important questions for potential providers are: how can they know if a farmer will use the material for direct use or when the farmer will experiment with the materials to the point that their actions constitute research or breeding (that is, accepted uses under the SMTA)? If the provider is certain that the farmer-recipient will use the

material for direct use, what should the provider do? Does the provider have a legal right under the default CBD/Nagoya Protocol compliant access and benefit-sharing rules to provide the materials? If yes, under what conditions? Which material transfer agreements should be used? Whose permission must the provider obtain before doing so?

The TAC has considered these issues in the past, suggesting generic questions and processes that a potential provider must consider in this regard.⁶¹ Germany has gone one step further, adopting a one-page material transfer agreement (not the SMTA), specifying that the farmer or gardener concerned may get access to material if she explicitly states that she will not use the material for research, breeding or training, and that she will either not pass it on to third parties or will pass on the same restrictions. Hence, the material will only be available by the farmer or gardener for direct use and not for purposes set out in the SMTA (Dr. Frank Begemann, Personal communication).⁶²

3.3 Requests for Access to *In-situ* PGRFA in the Multilateral System

Access to protected areas and collecting biota from them are already subject to various forms of regulation in many countries. Article 12.3(h) of the ITPGRFA expresses an intent that access to *in-situ* materials in the multilateral system should be provided within the context of such laws and that such laws should be developed if they do not exist. A whole reading of the ITPGRA suggests that those laws should operate to ensure that collecting activities are conducted in ways that respect domestic conservation, phytosanitary, cultural, and other standards. The *in-situ* materials in question should ultimately be made available under the SMTA, if

and when the other standards are satisfied/complied with.⁶³ Extant rules may need to be revised or new rules developed in this regard. The agencies responsible for regulating access to these areas – usually not the agriculture agencies that are responsible for implementing other aspects of the multilateral system – will have front-line responsibility for implementing them. Clearly, there needs to be coordination between the ministry or department responsible for the ITPGRFA and agencies overseeing protected areas. Otherwise, the managers of these areas will understandably be uncertain about which rules apply and to which competent authorities they should turn for guidance and approval.

3.4 Creating Legal Space for the Operation of the Multilateral System

As emphasised in the first part of this article, access and benefit-sharing laws under the CBD have the potential to block implementation of the multilateral system. Mutual supportiveness requires, at the very least, amendments or accommodations to be made to access and benefit-sharing laws passed pursuant to the CBD to make space for the operation of the multilateral system. A number of countries have addressed this situation by 'carving out' the multilateral system from the scope of the existing access and benefit-sharing law. Some countries, for example, Peru, have done this when creating access and benefit-sharing legislation, in anticipation of implementing the multilateral system (but before actually making progress with the latter). Others are in the process of considering means to retroactively amend access and benefit-sharing laws. It is important to note, however, that no country has yet managed to retroactively amend national access and benefit-sharing laws in this regard. Some of the factors contributing to the lack of progress will be taken up in the next section.

In some countries, where draft access and benefit-sharing bills do not include exemptions for the multilateral system, they are cited by national actors

⁶¹ See TAC of the SMTA, Report of the Second Meeting, note 33 above and TAC of the SMTA, Report of the Third Meeting, note 44 above.

⁶² F. Begemann et al., *Recommendations for the Implementation of the Nagoya Protocol with Respect to Genetic Resources in Agriculture, Forestry, Fisheries and Food Industries* (Bonn: Secretariat of the Scientific Advisory Board on Biodiversity and Genetic Resources at the Federal Ministry of Food, Agriculture and Consumer Protection, 2012).

⁶³ See note 51 above, regarding PGRFA managed and controlled by farmers on such lands.

as impediments to progress in implementing the multilateral system, despite the fact that they have no legal force. In a number of countries – for example, Nepal – such draft laws have been in circulation under various forms of government consideration for over a decade and date back to before the country became an ITPGRFA member state. The fact is, however, that these draft laws, and the aspirations they embody, have been part of national public discussion for so long that they have taken on an informally recognised presence and authority of their own.

Before proceeding to the next section, it is important to note that few countries have opted to develop omnibus legislation that attempts to address implementation of access and benefit sharing under the Treaty and the CBD simultaneously, instead of simply exempting the multilateral system with the promise of developing separate policies and mechanisms as part of its implementation. (Costa Rica and Norway have started the process but have not yet finalised it.) Among other things, such legislation could delegate responsibility to different ministries or departments for considering requests for PGRFA in the multilateral system, and it could include whatever kinds of details are necessary to make such a system work, depending on the political and legal culture of the country. More importantly, such legislation could be used to establish to whom access applications may be directed for access to different genetic resources and to establish interdepartmental mechanisms through which requests could be redirected and monitored. The law could create an interagency committee to consider difficult cases where it is not clear which rules should be applied, depending on the range of variables discussed earlier, including the resources concerned, who holds them, the proposed uses, and so on.

3.5 Using the SMTA to Provide PGRFA of Crops That are Not Included in the Multilateral System

Member states' obligations to provide facilitated access through the multilateral system only extends to the genetic resources of the 64 crops and forages include in Annex 1 of the ITPGRFA. However, to lessen administrative burdens for collection holders,

some countries have voluntarily adopted policies to make non-Annex 1 PGRFA in publicly held collections available using the SMTA. Indeed, this policy has been adopted on a European regional level, in the context of establishing a European Genebank Integrated System (AEGIS).⁶⁴ To adopt this approach, countries are in effect exercising their rights under the CBD (or national laws implementing the CBD) to decide to make the resources in question available under the SMTA. As far as the authors are aware, no developing countries have yet adopted such a policy.⁶⁵

3.6 Low Levels of Awareness About the Multilateral System (And to a Lesser Extent, the CBD)

In most countries, there is a persistently low level of awareness about the ITPGRFA in general and about the benefits of participating in the multilateral system in particular. This is the case both within the agricultural sector and outside it. In most countries, very few people outside the relatively small circle of plant breeders, university researchers, plant genetic resources specialists, and a handful of farmers and civil society organisations appreciate the importance of access to genetic diversity to national food security. By contrast, stories about biopiracy are much more widely appreciated by the general public in many countries. As a result, concerns about controlling unauthorised access to genetic resources overshadow, and to some extent undermine, popular interest in the benefits associated with sharing plant genetic resources through mechanisms such as the multilateral system. To counteract this phenomenon, national partners in eight countries supported by the GRPI-2 project are conducting studies to document the extent to which the countries concerned have benefited from access to plant genetic resources from other parts of the world. These studies involve assembling data concerning germplasm flows into, within, and out of the countries, the international pedigrees of modern varieties released in the countries, and the contribution those varieties

⁶⁴ See Begemann et al., note 62 above.

⁶⁵ The model exemption clause developed by the TAC of the SMTA is consistent with this broader approach. See TAC of the SMTA, note 30 above.

have made to the economic development of those countries concerned. The national research teams are also analysing the extent to which their countries' dependence on PGRFA from other parts of the world may increase as a result of climate change.⁶⁶

Challenges associated with low levels of awareness are compounded by the fact that responsibility within ministries of agriculture for ITPGRFA implementation is often delegated to agricultural research organisations and, within these organisations, to departments dealing with genetic resource conservation. These departments and their activities are often relatively low profile within their own ministries, with the result that they have difficulty in getting their own minister to recognise the importance of multilateral system implementation. This phenomenon was noted by Michel Petit et al⁶⁷ and his colleagues over twelve years ago in the context of the negotiations of the ITPGRFA, and it persists today as a factor affecting national implementation.

Isabel López Noriega, Peterson Wambugu, and Alejandro Mejias point out that low level of awareness about the ITPGRFA can be partly attributed, in some countries, to the fact that very little consultation preceded their ratification of the Treaty.⁶⁸ As a result, in some countries, parties whose cooperation is required for implementation – including ministries of the environment – do not actually know much or anything about the multilateral system and may not feel a shared sense of its importance. As a result, they are likely to feel less compelled to accommodate, and make policy space for, the implementation of the multilateral system. The same thing could also be said about farmers and civil society groups in many countries. In this way, low levels of awareness about the multilateral system can play a significant role in holding back progress in its implementation.

Clearly, more work needs to be done to raise awareness about the benefits of facilitated access to germplasm through the multilateral system to

support national and local research and development objectives. This article is written primarily from the perspective of persons involved in the implementation of the ITPGRFA, so it has focused on challenges associated with low levels of awareness about the ITPGRFA. It is worth noting that commentators also note low levels of awareness about the CBD at a national level as a challenge to overcome.⁶⁹

Efforts to raise awareness about, and build capacity to implement, access and benefit sharing under the CBD and the ITPGRFA have also been largely separate and distinct exercises. This is a tendency that has percolated 'from the bottom, up' as a result of the fact that in most countries different agencies are responsible for the negotiation and implementation of the different agreements. It has also been reinforced 'from the top down', with international development assistance being delivered through sector specific channels.

It makes sense that resources committed to awareness raising should address access and benefit-sharing issues for all genetic resources in the country under all applicable international laws. Otherwise, resources will not be optimally used, possibilities for coordinating implementation (where coordination is necessary) will be overlooked, and there will be less likelihood of overcoming the sense of competition that sometimes exists between ministries regarding access and benefit sharing.

3.7 Lack of Shared Vision and Coordination Between Ministries/Agencies Responsible for Implementation

As highlighted in the first part of this article, despite the fact that the ITPGRFA and CBD list practically identical objectives, their approaches to regulating access and benefit sharing are extremely different. The access and benefit-sharing articles of the CBD were developed largely in response to perceived injustices about developed countries' unchecked exploitation of developing countries' resources. Concerns about this issue were exacerbated by developed countries' push to extend intellectual

⁶⁶ See Vernoooy and Halewood, note 24 above.

⁶⁷ M. Petit et al, *Why Governments Can't Make Policy: The Case of Plant Genetic Resources in the International Arena* (Lima: International Potato Centre, 2001).

⁶⁸ See López Noriega, Wambugu and Mejias, note 22 above.

⁶⁹ See Cabrera, Perron-Welch & Rukundo, note 12 above.

property rights into international trade negotiations and the concomitant 'boom' in share values of biotechnology companies in the 1980s.⁷⁰ The access controls that mostly developing countries put in place pursuant to the CBD are designed to stop such practices and force users to pay a fair price for accessing developing countries' resources.⁷¹ It is not an exaggeration to say that, in many developing countries, national access and benefit-sharing laws have been developed in the spirit of redressing historic, geopolitical inequalities and injustices.

Countries' participation in the multilateral system is based on a different historical justification and meta-narrative. All countries are interdependent on PGRFA; all countries benefit from sharing their resources. No single country can possibly conserve all of the genetic diversity it needs to support its agricultural research and development and plant breeding programs. Many of the genetic resources concerned are already spread around the world and are potentially available for numerous potential providers. The benefit of facilitated access to the pool of shared plant genetic resources in the multilateral system outweighs whatever benefits can potentially be gained from strictly controlling access to those resources. All countries, developed and developing alike, will benefit from reaching out beyond their national borders and interests, to cooperate and share responsibilities in globally coordinated systems of conservation, use, and benefit sharing. The story that must be understood to appreciate the contributions of the multilateral system to conservation, agricultural research, plant breeding, and, ultimately, food security is more complex and not as immediately compelling from an 'historical wrongs and rights re-balancing' point of view.

The CBD came into force eleven years before the ITPGRFA. Ministries of environment, supported by highly motivated civil society organisations, international conservation organisations such as

International Union for the Conservation of Nature and international and country donors had already spent over a decade struggling to implement the CBD before it was possible to know what form the ITPGRFA or the multilateral system would take. There is an understandable tendency, therefore, on the part of some champions of the CBD to see the ITPGRFA and the multilateral system as an unasked-for baby brother who threatens to detract attention and resources away from his older sibling.

The structural issues and tensions listed earlier have likely contributed to delay in amendments being made to national laws that limit the national implementation of the multilateral system. They are likely also contributing to the fact that, as far as the authors aware, ministries of agriculture and environment have not jointly developed guidelines, jointly published information documents, or advertised the availability of joint support services to address the interface issues highlighted in this article.

3.8 Coordinating Aspects of Implementation

The forgoing analysis is not meant to suggest that divisions between the ministries of environment and agriculture in the implementation of access and benefit-sharing norms are insurmountable. There are promising examples in a number of countries of efforts to coordinate policy development and implementation efforts under the guidance of the respective lead agencies. Some countries are experimenting with cross-departmental, multi-stakeholder initiatives to help address some of the issues mentioned earlier. India, Rwanda, and Uganda, for example, have created permanent multi-stakeholder committees or boards to facilitate information sharing, awareness raising, interagency consultation, and identification of options for national policy development pursuant to both the CBD and the ITPGRFA. These bodies include representatives from departments of agriculture, environment, forestry, and the attorney general. They also include representatives from national farmers' organisations, indigenous peoples, industry groups, and civil society organisations. However, in many countries, these kinds of multi-stakeholder committees exist only on paper and need resources to be put into practice.

70 M. Halewood, 'Governing the Management and Use of Pooled Microbial Genetic Resources: Lessons from the Global Crop Commons', 4(1) *International J. Commons* 404 (2010); See Petit et al., note 67 above and S. Safrin, 'Hyperownership in a Time of Biotechnological Promise: The International Conflict to Control the Building Blocks of Life', 98 *Am. J. Int'l L.* 641 (2004).

71 See Halewood, *id.*

Box 6: Inter-ministerial, multi-stakeholder coordination mechanisms to guide implementation of access and benefit-sharing norms under the CBD and ITPGRFA: The Rwandan example

In Rwanda, a steering committee to oversee the implementation of the CBD is composed of delegates from different ministries, including the Ministry of Agriculture and Animal Resources. Rwanda recently acceded to the ITPGRFA, so there is still no formalised oversight committee. In this regard, the Rwandan Agricultural Board (RAB), a national agricultural research organisation, has proposed a national gene bank strategy (to be approved by the Ministry of Agriculture and also possibly the Ministry of Natural Resources). Among other things, it proposes to create a permanent national steering committee to provide policy guidance on issues related to collection, conservation, sustainable use, and benefit sharing. The committee would include representatives from RAB (currently the focal point for both the CBD-ABS and the ITPGRFA), the Rwanda National Gene Bank, the Rwanda Environmental Management Authority (CBD-national focal point), the Ministry of Agriculture and Animal Husbandry, MINAGRI, the Rwanda Natural Resources Authority, the Rwanda Scientific and Technological Research Institute, (including National Herbarium), the National University of Rwanda, farmers' associations, and the Rwanda Development Board (including protected areas),

In addition, in other countries – for example, Rwanda and Côte D'Ivoire – there are discussions about the possibility of ministries of environment and agriculture working together to develop a single law, with delegated responsibilities between ministries, to implement the multilateral system under the CBD, including the Nagoya Protocol. Costa Rica and Norway appear to have committed themselves to taking such an approach but have not yet developed the requisite supportive policies and mechanisms. Such an approach may be simpler to follow in those countries where the ITPGRFA is

the focal point, and the CBD access and benefit-sharing focal point are the same person, as in Rwanda, or the same government agency, as in Bhutan.

CONCLUSION

This article has identified nine issues that national policy-makers need to address and the concomitant steps they need to follow when implementing the multilateral system under the ITPGRFA. In this respect, it responds to an outstanding need for a synthesis of research and practical experiences to date concerning the implementation of the multilateral system.

The article also identifies those situations where national mechanisms to implement the multilateral system come face to face with access and benefit-sharing mechanisms designed to implement the CBD (and those that are being planned to implement the Nagoya Protocol). The authors have described the practical consequences that can result from mismanagement of the points of interface and suggest means by which national agencies can coordinate their technical support to the constituencies of conservers, users, providers, and receivers of genetic resources at the frontier of the two systems. The authors hope that the article will help increase national policy actors' confidence in their collective capacities to clearly and practically delineate the interface of the two systems.

Finally, the article identifies a range of structural, administrative, and political factors that are currently challenging the mutually supportive implementation of the access and benefit-sharing mechanisms under the CBD and ITPGRFA. In this context, the article has drawn attention to the fact that, in many countries, efforts to domesticate the multilateral system and access and benefit sharing under the CBD have been led by separate agencies through largely independent processes. While this separate approach may be acceptable in many ways – it is not necessary to coordinate on all fronts – it appears to have contributed to some blocked policy development processes, at least as far as the implementation of the multilateral system is concerned. It is beyond the scope of this article to

develop prescriptions for dealing with these administrative, structural, and political challenges. Instead, the article is meant to assist others to address those issues in the context of their own domestic policy-making processes or in designing support for these processes. That said, we will underscore here a few observations that flow directly from the earlier analysis. It is critically important for the communities of people working in the agricultural sector, on the one hand, and in the environmental sector, on the other hand, to overcome their apparent reluctance to engage with one another concerning access and benefit-sharing issues. It is incumbent upon the agencies responsible for the implementation of the ITPGRFA and CBD/Nagoya Protocol to initiate processes to engender information exchange, increased trust, and a shared sense of purpose between their respective constituencies. There is not one 'best way' to approach coordination of national access and benefit-sharing norms developed pursuant to the ITPGRFA and the CBD. What is most important is that the applicable rules related to the implementation of both the CBD and ITPGRFA are clearly established so that providers and recipients can easily ascertain when the different sets of rules apply, who is responsible for administering those rules, and what kinds of assistance they can obtain when they are not sure how to proceed. How this clarity is ultimately concretised and communicated will vary from country to country depending on their political and legal cultures and the issues about which there is most sensitivity and or uncertainty. Some countries will require more overt, formal mechanisms such as new or amended regulations, executive orders, or ministerial decrees. For others, it may suffice for the government to publish information documents clearly describing the systems in place and how they work and relate to one another.

To achieve the required clarity, the lead agencies responsible for implementing access and benefit-sharing norms under the ITPGRFA and CBD will need to work together more closely than they currently do in many countries. To that end, they should conduct joint background studies, capacity-building projects and workshops, national consultations, and awareness-raising activities. If they need financial support, they should approach

donors with joint proposals to develop complementary policy options and mechanisms for implementation of the ITPGRFA, CBD, and Nagoya Protocol as outcomes of the same project. These coordination processes can be formalised through the creation of joint inter-ministerial committees, or they can remain informal and ad hoc. National circumstances will dictate which arrangements are most appropriate. In the absence of such efforts, implementation of all three instruments may be significantly delayed or completely frustrated in many countries, and their full contributions to the conservation and equitable, sustainable use of biological diversity will not be realised.

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