



# **MALAYSIA'S IMPLEMENTATION OF THE MULTILATERAL SYSTEM OF ACCESS AND BENEFIT-SHARING**

Gurdial Singh Nijar

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**Gurdial Singh Nijar**

## FOREWORD

The International Treaty on Plant Genetic Resource for Food and Agriculture (ITPGRFA) is the first international, legally-binding agreement promoting the sustainable use and conservation of plant genetic resources for food and agriculture, and the sharing of benefits derived from their use. As such, it represents a breakthrough in the international community's understanding of the importance of plant genetic resources and the need for countries to work together to make sure those resources are not lost or used unfairly. This paper focuses on Malaysia's implementation of the multilateral system of access and benefit-sharing. It is written, however, to be used as a tool by actors who are involved in implementation of the multilateral system in other countries. It addresses issues such as how to confirm what materials are 'under the management and control' of the national government and 'in the public domain' (that is to say, automatically included in the multilateral system) and how to address the interface, at the level of national policy and law, of access and benefit-sharing under the ITPGRFA and the Convention on Biological Diversity. With this paper, Professor Gurdial Singh Nijar and CEBLAW have provided a very useful tool for worldwide use. Bioversity International is very pleased to be co-publishing it with the Malaysian Agricultural Research and Development Institute.

Dr Michael Halewood  
Policy Theme Leader  
Bioversity International

This paper, Malaysia's Implementation of the Multilateral System of Access and Benefit-sharing is an important source of information related to the implementation of the multilateral system of access and benefitsharing created by the International Treaty on Plant Genetic Resource for Food and Agriculture. This will be a good source of information for policymakers, academicians and researchers. The report also provides updated information related to Malaysian agriculture and plant genetic diversity, conservation, research and use, origin of germplasm, regional and international collaboration and legal and policy frameworks. The Malaysian Agricultural Research and Development Institute (MARDI) has worked closely with the Centre of Excellence for Biodiversity Law (CEBLAW) and Bioversity International in providing some of the information included in the study. We hope that this publication will spur greater support for a strong program on access and benefit-sharing between Malaysia and other countries in the world. Therefore, I am indeed honored to be given the opportunity to introduce this comprehensive report.

Datuk Dr Abdul Shukor Abdul Rahman  
Director General of MARDI

**CONTENTS**

<b>Acknowledgements</b>	<b>8</b>
<b>About CEBLAW</b>	<b>8</b>
<b>Acronyms</b>	<b>9</b>
<b>EXECUTIVE SUMMARY</b>	<b>10</b>
<b>PART I. INTRODUCTION</b>	<b>11</b>
<b>1. Background</b>	<b>12</b>
1.1 Purpose of the study	12
1.2. Scope of the study	13
1.3. Methodology	14
1.4. Limitations	14
<b>2. Agriculture and plant genetic diversity in Malaysia</b>	<b>14</b>
2.1 Agriculture sector	15
2.2. Food crops	15
2.3. Centre of diversity	15
2.4. Employment	15
<b>3. Overview of PGRFA conservation, research and use, and the origin of germplasm</b>	<b>16</b>
3.1 Conservation and research	16
3.2. Sources of acquisitions	18
3.3. Mechanisms for access to and use of PGRFA: supportive information technology	20
3.4. Access to germplasm by farmers: formal and informal seed systems	21
<b>4. Regional and international collaboration</b>	<b>22</b>
<b>5. Legal and policy frameworks</b>	<b>25</b>
<b>PART II. IMPLEMENTING THE MULTILATERAL SYSTEM OF ACCESS AND BENEFIT SHARING</b>	<b>26</b>
<b>1. Identification of PGRFA</b>	<b>27</b>
1.1 Annex-1 PGRFA in Malaysia	27
1.2. Coverage of the multilateral system (articles 11 and 15.1A of the treaty)	27
1.3. Identification of bodies holding Annex-1 crops	28
1.4. Analysis of whether mardis accessions are under the management and control of Malaysia as a contracting party	30
1.5. Analysis of whether accessions in public universities are under the management and control of Malaysia as a contracting party	33
1.6. Establishing criteria for determining 'management and control' of a contracting party	35
<b>2. The impact of federal-state distribution of powers under the Malaysian Federal Constitution</b>	<b>36</b>
<b>PART III. IMPLEMENTING THE MULTILATERAL SYSTEM OF THE TREATY IN MALAYSIA: CONCEPTUAL AND PRACTICAL CHALLENGES</b>	<b>39</b>
<b>1. Incorporating treaty provisions into Malaysian law</b>	<b>40</b>
<b>2. Is there power in existing laws to implement the multilateral system of the Treaty?</b>	<b>41</b>

3. Informational provisions	42
4. Notification	43
<b>PART IV. RECOMMENDATIONS</b>	<b>45</b>
1. Proceeding under existng law through administrative instructions	46
2. Amendment of the MARDI Act	46
3. <i>In situ</i> materials	47
4. Draft access and benefit-sharing law	47
5. Other issues	49
<b>PART V. MEASURES TO ENCOURAGE NATURAL AND LEGAL PERSONS TO INCLUDE Annex-1 PGRFA IN THE MULTILATERAL SYSTEM</b>	<b>50</b>
List of workshop participants	52
Bibliography	54
<b>TABLES</b>	
Table 1: Ex situ collection centres in Malaysia	
Table 2: Institutions conducting plant crop breeding	
Table 3: Number of improved rice lines sent to Malaysia from IRRI's breeding programme between 2007 and 2010	
Table 4: Number of samples sent from CGIAR genebanks to recipients in Malaysia between 1973 and 2010	
Table 5: Accessions conserved in CGIAR centres' genebanks that were originally collected in Malaysia	
Table 6: List of international collaborations	
Table 7: Federal and state laws, and policies affecting PGRFA	
Table 8: PGRFA, including those in Annex 1, held in situ	
Table 9: Total accessions in all ex situ collection centres	
Table 10: Annex-1 crops held by national authorities	
Table 11: Accessions held by MARDI (Annex-1 Crops)	
Table 12: Annex-1 Crops held by public universities	
Table 13: Table 13: Annex-1 PGRFA under states' jurisdiction	
<b>CHART</b>	
Chart 1: MARDI's crop accessions	
<b>BOXES</b>	
Box 1: Interpreting 'in the public domain'	
Box 2: Establishment of information systems	

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### **About CEBLAW**

CEBLAW has the distinction of being the first Centre of Excellence to be set up in the field of law jointly by the University of Malaya and the Government of Malaysia. It is housed at the Law Faculty of the University of Malaya. The Centre not only provides advice to the Government on matters related to biodiversity and biosafety law, it also plays a leading role in the negotiation of international treaties under the United Nations Convention on Biological Diversity and Cartagena Protocol on Biosafety, on behalf of the Government of Malaysia, the Group of G77 and China, Like-Minded Megadiverse Countries and other informal international groupings. CEBLAW also provides consultancy services to international institutions as well as to developing countries.

## ACRONYMS

AGROBIS	Agrobiodiversity Information System
ANSWER	Asian Network for Sweetpotato Genetic Resources
ASEAN	Association of Southeast Asian Nations
AVRDC	World Vegetable Center
BAPNET	Banana and Plantain Network
CEBLAW	Centre of Excellence for Biodiversity Law
CFFRC	Crops for the Future Research Centre
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Center for Tropical Agriculture
CIMMYT	International Maize and Wheat Improvement Center
CIP	International Potato Center
COGENT	International Coconut Genetic Resources Network
FAO	Food and Agriculture Organization of the United Nations
FRIM	Forest Research Institute of Malaysia
GDP	gross domestic product
ICDUP	International Council for Development of Underutilized Plants
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IITA	International Institute of Tropical Agriculture
INGENIC	International Group for Genetic Improvement of Cocoa
INGER	International Network for the Genetic Evaluation of Rice
IRRI	International Rice Research Institute
MARDI MGIS	Malaysian Agricultural Research and Development Institute Musa Germplasm Information System
NISM	National Information-Sharing Mechanism
PGRFA	Plant Genetic Resources for Food and Agriculture
PROSEA	Plant Resources of South East Asia
RECSEA-PGR	Regional Cooperation in Southeast Asia on Plant Genetic Resources
RGBIS	Rice Genebank Information System
SABGRC	Southeast Asia Banana Germplasm Resources Center
SINGER CGIAR	System-wide Information Network for Genetic Resources
SMTA	Standard Material Transfer Agreement
TANSOA	Taro Network for Southeast Asia and Oceania
UNIMAS	Universiti Malaysia Sarawak

## SUMMARY

This study examines a number of issues related to Malaysia's implementation of the multilateral system of access and benefit-sharing created by the International Treaty on Plant Genetic Resources for Food and Agriculture. The paper suggests a three-stage approach to addressing these issues. First, it establishes a process for ascertaining which of Malaysia's plant genetic resources for food and agriculture are under government management and control. It includes a survey of the major institutions in Malaysia holding collections of crops and forages, and examines whether they function as an extension of a government department. If so, the paper argues that the plant genetic resources held by those organizations and listed in Annex 1 of the Treaty are automatically included in the Treaty's multilateral system (if they are also in the public domain, as the Treaty stipulates).

Second, the paper examines existing laws to ascertain whether they include provisions for implementing the multilateral system. The study suggests that it is possible to implement the multilateral system in Malaysia without the time-consuming process of enacting a new law, or even amending existing laws. While such initiatives are not necessary however, there may be situations in which amending existing statutes would contribute to long-term legal certainty. The paper offers draft text for such amendments.

Finally, the study examines a draft national law on access and benefit-sharing made pursuant to the Convention on Biological Diversity and recommends that it exclude the PGRFA in the multilateral system from its ambit, thereby creating legal and policy space for implementing the multilateral system.



## **PART I**

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### **INTRODUCTION**

## 1. Background

### 1.1 Purpose of the study

Malaysia is a Contracting Party to the International Treaty on Plant Genetic Resources for Food and Agriculture ('the Treaty'); it acceded to the Treaty on 5 May 2003. The Treaty establishes a multilateral system of facilitated access and benefit-sharing for plant genetic resources that are most important for food security. Annex 1 of the Treaty lists the 64 crops and forages included in the multilateral system. As a Contracting Party, Malaysia assumed several obligations, the most fundamental of which is an agreement to facilitate access to plant genetic resources of Annex-1 crops and forages on a multilateral basis. According to the Treaty (Article. 11.2), Annex-1 crops "under the management and control" of the national government and "in the public domain" are automatically included in the multilateral system. Contracting parties to the Treaty also agree to encourage 'natural and legal persons' to voluntarily include plant genetic resources of Annex-1 crops and forages in the multilateral system (Article 11.3).

As a Contracting Party, Malaysia has also agreed that facilitated access shall be provided through a Standard Material Transfer Agreement (SMTA). The SMTA was adopted by the first session of the Treaty's Governing Body in 2006. It contains provisions that reflect the conditions established in the Treaty related to use, limitation of intellectual property rights and continued availability for access. The SMTA also reflects conditions established after the Treaty's adoption, including those for commercial benefit-sharing, which require mandatory payment when availability of a product incorporating material included in the multilateral system is restricted. Payment is based on a fixed percentage of the commercialized product's sales. The normal rate for monetary benefit-sharing is set at 1.1% of the revenue generated by the product minus 30% (i.e. 0.77%). The recipient may opt for an alternative scheme, paying 0.5% of all revenue generated by the crop, regardless of whether the new plant genetic resources are available for research and breeding. All payments are to be made through the multilateral system.

When products are available without restriction, recipients are encouraged to make voluntary payments to the benefit-sharing fund of the multilateral system. The obligation to provide facilitated access under the Treaty only extends to conservation and use of the plant genetic resources for research, breeding and training related to food and agriculture. Contracting parties are not obliged to provide facilitated access for chemical, pharmaceutical or other non-food or feed industrial uses (Article 12.3(a) of the Treaty).

In addition, Contracting Parties have agreed upon a range of other benefits to be shared, including information, capacity building and transfer of technology.

The SMTA obviates the need for negotiating individual bilateral contracts for each case of access and transfer. For this reason, it is a critical component of the multilateral system that was specifically designed to lower transaction costs.

All materials listed in Annex 1 of the Treaty are automatically included in the multilateral system. Provided that they are 'managed and controlled' by the party and 'in the public domain', there is no need for declaration or notification. However, in order to make full use of the multilateral system, there is a need to:

- first, ensure that the obligations stated in the Treaty are incorporated into national law;
- second, implement the system nationally through supportive measures and structures; and
- third, bring the Annex-1 crops into the Treaty's multilateral system by sharing information about them. This can be done by informing other Contracting Parties through the Treaty Secretariat (where the materials can also be accessed), and including useful, non-confidential information such as characterization and evaluation data in order to assist potential users in ascertaining the materials' usefulness.

The Centre of Excellence for Biodiversity Law (CEBLAW) has been engaged by Bioversity International to study Malaysia's implementation of its obligations under the Treaty. This study was undertaken under the overall framework of a FAO/Bioversity/Treaty Secretariat programme to support implementation of the Treaty<sup>1</sup>. It involved identifying plant genetic resources for food and agriculture (PGRFA) covered by the Treaty, institutions holding these PGRFA and the status of these PGRFA, particularly whether they are considered 'under the management and control' of Malaysia as a Contracting Party.

This paper analyses the term 'under management and control'. Many functions of Malaysia's Government are carried out through different bodies. These include institutions established by: statutes; constitutions of public universities (which in turn are established by federal law); and corporations established under the Companies Act. While some of these bodies hold PGRFA, it is unclear whether they are 'under the management and control' of the national Government. This study seeks to: (i) provide a framework for responding to this question; and (ii) apply that framework to PGRFA collections in Malaysia.

Malaysia has a federal constitutional structure in which power is distributed between the national Government and its 13 states. The states hold PGRFA *in situ* as well as in *ex situ* collections. There are well-established botanical gardens in some states, which may hold PGRFA. Therefore, applying the Treaty in Malaysia involves a close examination of the distribution of PGRFA located on state lands and held in states' *ex situ* collections. The study identifies recommendations for legislative, administrative and policy measures that can facilitate Malaysia's participation in the multilateral system as a Contracting Party to the Treaty.

## 1.2 Scope of the study

The study provides:

1. an identification of PGRFA in Malaysia that are listed in Annex 1 of the Treaty;
2. an identification of authorities, research institutes and other bodies holding these crops *in situ* and *ex situ*;
3. an analysis of whether the crops these bodies hold are 'under the management and control' of the Government of Malaysia as a Contracting Party to the Treaty (and therefore included in the multilateral system);

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<sup>1</sup> FAO/Bioversity International/Treaty Secretariat Joint Capacity Building Programme for Developing Countries on Implementation of the Treaty and its Multilateral System of Access and Benefit-sharing. See <http://www.planttreaty.org/content/capacity-building-programme-developing-countries-implementation-treaty-and-its-multilateral->

4. an assessment of the distribution of powers between the federal and state governments under the Malaysian Federal Constitution with regard to PGRFA in the states' jurisdictions and in line with Malaysia's obligations as a Contracting Party to the Treaty;
5. an overview of actions necessary to ensure Malaysia's compliance with its obligations under the Treaty – these include notifying the Secretary of the Treaty, using the SMTA when making material available through the multilateral system, adequately documenting material to be exchanged through the multilateral system and donating samples of PGRFA to institutions already committed to holding the material within the multilateral system; and
6. recommendations for legislative, administrative or policy measures that may clarify the legal framework.

### **1.3 Methodology**

The research methodology included an analysis of the laws governing the major organizations holding PGRFA listed in Annex 1 of the Treaty. In addition, individuals in charge of managing collections were interviewed –including heads of office, gene bank curators and policy makers. Background information for the study was collected from: reports of government ministries – especially the Ministry of Agriculture and Agro-Based Industry – and planning authorities; reports to international organizations such as FAO; an analysis of other countries' national laws on access and benefit-sharing; and questions posed to stakeholders, including breeders and researchers. This data was analysed to further our understanding of the work and functions of organizations holding collections of PGRFA.

The results of the study were presented in a workshop<sup>2</sup> that included staff of government ministries, agricultural research organizations, genebanks, universities, state research centres and other stakeholders. The study was finalized by incorporating feedback from the workshop.

### **1.4 Limitations**

While every effort was made to obtain the most up-to-date information, this was not always possible since many reports from ministries and other stakeholder organizations were prepared in 2009. In addition, Malaysia's latest Country Report to FAO was dated 2007. Attempts were made to overcome these gaps by conducting interviews and informally gathering data; however the reliability of this information could not be verified.

## **2. Agriculture and plant genetic diversity in Malaysia**

This section elaborates the role of the agricultural sector in Malaysia's economy. Although not strictly required for the study, it frames the context around access to PGRFA in Malaysia.

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<sup>2</sup> The workshop was held on 14 and 15 March 2012 at Hotel Istana, Kuala Lumpur. The list of participants is attached as Annex 1.

## 2.1 Agriculture sector

In 2009, the share of the agriculture sector in Malaysia's gross domestic product (GDP) was 7.7%, following 3% growth between 2006 and 2009 (see the 10th Malaysia Plan). This share is targeted to increase by another 3.3% between 2011 and 2015. The 10th Malaysia Plan identifies agriculture as one of the National Key Economic Areas with the potential to contribute to the Malaysian economy's growth. The Government has made a commitment to focus on innovation and research, and develop infrastructures in modern agriculture, with a focus on palm oil. According to Malaysia's 2007 FAO Country Report, Malaysia's palm oil sector leads the world in vegetable oil production, research and development. The use of PGRFA is expected to assume a central role in Malaysia's attainment of economic targets.

## 2.2 Food crops

Malaysia's leading food crops are: rice; fruits such as papaya, pineapple, banana and starfruit; and vegetable crops like chilli pepper, cabbage and other *Brassicas*; *Curcubits* (cucumbers and similar crops); Solanaceous crops (tomato, eggplant, sweet pepper); and beans (Fabaceae). Rice cultivation occupies the largest land area, accounting for 670,000 ha in 2010 (Department of Agriculture, 2010). Oil palm, rubber, coconut and durian also occupy large cultivation areas. Together with rice, they represent 97% of the total cultivated agricultural land in Malaysia (FAO Country Report 2007).

Malaysia's Annex-1 crops include rice, sweet potato, cassava, coconut, eggplant, banana, citrus, breadfruit, cabbage, chilli, radish and turnip.

## 2.3 Centre of diversity

Malaysia lies within the centers of diversity in Southeast Asia for rice, banana, citrus and coconut. Its genebanks feature traditional varieties of rice and wild relatives of *Oryza*, which have been incorporated into improved modern varieties; several farmer varieties or landraces have also developed from these. In addition, Malaysia's *ex situ* genebanks include germplasm of banana, chilli, eggplant, tomato, citrus, taro, sweet potato, coconut and several fruits.

## 2.4 Employment

Rice is the staple food for a large part of Malaysia's population and rice farming is a source of income for 173,000 farmers; 70% of the nation's supply is grown locally. There is growing concern that the region's future rice supply will be affected by climate change, rising oil prices and a growing global population (*Sunday Star*, 6 March 2011). The Government plans to increase food production by encouraging private and government-affiliated companies to become involved in the agricultural sector, and committing RM100 million in investments to scale up rice farming in the important *Muda* rice-growing area (*The Sun*, 16 March 2011).

In 2009, there were 46,000 farmers involved in vegetable farming and 308,000 involved in fruit growing. In the same year, 28% of farmers were involved in rice farming; 50% in fruit growing and 9% were involved in vegetable cultivation (Department of Agriculture, 2010).

The percentage production of agricultural commodities in 2010 was: 43% paddy rice; 29% fruit; 9% coconut; 9% vegetables; 7% pineapple; 2% cash crops; and 1% spices and herbs (Department of Agriculture, 2010).

### 3. OVERVIEW OF PGRFA CONSERVATION, RESEARCH AND USE, AND THE ORIGIN OF GERMPLASM

#### 3.1 Conservation and research

There are 18 government, NGO and private-sector collections holding germplasm *ex situ* in Malaysia. Most of these accessions are conserved in field genebanks. A few organizations also have seed genebanks, *in vitro* collections and cryopreservation facilities. The government-run Forest Research Institute of Malaysia (FRIM) has the additional capacity to conserve germplasm in a DNA genebank. Botanical gardens also conserve wild species and the wild relatives of cultivated crops.

Table 1  
Ex situ collection centres in Malaysia

Level	Holders
Federal	Asian Network for Sweetpotato Genetic Resources
	Malaysian Agricultural Research and Development Institute (MARDI)
	Forest Research Institute Malaysia (FRIM)
	Department of Agriculture, Peninsular Malaysia
	Malaysian Rubber Board
State	Sabah Parks
	Department of Agriculture, Sabah
	Kedah Regional Development Authority
	Department of Agriculture, Sarawak
	Department of Forestry, Sabah
	Department of Forestry, Sarawak
	Sarawak Botanical Garden
	Sarawak Biodiversity Centre
	Penang Botanical Garden
Universities	Putra University of Malaysia
	Sabah University of Malaysia
	National University of Malaysia
	Science University of Malaysia
	MARA University of Technology, Sabah Campus
	University of Malaya
Private	Golden Hope Research
	United Plantations, Berhad

Source: FAO Country Report 2007; Malaysian National Information-sharing Mechanism (NISM) database; Consultation feedback, March 2012.

## Collections

The Malaysian Agricultural Research and Development Institute (MARDI) holds the country's largest germplasm collection, with 22,751 accessions of 869 species in its seed and field genebanks. The seed genebank mainly conserves rice and vegetables (19,108 accessions of which approximately 14,000 are rice; Shukor, M., personal communication, 23 December 2010). The field genebank, with 3,643 accessions, covers 157.75 ha and includes fruits, herbs, medicinal plants, traditional vegetables, bio-pesticide plants and aromatic plants. Some field genebanks are also maintained by individual farmers as 'on-farm conservation' collections throughout the country (Shukor *et al.* 2011a).

### *In situ* conservation

For *in situ* management, it is crucial to conduct inventories of plant genetic resources, crop-related biodiversity and wild plants used for food production; priority is accorded to those facing major threats. In line with the National Action Plan and Strategy for PGRFA and the National Policy on Biological Diversity, 34 surveys were undertaken build inventories of resources held both *in situ* and on-farm (Shukor, *et al.* 2011a).

Initiated in 2000, on-farm conservation activities, are increasing but still given low priority. These activities are discussed further in section 3.4.

In the last few years, there have also been activities related to *in situ* conservation of wild crop relatives and wild plants for food production. Most of these efforts have focused on medicinal and herbal plants, indigenous vegetables and fruit species. Awareness of the value of wild crop relatives and wild plants is increasing in the country. This has encouraged research institutes to study and promote these species among local farmers and consumers (Shukor, *et al.* 2011a).

Most *in situ* conservation of plant genetic resources in Malaysia is carried out in protected areas. These protected areas cover 5.8% of the total land area of Peninsular Malaysia (763,300 ha); 8.9% of Sabah (658,824 ha); and 2.3% (288,806 ha) of the land area of Sarawak. There are plans to expand Sarawak's protected areas to 1.14 million ha, which will represent 8% of its total land area.

Protected areas in forest habitats comprise national and state parks, virgin jungle reserves, wildlife reserves and bird sanctuaries and protected forests (such as Sabah). Studies have been conducted to inventory wild fruit species in these protected areas (Shukor, *et al.* 2011a).

### Plant breeding

Breeding activities in Malaysia are conducted by agricultural research institutions, state agencies, public universities and private companies. These breeding programs include objective-setting for the selection of parental lines and the selection of segregating generations. Table 2 lists the institutions and the crops involved in plant breeding in Malaysia.

Table 2: Institutions conducting plant-breeding activities in Malaysia

Breeding institution	Crop
Strategic Resources Research Centre, MARDI	cereals; fruits; vegetables
Rice and Industrial Crops Research Centre, MARDI	cereals; grain legumes; roots and tubers; fiber crops; oil crops; sweetener plants
Horticulture Research Centre, MARDI	fruits; vegetables
Malaysian Institute for Nuclear Technology Research	cereals; grain legumes; fruits; forages; oil plants
Malaysian Rubber Board	rubber; tree crops
Malaysia Cocoa Board	cocoa
Malaysian Pepper Board	pepper
Department of Forestry, Peninsular Malaysia	oil plants
Department of Agriculture, Sabah	cereals (rice); oil palm, cocoa; coconut
Department of Agriculture, Sarawak	vegetables
Sabah Park	roots and tubers; fruits
National University of Malaysia	fruits
University of Sarawak	sago
International Islamic University of Malaysia	vegetables

Source: FAO Country Report 2007; Malaysian NISM database; Consultation feedback, March 2012.

### 3.2 Sources of acquisitions

The sources for Malaysia's collections vary from direct collecting by researchers from across the country to exchange with local and foreign institutions.

Breeders from public-breeding institutions obtain materials for crop improvement from several sources. Most PGRFA used in rice breeding originates from the International Rice Research Institute (IRRI) in the form of advanced breeding lines or accessions that contain specific desirable traits used in breeding disease resistance or quality. Table 3 provides more detail on these breeding lines.

Table 3: Number of improved rice lines sent to Malaysia from IRRI's breeding programme between 2007 and 2010

Centre	Species	Number of lines distributed
IRRI	Oryza	4,138

Source: [smta.irri.org](http://smta.irri.org)

All of these improved materials were transferred through the Treaty's multilateral system under the SMTA.

For vegetable crops such as chilli, long bean and luffa, improvement was carried out by selecting superior plants from local landraces. The same applied to fruits such as durian and rambutan. Some previously introduced PGRFA were used to improve mango, ciku and starfruit. Both local and foreign PGRFA were used to improve cultivated banana varieties (FAO Country Report, 2007).

Advanced lines from the World Vegetable Centre (AVRDC) have also been used to improve vegetables like tomato. Introduced PGRFA from the International Potato Centre (CIP) and International Centre for Tropical Agriculture (CIAT) were used alone with local germplasm to improve sweet potato and cassava.

In the decade preceding 2007, there was a trend towards the use of foreign PGRFA in crop improvement research; these materials were obtained from the centres listed in Table 2 and from IRRI for rice (FAO Country Report, 2007). MARDI and the Departments of Agriculture in Sabah and Sarawak States currently provide 90% of all germplasm to local breeders (Shukor, M., personal communication, 3 December 2010).

Public research and breeding organizations have also received a considerable amount of germplasm from international collections hosted by CGIAR centres (see Table 4). This material is different than that obtained from breeders, and includes farmer varieties, wild relatives and other materials that have not have been subject to formal improvement efforts.

Table 4: Number of samples sent from CGIAR genebanks to recipients in Malaysia between 1973 and 2010

Centre	Species	Number of accessions received	Total
CIP	<i>Ipomoea batatas</i>	97	110
	<i>Solanum</i> spp.	13	
ICRISAT*	<i>Arachis hypogaea</i>	255	298
	<i>Cajanus cajan</i>	23	
	<i>Cicer arietinum</i>	20	
IITA**	<i>Sphenostylis stenocarpa</i>	1	7
	<i>Vigna subterranea</i>	2	
	<i>Vigna unguiculata</i>	4	
IRRI	mainly <i>Oryza sativa</i> ; also <i>nivara</i> ,		
	<i>glaberrima</i> and other spp.	3,769	3,769
TOTAL			4,184

\*International Crops Research Institute for the Semi-Arid Tropics

\*\*International Institute of Tropical Agriculture

Sources: CGIAR System-wide Information Network on Genetic Resources (SINGER):

<http://singer.cgiar.org> and IRRI:

[www.irri.org](http://www.irri.org).

All materials sent to Malaysia from CGIAR genebanks after January 2007 employed the SMTA.

Other member countries of the Association of Southeast Asian Nations (ASEAN) also access germplasm from CGIAR centers. These institutions are the main sources of breeding lines for major crops such as rice, maize, sweet potato, cassava, coconut, banana, mungbean, peanut, and pigeon pea. Many breeders also source their materials from the national and international research communities.

Private companies usually obtain breeding materials from neighbouring countries – especially for fruits – without utilizing formal networks.

Some of the sources of germplasm listed above were supplied on the basis of regional or international agreements related to specific crops included in the multilateral system.

### Materials supplied by Malaysia to the CGIAR

Over the past several years, Malaysia has also supplied materials to the CGIAR for conservation in its genebanks (see Table 5). The CGIAR then supplies these materials to other Contracting Parties of the Treaty. This highlights the role of Malaysia as a supplier as well as recipient of genetic resources.

Table 5  
Accessions conserved in CGIAR centres' genebanks that were originally collected in Malaysia

CGIAR Centre	Collection	Number of accessions
AfricaRice	Oryza sativa	21
CIAT	Cassava	59
CIAT	Tropical forages	94
CIP	Sweet potato	10
ICRISAT	Groundnut	55
IITA	Musa	1
IITA	Wild Vigna	1
ILRI	Genetic resources	47
IRRI	Oryza sativa	4,242
IRRI	Wild rice	71
Total		4,601

Source: SINGER: <http://singer.cgiar.org>.

### 3.3 Mechanisms for access to and use of PGRFA: Supportive information technology

Several information systems are employed to store and manage information on PGRFA. The first step towards a comprehensive information system for PGRFA in Malaysia was taken with a project to establish the National Information Sharing Mechanism (NISM). This project was implemented in line with the Global Plan of Action for the conservation

and sustainable utilization of PGRFA. MARDI went on to coordinate the establishment of a formal information system for PGRFA in the country. In 2003, MARDI developed the Agrobiodiversity Information System (AGROBIS), a tool for information sharing on agricultural biodiversity. The Rice Genebank Information System (RGBIS) was also designed by MARDI for rice conservation.

Researchers and scientists can now benefit from the efficient management of important data and research findings. There are now databases for rice, indigenous fruits and vegetables, medicinal plants, arthropods and microbial cultures along with wild relatives of cultivated crops. Although there are now several information systems, only RGBIS and AGROBIS are actively used for PGRFA (Shukor *et al.* 2011a). The Medicinal Plant Information System provides information on plants used for medicinal purposes.

Constraints to further development of electronic databases include lack of funding, limited capacity for gathering information and the low priority given to the activity by some institutions. Online databases developed by CGIAR centers are accessible to users worldwide.

Malaysia's most pressing challenge is the difficulty accessing computerized documentation systems. Some data are not documented in databases at all; other databases have not been updated. Recent evidence suggests that important data on Malaysia's coconut collections has not been uploaded into the database of the International Coconut Genetic Resources Network (COGENT). However, data on banana genetic resources has been included in Bioversity International's Musa Germplasm Information System (MGIS), which contains detailed information on accessions held by Musa genebanks around the world. It is unclear whether databases on Malaysia's other major crops can be accessed electronically. When electronic documentation of germplasm accessions is not possible, users must make the effort to contact these institutions in person.

Ultimately, information on Malaysia's PGRFA should be included in national databases; these could then be included in the global information system anticipated in Article 17 of the Treaty. Efforts are underway to develop a prototype, which could be endorsed by the Treaty's Governing Body in the future. Bioversity International is leading the development of the system (known as Genesys), which will allow national information systems to upload data in order to create a unified global portal for information on all PGRFA included in the multilateral system. Ultimately, Genesys is expected to make available national accession-level information through the international mechanism described in Article 17. By making information about access and use of PGRFA widely available, this mechanism is a prerequisite for implementing the multilateral system.

### **3.4 Access to germplasm by farmers: Formal and informal seed systems**

Malaysia's seed-supply system has two major components: formal and informal systems.

The formal seed system is administered by the Government, but only for export commodities such as oil palm and rubber. Most products of plant-breeding institutions are channeled through this system. Institutions such as breeding centers, Malaysia's seed certification agency, seed-producing units and distribution centers are also included in the system.

In the informal seed system, farmers are the main players. The size and value of this system cannot be accurately calculated, but is estimated to account for a significant component of Malaysia's total seed supply for food crops. The Government strongly supports on-farm participatory plant breeding as a means to improve farmers' livelihoods.

Bario rice is a good example (Shukor *et al.* 2011a): this is a unique variety in that it is long grain, soft-textured and has a lively aroma. It grows well using traditional cultivation methods and without the need for pesticides or chemical fertilizers. The Department of Agriculture, Sarawak has initiated a Bario Rice Certification Scheme to ensure quality from seed certification to end-product retail and distribution. Another example of the informal system is related to coconut genetic diversity, which is conserved on farmers' land, sea coasts and islands. In fact, *in situ* conservation has the advantage of safeguarding well-adapted germplasm that has naturally evolved in niche environments (Au, 2011). Projects have been implemented since 1998 in coconut-growing communities with the Sabah Department of Agriculture and COGENT to conserve coconut genetic resource on-farm using a farmer-participatory approach. Research on the conservation of coconut genetic resources was also undertaken by the Sabah Department of Agriculture and MARDI from 1998 to 2001.

For traditional varieties, seed certification provides assurance of identity and quality. The Government is leading efforts to increase local small-scale seed production. One example is a seed-certification programme for rice to ensure a supply of certified seed for planting (Shukor *et al.* 2011a). The Department of Agriculture has developed a standard set of guidelines for rice seeds (*Oryza sativa*) and has become involved in certifying durian and other traditional varieties.

In addition, the Government encourages private-sector involvement in producing certified seeds. Farmers are encouraged to participate as seed growers under contract to supply planting materials under the scheme.

Government officials have examined the need to provide a legal framework for these activities by enacting a Seed Act, and there are signs that the idea may come to fruition.

One probable reason for the lack of incentives to offer seed certification in Malaysia is the high degree of reliance on imports of vegetable seeds (as much as 95%) and fruit material such as citrus, dukong and rambutan.

#### 4. REGIONAL AND INTERNATIONAL COLLABORATION

Malaysia is a member of several regional and international bodies, as described below:

- **Regional Cooperation in Southeast Asia on Plant Genetic Resources (RECSEA-PGR):** this network has crafted proposals for the conservation and use of PGRFA in the region.
- **Southeast Asia Banana Germplasm Resources Center (SABGRC):** Together with national germplasm centers, SABGRC collects all banana cultivars within Southeast Asia.
- **The Banana Asia and Pacific Network (BAPNET)** enhances regional collaboration for germplasm management, information exchange, banana resource development and strategic planning.

- **Bioversity International's** research programme on banana and plantain undertakes the assessment of tissue culture-derived banana and promotes germplasm exchange, information sharing and capacity building. Bioversity has also involved several Malaysian scientists in a regional mission to collect genetic resources of citrus species and related genera. In addition, Bioversity has provided funds to MARDI to establish a medium-term seed-storage facility and collect coconut germplasm.
- **CGIAR** scientists undertake on-farm studies of food-crop varieties' adaptability. They also work to facilitate germplasm exchange, capacity building and testing of advanced lines.
- The **Taro Network for Southeast Asia and Oceania (TANSOA)** promotes the exchange of germplasm, information sharing and testing of advanced lines.
- The **Asian Network for Sweetpotato Genetic Resources (ANSWER)** focuses on *ex situ*, *in vitro*, cryopreservation, and other means of conserving sweet potato genetic resources. ANSWER also builds capacity among member countries with regard to maintenance, characterization, evaluation and documentation of sweet potato genetic resources.
- **Users' Perspectives with Agricultural Research and Development (UPWARD)** is an initiative of CIP aimed at information sharing and testing of advanced lines. UPWARD collaborates with national programmes to conduct field research and training, and support information sharing, germplasm exchange and capacity building.
- The **International Maize and Wheat Improvement Center (CIMMYT)** works for the exchange of germplasm and information on maize.
- **COGENT's** regional network in Southeast Asia promotes sustainable coconut production through germplasm exchange and information sharing. Southeast Asia's coconut accessions are listed in the Coconut Genetic Resources Database.
- **AVRDC** facilitates germplasm exchange, information sharing and capacity building on vegetables and pulses.
- The **International Group for Genetic Improvement of Cocoa (INGENIC)** established the international cocoa germplasm database. It also promotes germplasm exchange and testing of advanced lines.
- The **International Pepper Community** is involved in germplasm exchange, information sharing and testing of advanced lines.
- **IRRI** specializes in rice germplasm exchange, testing of advanced lines, information sharing and capacity building.
- **CIAT** facilitates the exchange of cassava germplasm and information sharing.
- The **Agricultural Technical Cooperation Working Group of the Asia-Pacific Economic Cooperation (APEC)** implements information exchange, workshops, training, the safe exchange of genetic resources and harmonization of plant genetic resources policies and intellectual property rights.
- The **International Network for the Genetic Evaluation of Rice (INGER)** facilitates the unrestricted and safe exchange of rice germplasm, and the sharing of information among national and international partners.
- The **Malaysian Palm Oil Board** has sizeable collections of oil palm funded by Bioversity International.
- Several Malaysian universities have collected and conserved germplasm of underutilized crops with assistance from international donors. For example, winged bean germplasm was collected by **Universiti Kebangsaan Malaysia** with funding from Bioversity International, the International Council for Development of

Underutilized Plants (ICDUP) and the International Federation of Scientists. Researchers at **Universiti Putra Malaysia** also collected germplasm for conservation with assistance from the Asia Foundation and ICDUP. The International Federation for Science awarded grants to **Universiti Putra Malaysia** and **Universiti Kebangsaan Malaysia** for collecting germplasm of long bean and edible aroids.

- Regional cooperation programmes such as **Plant Resources of South East Asia (PROSEA)** help to gather, document and exchange information on plant genetic resources among countries in the region (FAO Country Report, 2007).
- Established in 2008, **Crops for the Future Research Centre (CFFRC)** is a collaboration between the University of Nottingham and the Government of Malaysia, which is hosted in Malaysia by Bioversity International and the University's Malaysian campus. It was designed to evaluate underutilized crops from across the world and to identify crops with the potential for commercial, medicinal or nutritional use, and biomaterials that can be used cope with climate change. It draws upon Malaysia's 18,000 indigenous species of edible plants.

Table 6: List of international collaborations

Network	Activity	Local institution
COGENT	Coconut germplasm utilization and conservation to promote sustainable coconut production	Department of Agriculture, Sabah and MARDI
Bioversity International	Assessment of tissue culture derived banana (Musa AAA, cv. Pisang Berangan)	MARDI
CGIAR	On-Farm studies of adaptability of foodcrop varieties (zucchini and potato)	Department of Agriculture, Sabah and MARDI
INGER	Pilot project on accession-level information system for rice	MARDI
ANSWER	Sweet potato crop improvement through collecting, preservation and use	MARDI
TANSO	Sharing of information, resources and capacity in relation to taro	MARDI
Asian Cassava Research Network	Research and development of cassava	MARDI
International Group for Genetic Improvement of Cocoa	International Cocoa Germplasm Database	Department of Agriculture, Sabah and Malaysian Cocoa Board

Source: FAO Country Report 2007

## 5. LEGAL AND POLICY FRAMEWORKS

Laws and policies related to PGRFA cover: protected areas, national parks and reservations; plant quarantine; crop improvement; PGRFA conservation; variety testing; seed testing and certification; crop production; and plant variety protection. Table 7 lists some of these laws and policies; however there is no law that deals exclusively with access to PGRFA or sharing of benefits. In addition, no Malaysian law covers implementation of the country's obligations under the Treaty. All debates concerning PGRFA in Malaysia are influenced by past discussions regarding which agency should regulate PGRFA-related activities.

A draft law on access and benefit-sharing has been prepared by CEBLAW for the Ministry of Natural Resources and Environment, and state-level authorities have been consulted. The draft is expected to be finalized after a final round of consultations with stakeholders. The law, which addresses PGRFA covered by the Treaty, is discussed later in this paper.

Table 7:  
Federal and state laws, and policies affecting PGRFA

Policies
National Forest Policy 1978
National Policy on Biodiversity 1998
Laws
Plant Quarantine Act 1976
Customs (Prohibition of Export) 1993
National Forestry Act 1984
National Park Act 1980
Parks Enactment 1984
Forest Enactment 1992
Fauna Conservation Ordinance 1949
Forest Ordinance 1954
Natural Resources Ordinance 1949
Sarawak Biodiversity Centre Ordinance 1997
Sabah Biodiversity Enactment 2000
Protection of New Plant Varieties Act 2004

Source: Malaysian NISM database



## **PART II**

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### **IMPLEMENTING THE MULTILATERAL SYSTEM OF ACCESS AND BENEFIT-SHARING**

## **1.IDENTIFICATION OF PGRFA**

### **1.1 Annex-1 PGRFA in Malaysia**

Annex-1 PGRFA found in Malaysia include:

- Rice
- Sweet potato
- Cassava
- Coconut
- Eggplant
- Banana
- Maize
- Taro
- Citrus
- Yam
- Vegetable crops: cabbage, chilli, radish, turnip, and other brassica spp.

### **1.2 Coverage of the multilateral system (Articles 11 and 15.1a of the Treaty)**

Not all crops listed in Annex 1 of the Treaty fall within the scope of the multilateral system. Only those that are: (a) 'under the management and control' of national governments; and (b) 'in the public domain' are automatically included (Article 11.2). The Government and natural and legal persons are also encouraged to voluntarily include other Annex-1 crops and forages in the multilateral system (Articles 1.2 and 11.3), but it is not a requirement. It is therefore important to clearly define what is meant by 'under management and control'.

The term refers to both factual as well as legal conditions. 'Under management' refers to the capacity to determine how the material is handled and not the legal right to dispose of PGRFA. 'Control' refers to the legal power to dispose of the material (IT/AC-SMTA-MLS 1/10/Report, Appendix 3). Taken together, the term refers to a Contracting Party's government managing the resources, such as through conservation in a genebank. In addition, the Contracting Party must have the power to decide how these resources are to be treated. The factual requirement is met if the collection is managed and controlled by the government. However, if a separate entity holds the collection, the government has no control over it and the factual requirement is not met.

This issue is not as simple as it may seem. First, government activities in Malaysia take many forms. Bodies are usually established by statute to manage PGRFA, but they are given a large measure of autonomy for maximum efficiency. Some of these bodies may even constitute separate legal entities like corporations. Second, in a federal constitutional government, jurisdiction is often split between federal and state authorities.

Each of these situations has implications for implementing the multilateral system, particularly when establishing whether collections are under the management and control of Malaysia as a Contracting Party of the Treaty.

### 1.3 Identification of bodies holding Annex-1 crops

PGRFA may be held *in situ* or *ex situ*. *In situ* collections include protected areas, national parks and other areas under the management or authority of research institutes or state governments. Table 8 shows the PGRFA conserved *in situ* by MARDI, including Annex-1 crops.

Table 8: PGRFA, including those in Annex 1, held in situ

Network	Activity	Local institution
Strategic Resources Research Centre, MARDI	Klang, Kuala Selangor, Sabak Bernam, Kuala Langat, Hulu Langat, Hilir Perak, Kuala Kangsar, Raub, Jerantut, Bentong, Kuala Lipis, Johor Bahru, Pontian, Batu Pahat, Muar, Segamat	Pisang tanduk, pisang nipah, pisang kapas, pisang nangka, pisang awak
Strategic Resources Research Centre, MARDI	Batu Berendam, Baram, Beluran, Besut, Bintulu Town District, Cameron Highlands, Daerah Kota Marudu, Daerah Kudat, Daerah Pensiangan, Daerah Pitas, Endau Rompin, Gerik, Gua Musang, Kuala Lipis, Lubuk Antu, Telupid, Temerloh	Wild rice and upland rice (padi huma)
Strategic Resources Research Centre, MARDI	Batu Kikir, Baling, Bahau, Seberang Perai, Gurun, Kangar, Kota Setar, Kuala Krai, Kuala Pilah, Kuala Terengganu, Machang, Marang, Pasir Puteh, Titi Tinggi, Tumpat, Muar, Dungun, Jelebu	Edible plant species
Strategic Resources Research Centre, MARDI	Jerangau	Edible plant species
Strategic Resources Research Centre, MARDI	Bayan Lepas, Batu Kikir, Balik Pulau, Bachok, Seberang Perai, Besut, Kota Bahru, Kuala Berang, Kuala Pilah, Kuala Terengganu, Machang, Marang, Parit Buntar, Tanah Merah, Tumpat, Muar, Setiu, Jelebu	Indigenous vegetables
Strategic Resources Research Centre, MARDI	Alor Gajah, Bentong, Bota, Cameron Highlands, Gua Musang, Johor, Kuala Lipis, Kuala Pilah, Raub, Serdang, Tampin, Perak Tengah, Jelebu, Jempol	Capsicum spp., Solanum spp. and Lycopersicon spp.
Strategic Resources Research Centre, MARDI	Baling, Tanjung Tuan, Air Keroh, Durian Tunggal, Gerik Jitra, Kota Tinggi, Kuala Kangsar, Masjid Tanah, Port Dickson, Pulau, Segamat, Seremban, Sungai Petani, Taiping, Tapah, Ulu Langat, Muar, Langkawi, Larut and Matang, Hulu Selangor	Zingiber spp., Derris spp., Labisia spp. and Citrus spp.

Source: Shukor et al., 2011a

Table 9 lists all Annex-1 collections held by *ex situ* collection centres in Malaysia.

Table 9: Total accessions in all ex situ collection centres

Crop	Number of accessions
Rice, cultivated ( <i>Oryza sativa</i> )	30,478
Rice, wild ( <i>Oryza rufipogon</i> )	200
Rice, wild ( <i>Oryza officinalis</i> )	52
Eggplant ( <i>Solanum</i> )	86
Ubi kayu ( <i>manihot esculenta</i> )	33
Sweet potato ( <i>ipomoea batatas</i> )	182
Citrus	199
Nangka ( <i>Artocarpus heterophyllus</i> )	43
Cempedak ( <i>Artocarpus champeden</i> )	11
Banana ( <i>Musa spp.</i> )	200

Source: FAO Country Report, 2007

Table 10 lists national authorities holding Annex-1 crops.

Table 10: Annex-1 crops held by national authorities

Crop	Number of accessions
National Herbarium of Malaysia, FRIM	180,000
Forest Department, Peninsular Malaysia	214,892
National Centre for Plant Pest Collection and Depository	Unknown
Department of Agriculture, Putrajaya	Unknown

Source: [www.globinmed.com](http://www.globinmed.com) (last accessed 22 May 2012)

Table 11 shows the accessions held by MARDI. The number of accessions does not equal the total in Table 9 since MARDI's data have been updated.

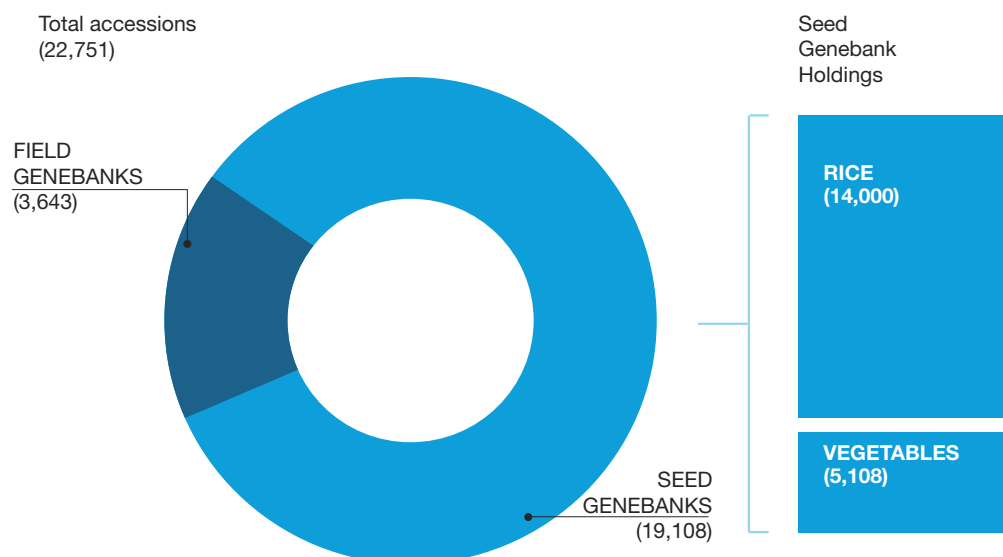
Table 9: Total accessions in all ex situ collection centres

Crop	Total accessions
Rice, cultivated ( <i>Oryza sativa</i> )	12,054
Rice, wild ( <i>Oryza rufipogon</i> )	109
Rice, wild ( <i>Oryza officinalis</i> )	25
Eggplant ( <i>Solanum</i> )	525
Cassava ( <i>manihot esculenta</i> )	85
Sweet potato ( <i>ipomoea batatas</i> )	49
Citrus	100
Banana ( <i>Musa spp.</i> )	217
Coconut	74
Chilli	613

Source: FAO Country Report, 2007

The largest number of accessions is held by MARDI, as shown in Chart 1. Rice is the most predominant crop conserved in MARDI's genebanks, followed by vegetables.

Chart 1: MARDI's crop accessions



#### 1.4 Analysis of whether MARDI'S accessions are under the management and control of Malaysia as a Contracting Party

Since MARDI holds the largest number of accessions in Malaysia, it is of paramount importance to ascertain whether its accessions fall under the national Government's management and control. This requires an analysis of their status.

Malaysia's Government carries out its functions in a variety of ways, including through bodies established by acts of Parliament. The statute creating each government body therefore determines its status.

MARDI is a research institute set up by one such act of Parliament: the Malaysian Agricultural Research and Development Institute Act (Act 11), which took effect on 2 May 1969. This act conferred upon MARDI the status of a statutory body. The question regarding PGRFA held by MARDI is whether the Government has the power to: (i) decide what treatment should be given to the materials it holds; and (ii) grant access to or dispose of them. Does the Government have the right to not only direct MARDI's general management but to determine how specific activities should be carried out – in other words, does MARDI function like a government department?

There have been judicial precedents: the English Court of Appeal cases *Trendtex Trading Corporation v Central Bank of Nigeria* [1977] and *Mellenger v New Brunswick Development Corporation* [1971] – both of which were approved by the Malaysian courts – decided that all evidence must be weighed in order to determine whether an organization is under government control and exercises governmental functions.

In India, the Supreme Court held that a corporation could also be an “instrumentality of the Government”, depending on the outcome of tests such as where it obtains financing, whether the state has any control over the corporation’s management and policies, the nature and extent of this control, and whether its functions are closely related to government functions. The cumulative effect of these and other factors will determine whether or not a body is to be treated as an instrumentality of government. *In Ramana Shetty v The International Airport Authority [1979]*, the Court held the International Airport Authority, a statutory body, was in fact an instrumentality of the Government.

These decisions show the courts’ recognition that government functions are carried out in a variety of ways, including by bodies set up by statute and by corporations performing public functions; such bodies are referred to as ‘public enterprises’. To determine whether a government body constitutes a public enterprise, both the factual and the legal situation must be examined. In MARDI’s case, this requires an examination of: (i) the provisions of the MARDI Act; and (ii) MARDI’s organizational structure and decision-making processes.

MARDI’s Board, an autonomous entity that effectively runs the institute, is given the status of a ‘body corporate’: it enjoys perpetual succession and a common seal, and may sue and be sued in its own name. In addition, the Board can decide whether or not to allow access to MARDI’s research findings and ‘facilities’, which include databases and germplasm collections (see Section 23A.2 of the MARDI Act). The Board can impose conditions, restrictions and limitations on this access (Section 23A).

These provisions were added by way of an amendment (Act A1160), which took effect on 1 November 2002. According to Section 23 of the MARDI Act, the Board holds all property resulting from MARDI’s activities and research findings if the research is funded entirely by the Government. If the research is funded by a private enterprise, the resulting property jointly belongs to the Board and that body.

In addition to these provisions, following must be considered:

- The members of MARDI’s Board are appointed by the Minister charged with the responsibility for Agriculture and Agro-based Industry (‘the Minister’). Board members include the Director General and representatives of five relevant ministries along with five other individuals.
- In relation to MARDI, the Minister:
  - i. appoints the Director General;
  - ii. has the authority to revoke this appointment;
  - iii. can fill a vacancy in the Board; and
  - iv. decides on the period of appointment for Board members.
- The Board determines policies for the administration of MARDI, ‘subject to the direction of the Minister’.
- Commercial activity may only be carried out with the approval of the Minister and the Minister of Finance.
- The Minister is empowered to provide general direction to the Board, which must acted upon (Section 24).

Taken together, these provisions suggest that while the Board has a large degree of autonomy, final decisions regarding policy, finance and operational matters must carry the Minister’s approval – and sometimes that of the Minister of Finance.

It is clear that the Minister is empowered to determine policies with regard to the collections and direct the Board regarding any conditions for access. Whether this actually occurs is another matter. From communications with MARDI, it appears that the Board invariably follows all directions given by the Director General – presumably emanating from the Minister. This implies that the Minister has direct control over MARDI's germplasm collections (Consultation with MARDI staff, 12 January 2011).

Finally, the 1980 Statutory Bodies (Accounts and Annual Reports) Act (Section 15) requires MARDI's Board to submit its audited statement of accounts and the Auditor General's report together with a report of its activities to the Minister. The Minister is then obliged to submit these reports to each house of Parliament (Sections 7 and 8).

A closer look at the factual basis of the English Court of Appeal decision *Mellenger v New Brunswick Development Corporation* is instructive. The issue was whether a statutory corporation could be identified as a government entity. Although the corporation was a body corporate, the Court held that other evidence showed its close connection with the Government. This included the fact that the Minister was an ex-officio director and that the other directors were appointed by the Government. In addition, the corporation had no shares of stock and principal powers were for a public purpose. Although it had the right to carry out ordinary commerce, it never did so. Instead, it promoted the industrial development of a province in much the same way as a government department. The Court concluded that the corporation "... is really a part and parcel of the Government". This case was cited with approval by Malaysia's High Court in *Tan Suan Choo v Majlis Perbandaran Pulau Pinang* [1982].

MARDI's role as a public body performing "like a government department" appears to be even stronger than in *Mellenger*. Given the facts, it is difficult to avoid the conclusion that MARDI is under the management and control of Malaysia's Government. This means that its germplasm accessions listed in Annex 1 of the Treaty are automatically included in the multilateral system if they are also 'in the public domain' (See Box 1)

It can be further concluded that any Annex-1-listed accessions held by other bodies governed by similar statutory provisions are also included in the Treaty's multilateral system.

**Box 1: Interpreting 'in the public domain'**

*In addition to being 'under management and control' of a Contracting party, the other criterion under Article 11.2 for the multilateral system is that PGRFA must be 'in the public domain'. In this context, it refers to materials that are not protected by intellectual property rights (see Carlos Correa's Annex to IT-AC-SMTA-MLS 1/10/Report Appendix 3, 2009; and Moore and Tymowski, 2005, Explanatory Guide to the International Treaty on Plant Genetic Resources, p. 84). PGRFA that are protected by intellectual property rights are not automatically included in the multilateral system, although the holder of these rights may include them voluntarily.*

### 1.5 Analysis of whether accessions in public universities are under the management and control of Malaysia as a Contracting Party

PGRFA are also held by several public universities in Malaysia, namely, Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, Universiti Sains Malaysia, Sabah Universiti, Universiti Teknologi MARA, and the University of Malaya. Their accessions include Annex-1 crops listed in Table 12.

Table 12: Annex-1 crops held by public universities

University	Total number of accessions	Annex-1 crops
University of Malaya	63,000	citrus, banana
Universiti Kebangsaan Malaysia	50,000	citrus
Universiti Sains Malaysia	6,500	tapioca varieties (manihot esculenta crantz)
UNIMAS*	unknown	
Universiti Putra Malaysia (Biology Department)	40,000	taro, sweet potato
Universiti Sains Malaysia	20,000	
Universiti Teknologi MARA, Sabah Campus	unknown	cassava (manihot esculenta crantz)

\* *Universiti Malaysia Sarawak*

Sources: *www.globinmed.com* (last accessed 22 May 2012); and *FAO Country Report 2007*

As in the case of MARDI, public universities are also set up by acts of Parliament and are statutory bodies. What then is the status of these collections? Are universities' collections also under government management and control? If so, then they also fall within the multilateral system of the Treaty.

For the purpose of this study, the statute relating to one public university – the University of Malaya – was analysed. This suffices since the substantial provisions in this act are replicated for all other public universities.

The University of Malaya was established by the University Malaya Act of 1961 (Revised 2007). Its autonomy is established by the fact that it is given the status of a body corporate, with perpetual succession and a common seal, and may sue and be sued in its own name.

The Act provides that the University is financed by the Government through grant-in-aid (Parliament decides the amount). The University must furnish audited accounts for each financial year to the relevant Government Minister. The University also has a constitution whose provisions are prescribed under the Universities and University Colleges Act of 1971; the constitution has the force of law. A government minister oversees the general direction of the University and the administration of the Act. The officers of the universities are governed by the Public Authority Protection Act of 1948 (which confers immunity from lawsuits or prosecution), and the staff are deemed to be public servants.

The Minister appoints all the senior management of the University (Vice Chancellor, Deputy Vice Chancellors), and other officers are appointed by the Board of Directors. The

Board is the University's executive body, with the Vice Chancellor as chief executive. The powers conferred upon the University are exercised by the Board, and Board members are appointed by the Minister. All powers and activities with financial implications require the Minister's approval. These include entering into equity participation, joint ventures, establishing companies or corporations, borrowing, furnishing securities, acquisition and holding of investment shares and bonds, and purchasing, leasing or hiring any real or personal estates.

Again, these provisions suggest that universities in Malaysia are under the management and control of the Government. But what about special institutes set up by a university such as botanic gardens and herbariums? One example is the botanic garden at the University of Malaya named *Rimba Ilmu* – 'the Forest of Knowledge'. It was established under the general powers conferred by the University's constitution.

The *Rimba* herbarium hosts Malaysia's largest university collection, with 63,000 accessions, including medicinal plants, palms and the Annex-1 citrus and citroid collection – reputed to be the most comprehensive in Malaysia. The wild citrus relatives are important because of their potential use in breeding for fruit improvement and hardiness. Some have value as root stock for growing citrus in marginal soils. Most species contain potentially useful essential oils. This publically accessible herbarium also hosts a small research collection of banana, another Annex-1 crop<sup>1</sup>.

On the one hand, it appears that public universities in Malaysia function under the direction and control of the Government since the Government directs their activities, appoints and decides upon the duration of appointment of senior management, provides funding, requires accountability of expenditures, determines policies and makes decisions regarding administration. However, in terms of academic pursuits and related matters, the University's administration is given a large measure of autonomy. For example an institute may be established by the University in consultation with the Studies Committee, which is appointed by the University Senate. The Senate is the University's academic body and has control over matters related to academia, including research.

Insofar as the herbarium operates as an academic body, it is not carrying out the functions of government. This is reinforced by the fact that the herbarium makes its own decisions regarding to the disposal of its collections<sup>2</sup>. Ultimately, it is a question of how the University's governance structure considers the matter. If it considers that decisions related to the management and disposal of its collections are entirely within its discretion, then its Annex-1 PGRFA collections are not included in the multilateral system. On the other hand, if the University's governing body (and by extension, the herbarium's management), defer to Government authority regarding the disposal of germplasm, then its collections fall within the Treaty's multilateral system.

On a cautionary note, research institutions should establish mechanisms to make their researchers aware of the terms under which they supply and accept PGRFA, and their implications.

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<sup>1</sup> *rimba.um.edu.my* (last accessed 24 May 2012).

<sup>2</sup> There appears to be a lack of awareness of the impact of the multilateral system on the University's collections. Materials are shared freely with national researchers without any formal documentation, and are supplied to others outside the country with written assurance that the source of the materials will be acknowledged "to prevent biopiracy" (personal communication with the coordinator of *Rimba Ilmu*, 19 April 2012).

## 1.6 Establishing criteria for determining 'management and control' of a Contracting Party

The Treaty specifies that all Annex-1 PGRFA are included within the multilateral system if they are:

- a. found in the country, whether *in situ* or *ex situ*;
- b. under the management and control of the Federal Government or its agencies, institutes or other bodies; and
- c. in the public domain – that is, not subject to any intellectual property rights (see Box 1 above).

Ascertaining what constitutes 'management and control' may be challenging, as the earlier discussion shows. This may impede the exchange of materials held by bodies that, on the basis of the earlier analysis, are clearly under the country's management and control. To overcome these challenges, it may be prudent for the Government, in consultation with the institute holding Annex-1 materials, to state clearly that the body is within its management and control. This will allow the collection's managers to make the materials immediately available through the multilateral system. For institutes established in the future, it will provide legal clarity in order to establish criteria for determining whether an entity falls under the 'management and control' of the Government. This can be undertaken through ministerial direction, obviating the need for enacting a new law or regulation. As the previous section demonstrates, criteria may include: appointment of key decision makers; decision-making powers; providing direction; reporting requirements; supplying funds; disbursement of funds; and accountability of expenditure. An especially useful criterion would be the right to direct the disposal of PGRFA collections. The cumulative effect of these criteria must be considered when determining whether or not the collections fall within the multilateral system.

The criteria could be framed as follows:

### *Proposed criteria for determining 'management and control'*

1. *An institute or body shall be deemed to be under the management and control of the Federal Government or its agencies if:*
  - a. *it is declared to be so by an appropriate authority; or*
  - b. *it carries out the functions of a government department or agency, taking into account the following:*
    - i. *its policy and management is prescribed by, or subject to, the direction of the Government;*
    - ii. *the appointment of its management boards are by, or subject to, the approval of the Government;*
    - iii. *its funding, including the disbursement of funds for investment, is subject to the final approval or scrutiny of the Government; and*
    - iv. *the Government reserves the right to manage, dispose of or transfer any PGRFA that it holds.*

## 2. THE IMPACT OF FEDERAL-STATE DISTRIBUTION OF POWERS UNDER THE MALAYSIAN FEDERAL CONSTITUTION

It is believed that state authorities also hold a substantial amount of Annex-1 PGRFA in their collections. The collection centres under states' jurisdiction are listed in Table 13. It was not possible to ascertain the number of accessions held in these collections, except for the first three collection centres listed in Table 13; these mainly include forest genetic resources. Nor was it possible to confirm which Annex-1 crops were held in states' collections except for those held by the departments of agriculture in Sabah and Sarawak.

Table 13: Annex-1 PGRFA under states' jurisdiction

Collection	Number of accessions	Annex-1 crops
Sabah Forest Department	1,246,920	
Forest Research Centre, Sarawak Forest Department	200,000	
Sarawak Museum	170,000	
Sarawak Biodiversity Centre	unknown	
National Centre for Plant Pest Collection and Depository	unknown	
Penang Botanic Garden	>20,000	
Sabah Park	6,000	
Department of Sabah Museum	unknown	
Department of Agriculture Sabah	unknown	tapioca ( <i>Manihot esculenta</i> ), rice, yam, sweet potato, breadfruit
Department of Agriculture, Sarawak	unknown	rice, indigenous vegetables

Source: [www.globinmed.com](http://www.globinmed.com) (last accessed 24 May 2012)

The Malaysian Constitution distributes powers between federal and state authorities; land is within the exclusive jurisdiction of state authorities. In the Constitution, land comprises everything related to agriculture and forestry. In Malaysia, genetic resources are included in any jurisdiction related to land<sup>3</sup>. In a landmark case, *Ketua Pengarah Jabatan Alam Sekitar and Anor v. Kaging Tubek and Ors* [1997], the Malaysian Court of Appeal decided that all matters related to land fall within the exclusive jurisdiction of states under the Constitution. This so-called 'Bakun Dam' case was related to environmental consequences arising from the construction of a dam in Sarawak State.

Exercising their exclusive constitutional jurisdiction, the states of Sabah and Sarawak have enacted their own biodiversity laws, which also cover access and benefit-sharing in relation to genetic resources. Sabah has large collections of genetic resources, at Sabah Park, Mount Kinabalu Botanical Gardens and the Sabah Forestry Department. Sarawak also has some PGRFA in its collections. These collections are set up as public entities but are outside the direct control of the Federal Government, and therefore outside the purview of the Treaty's multilateral system.

<sup>3</sup> This is not always the case: several Andean Pact countries consider genetic resources to be the 'national patrimony' of the country

In this case, the entity's consent is required before the multilateral system can apply to PGRFA held by any natural and legal persons within its jurisdiction. Such persons include state bodies.

A policy decision is required by these and other states holding Annex-1 crops regarding whether to include their collections in the multilateral system. This could be carried out by an administrative decision or a change in the law. In either case, a proposal could be formulated as described below:

*Proposal for text to be included in state law*

*Access shall be granted to the PGRFA included in Annex 1 of the International Treaty on Plant Genetic Resources for Food and Agriculture that are found in the state/collection to:*

- a. any Contracting Party to the Treaty;*
- b. any natural and legal persons under the jurisdiction of any Contracting Party to the Treaty, including in Malaysia, subject to the decision of the Governing Body under Article 11.4 of the Treaty;*
- c. an international agricultural research centre or other international institution that has signed an agreement with the Governing Body of the Treaty under the provisions of the Treaty;*
- d. non-Contracting Parties to the Treaty; and*
- e. natural and legal persons in non-Contracting Parties.*

*Such access shall be granted through the SMTA established under the Treaty*

## **The situation in the states of Malaysia**

It was noted earlier that the States of Sabah and Sarawak have enacted their own laws governing access and benefit-sharing in relation to genetic resources. The State of Sabah is considering a provision in its recent Sabah Biodiversity (Access and Benefit-sharing) Regulations 2011 to exclude Annex-1 crops from the purview of access and benefit-sharing in order to pave the way for voluntary inclusion in the multilateral system through the SMTA. This would mark a significant opportunity for non-Contracting Parties (state governments) to place their Annex-1 materials in the multilateral system, extending its coverage as envisaged under Article 11.2. Such a policy change would however require consultations with breeders, conservationists and indigenous people to carry out a cost-benefit analysis. It should be noted that most of the states' Annex-1 crop accessions are also held in MARDI's collections. In addition, accessions of important crops such as rice, coconut, banana, cassava and sweet potato have been provided by international bodies.

Sarawak's biodiversity law and regulations do not make any reference to the Treaty. None of Malaysia's other states have laws dealing with access and benefit-sharing of genetic resources.

All state governments are expected to sign the proposed national access and benefit-sharing law, which is being enacted to fulfill Malaysia's international obligations under the Convention on Biological Diversity. This allows the Federal Government to act upon matters that otherwise fall within the states' exclusive jurisdictions. Consultations with stakeholders

including state governments are underway. The proposed law preserves states' autonomy by granting the administration of the access and benefit-sharing law related to biological resources found in each state to an authority nominated by the state government. This jurisdiction extends to traditional knowledge associated with biological resources.

The draft law sets out comprehensive provisions on access and benefit-sharing. One such provision excludes PGRFA covered by the Treaty from the scope of the access and benefit-sharing requirements of the draft law. As the draft goes through consultations with stakeholders, it is expected to transform into a provision akin to the two options referred to below in the Recommendations section (Proposal for inclusion in the national access and benefit-sharing law). The proposed regulations listed in this paper have been drafted on the basis of this.

An acceptance of this law by all states implies their support for applying the multilateral system to resources located within their jurisdictions; individual states will have to make their own provisions. If realized, it will constitute a significant milestone in achieving the fullest possible coverage of the multilateral system as prescribed by Article 11.2 of the Treaty.



## **PART III**

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### **IMPLEMENTING THE MULTILATERAL SYSTEM OF THE TREATY IN MALAYSIA: CONCEPTUAL AND PRACTICAL CHALLENGES**

## 1. INCORPORATING TREATY PROVISIONS INTO MALAYSIAN LAW

Malaysia has a dualist constitutional approach to the incorporation of treaties into national law. This means that the Treaty does not automatically become part of Malaysian law: it must be explicitly incorporated by an Act of Parliament. However, the terms of the Treaty may also be implemented through an existing law. In the latter case, there would not be a need to enact new legislation or even new a regulation under existing law to implement the Treaty. All that would be required is for the relevant authority to acknowledge an obligation to place materials in the multilateral system and direct the holder of the material (in this case, MARDI) to implement the provisions of the Treaty.

In yet another scenario, a judicial decision could incorporate an obligation under the Treaty into national law (see *Trendtrex*). Examples of this abound in several jurisdictions.

In *Minister of Immigration & Ethnic Affairs v Teoh* (1995), the High Court of Australia held that parties to a treaty were required to *prima facie* carry out their countries' obligations under international law. The actions of a government department were declared invalid since the department had not taken into account the provisions of the treaty in its decision-making – a legitimate expectation created by the Government's ratification of the treaty. In the United Kingdom, the highest court – the House of Lords – ruled in *Re Secretary of State for Home Department ex parte Mohammad Hussain Ahmad* 1998 ENCA (Civ) 1345, 1347 that citizens have the right to expect the Government to act in accordance with a treaty it has entered into. In addition, the Supreme Court of India ruled in *Vishaka v The State of Rajasthan* AIR 1997 that international conventions and norms must be read into constitutional provisions in the absence of enacted law when there is no inconsistency between them.

These judicial approaches support the notion that Government should proactively implement the terms of a treaty on the basis of provisions in existing laws. The advantage of this proactive approach is that it avoids the time-consuming and difficult process of law-making.

In practice, if there are provisions in a existing act, they constitute the basis upon which to implement the Treaty through a simple directive issued to all bodies holding Annex-1 crops to implement the Treaty's multilateral system of exchange.

Through regional and international collaboration agreements, Malaysia has committed to the free use and exchange of germplasm of several crops, including many in Annex 1 of the Treaty such as rice, coconut and banana. This commitment is based on the power granted to the Federal Government under the Constitution to enter into agreements with other countries in order to carry out its external affairs. It could also be the basis for directing the Annex-1 collection holders to place their materials in the multilateral system. Again, this would obviate the need for a new law to implement the Treaty.

## 2. IS THERE POWER IN EXISTING LAWS TO IMPLEMENT THE MULTILATERAL SYSTEM OF THE TREATY?

### MARDI

Under the MARDI Act, the Minister is empowered to issue general directions to the Board (which it is obliged to follow), but these must be consistent with the Act. With the approval of the Minister, the Board may make rules for matters prescribed under the Act as stated in section 23a of the Act. It provides for the Board to allow any person access to MARDI's research findings and facilities. 'Facilities' include databases as well as germplasm collections.

Therefore, the existing statute clearly confers upon MARDI the power for making germplasm and associated information available as required by Article 12.4 of the Treaty using the SMTA. MARDI would be perfectly within its jurisdiction to supply Annex-1 germplasm and related databases to the Contracting Parties to the Treaty. Although not legally necessary, it may be prudent to include in the future a specific provision in the MARDI Act to make this explicit. Meanwhile, if the materials held by MARDI are under the management and control of the national Government and in the public domain, there is no legal impediment to making them available immediately in line with the terms and conditions set out in the Treaty, including the use of the SMTA for germplasm exchange. Indeed, as an extension of a Government institution, it is obliged to do so.

### Public universities

The institutes set up by the public universities have obligations pursuant to the powers enacted under their incorporating statute (for example, the University of Malaya Act 1961 together with the overarching Universities and University Colleges Act 1971), which identifies their functions and powers.

These institutes may exercise other functions conferred upon them by statute, rule or regulation as per the First Schedule [Section 8] of the Universities and University Colleges Act 1971, Articles 18(1) and (2). The matters for which a statute may be established are set out in Article 25 of the First Schedule [Section 8]. If the collections held by a university are declared by the Government as being: (i) under government management and control; or (ii) satisfying the criteria for inclusion in the multilateral system, then it may be desirable to include a specific provision in a university's constitution empowering it to: supply information to the NISM in order to fulfill Malaysia's obligations under the Treaty; and transfer Annex-1 material to Contracting Parties. This would mean expanding the subject matter for which a university can enact a statute to fulfill Malaysia's obligation. It could be drafted in a manner akin to an enabling clause, introduced by the provision below:

#### *Draft Proposal*

*Amend Article 25 of the First Schedule [Section 8] Constitution of the Universities and University Colleges Act 1971 by adding:*

*(ff) the fulfillment of any obligation by the Government under any agreement or treaty of which it is a Party.*

Under this enabling clause, rules can be made to provide the procedures by which the materials will be made accessible and transferred under existing Article 25(h) of the University Constitution (Section 8 of the Universities and Colleges Act), which provides for the enactment of statutes covering 'matters incidental to or consequential upon any of the matters aforesaid'.

It bears reiterating that if the Annex-1 materials held by Malaysia's universities are in fact under the national Government's management and control, and in the public domain, they automatically fall within the Treaty's multilateral system. In that case, there is a clear legal obligation to make them available pursuant to the Treaty within six months of ratification. This means that the proposed enabling provision is not a precondition for making the materials available under the multilateral system. However it should provide clarity and legal certainty in the event that questions are raised in the future.

### 3. INFORMATIONAL PROVISIONS

All Annex-1 materials that are managed and directly controlled by parties to the Treaty, and are not subject to intellectual property rights, are automatically part of multilateral system without the need for any declaration or notification. The proposed amendments to the MARDI Act and University Act, and directives from the MARDI Board, are for long-term clarity only – a matter of abundant caution (*'ex abundante cautela'*).

They should not be seen as impediments to the Treaty's implementation. Nonetheless, there is a need to make available information about what material exists and where it can be accessed; this requires documenting all PGRFA within the system to provide full, easily accessible information on individual accessions.

Material can only be truly made available through the multilateral system if it is adequately and publicly documented. The information could be provided on a website that contains: (i) detailed data on the collection's composition and procedures for use; and (ii) a web address (URL) that affords access to the collection's database.

More specifically, the information must consist of:

- a. a catalogue of existing bodies holding *ex situ* collections or administering *in situ* conservation areas that are under the management and control of the Government;
- b. a list of the Annex-1 crops in the public domain (and therefore within the scope of the Treaty) held by these bodies;
- c. confirmation that the materials are available for the purposes set out in the Treaty through the SMTA; and
- d. a statement of where each may be accessed along with related non-confidential information.

The following further actions may need to be taken:

- a. This information should be made publicly available to potential recipients.
- b. Where a national genebank exists, the materials should be transferred to it. Although this is a huge extra step, it is necessary because some providers may wish to contract another entity to manage their material for cost reasons. This implies that they would give up their connection with the materials.

#### 4. NOTIFICATION

The Secretariat of the Treaty must be notified of all information related to materials included in the multilateral system; the information is then made available on the Treaty website. This requires that bodies holding Annex-1 PGRFA under Government management and control notify a focal point or competent authority about all accessions that are in the public domain. The focal point or competent authority then notifies the Secretariat of the Treaty after verifying that these PGRFA indeed fall within the ambit of the Treaty.

The focal agency for implementing the Treaty in Malaysia is the Ministry of Agriculture, Department of Agriculture; it has delegated this responsibility to MARDI on the basis of existing laws and provisions since law making is a time-consuming and costly affair. However, if there is a need for a law in the future, the Government will have to provide an institutional mechanism to implement the Treaty, including the establishment of a focal point or competent authority. All bodies holding accessions that fall within the terms of the Treaty would be obliged to notify the focal point about their accessions and how they may be accessed.

The proposal could be formulated as follows:

*Proposal for establishment of a focal point or competent authority*

*1. The Minister shall appoint a focal point and/or competent authority as may be necessary to implement the Treaty. For this purpose, the focal point and/or competent authority shall have such powers and functions as may be necessary.*

*Proposal on notification<sup>1</sup>*

*2. (a) All institutions or bodies referred to in (xxxx) shall notify the focal point or the competent authority as appropriate within (prescribed timeframe) regarding:*

- i. the accessions they hold;*
- ii. the passport data on these accessions;*
- iii. where the accessions are located;*
- iv. where the accessions may be accessed;*
- v. the procedure for accessing these accessions; and*
- vi. the persons responsible for supplying the material.*

*(b) The focal point and the competent authority shall verify the information in Paragraph (a) and thereafter notify the Secretariat of the Treaty of the aforementioned information relating to PGRFA within the multilateral system.*

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<sup>1</sup> The Treaty Secretariat has developed a sample letter that Parties or natural or legal persons may use to notify the Secretary about materials that are included in the multilateral system.  
See <http://www.planttreaty.org/inclusions> for more information.

**Box 2: Establishment of information systems**

*The information supplied to the Treaty Secretariat needs to be regularly updated. This may require additional infrastructure, including information systems, manpower and capacity. The most practical measure may be to establish a comprehensive information system for all Annex-1 crops. As early as 2003, a memorandum of understanding was signed between the Government of Malaysia and FAO to establish the National Information Sharing Mechanism (NISM), which would facilitate the exchange of information related to Malaysian plant genetic resources in line with the Global Plan of Action on PGRFA. The NISM is a network of public and private institutions that conserve and use plant genetic resources in Malaysia, and which in the past maintained databases of their own. Previous attempts to establish a national information system were not successful: there is a need for this effort to be revived and implemented.*

*MARDI has developed a few information systems for PGRFA on its own. In 2007, MARDI coordinated the establishment of an information system for crops including rice, aromatic plant species, indigenous vegetables, capsicum, eggplant, tomato and ulam (salad-like) species. Other systems actively used for PGRFA and seed-stock data management include the Rice Genebank Information System (RGBIS) and the Agrobiodiversity Information System. These provide information on the genetic resources collected, characterized and conserved in their respective genebanks (FAO Country Report, 2007). Ultimately, the national system should feed into the global information system envisaged by Article 17 of the Treaty. NISM is a first meaningful step towards establishing a comprehensive information system for PGRFA and implementing the Global Plan of Action.*



## **PART IV**

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### **RECOMMENDATIONS**

## 1. PROCEEDING UNDER EXISTING LAW THROUGH ADMINISTRATIVE INSTRUCTIONS

As was elaborated earlier in this paper, nothing more is required than for MARDI to exercise its existing powers under section 23A of the MARDI Act and confirm that its Annex-1 PGRFA are within the Treaty's multilateral system; this would also apply to universities.

## 2. AMENDMENT OF THE MARDI ACT

It was also suggested that, although it is not legally necessary, the MARDI Act could be amended as a matter of abundant caution to deal with the Treaty's various provisions. The amendments to the Act could provide a framework for:

- an enabling provision empowering MARDI to fulfill Malaysia's obligations under the Treaty;
- a range of activities such as notifying the Secretariat of the Treaty about Annex-1 materials, use of the materials and sharing information about how they may be accessed along with related non-confidential information; and
- establishing institutional arrangements and rules that would facilitate the implementation of these activities – in order to clarify who is to carry them out and how.

The amendment may be framed as follows:

### *Proposal*

*The Board shall allow, subject to its rules and procedures, access to and transfer of plant genetic resources for food and agriculture of the crops held by the Institute and that are within the scope of the Multilateral System of the International Treaty on Plant Genetic Resources for Food and Agriculture ('the Treaty') to other Contracting Parties as well as to legal and natural persons under their jurisdiction and international institutions that sign agreements under Article 15 of the Treaty.*

*Such access and transfer shall be provided pursuant to the Standard Material Transfer Agreement (SMTA) established under the Treaty.*

*Such access and transfer shall only apply when requested solely for the purposes of utilization and conservation for research, breeding or training for food and agriculture.*

*The Board may with the approval of the Minister and in respect of Paragraph [#] make rules for:*

*(a) Implementing Malaysia's obligations under the International Treaty on Plant Genetic Resources for Food and Agriculture.*

### 3. *In situ* MATERIALS

Access to PGRFA found *in situ* is subject to the same provisions as for materials held *ex situ*. The materials are to be provided according to national law. In absence of national law, they must be provided according to the standards set by the Governing Body of the Treaty under Article 12.3(h). These laws apply to the specific mechanisms for accessing *in situ* materials located in national parks and other protected areas, and the procedures for collecting plants. The power to handle these materials is spread over a plethora of laws relating to forests, wildlife, national parks and protected materials, and is vested in different bodies.

There may be a need to review these laws in order to harmonize them with the provisions of the Treaty. This implies the need to amend any provision in these laws that impedes access to the materials. It would also require the establishment of procedures to facilitate access.

If resources in places such as protected areas or national parks are managed by authorities outside the agriculture sector, there will also be a need for adequate coordination between Malaysia's Ministry of Agriculture and Agro-Based Industry, and those authorities. The objective is to remove impediments to access.

### 4. DRAFT ACCESS AND BENEFIT-SHARING LAW

The scope of Malaysia's proposed national access and benefit-sharing law covers all biological and genetic resources, including PGRFA within the multilateral system. Since special rules on access and benefit-sharing apply to crops and forages covered by the Treaty's multilateral system, it follows that these materials cannot be subject to the permit and bilateral contractual requirements envisaged by the draft access and benefit-sharing law.

It is important to emphasize that the draft law is presently subject to inter-agency and other stakeholder consultations; its final shape cannot be predicted. What is clear however is that the draft law must take into account and accommodate Malaysia's existing obligations under the Treaty to implement the multilateral system. Therefore, the existence of a draft law cannot impede implementation of existing Treaty obligations. This also implies that the draft access and benefit-sharing law cannot affect the way in which the Malaysian Government decides to implement the Treaty<sup>1</sup>.

The current draft of the access and benefit-sharing law includes a provision empowering the Minister of Natural Resources and Environment to exclude the law's application to genetic resources that are the subject of international agreements ratified by Malaysia – this provision is intended to exclude genetic resources covered by the Treaty. It is expected that once the law is approved by Parliament, the Minister will make the necessary order to exclude PGRFA in the multilateral system from the scope of the access and benefit-sharing law, bringing this law into harmony with Malaysia's commitments under the Treaty.

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<sup>1</sup> There is a similar provision in the Australian access and benefit-sharing law – the Environment Protection and Biodiversity Conservation Regulations 2000, Section 8A.05(1)(c).

However, this raises a problem: until the declaration is made, Malaysia will have enacted a law that is in conflict with its international obligations. Suggested solutions include specifying that: (i) the declaration must enter into effect on the date when the access and benefit-sharing law comes into effect; or (ii) the provision in the access and benefit-sharing law should oblige the Minister to make the necessary order. A third, simpler alternative would be to directly state in the access and benefit-sharing law that biological resources covered by the Treaty are excluded from the scope of the access and benefit-sharing law. This would echo the provision in the Nagoya Access and Benefit-sharing Protocol (Article 4.4), which excludes the Protocol's application to the "specialized instrument in respect of the specific genetic resources covered by and for the purpose of the specialized instrument". This provision – along with Articles 4.1 and 4.3 – is intended to provide for exclusion of the Treaty from the scope of the Nagoya Protocol.

*Proposal for inclusion in the national access and benefit-sharing law*

**Option 1**

*This Act shall not apply to the access to and transfer of biological resources required to be controlled under, and for the specific purpose stated in, any international treaty to which Malaysia is a Party, including plant genetic resources for food and agriculture in the multilateral system of access and benefit-sharing under the International Treaty on Plant Genetic Resources for Food and Agriculture.*

**Option 2**

*The access to and transfer of biological resources required to be controlled under, and for the specific purpose stated in, any international treaty to which Malaysia is a Party shall be governed under regulations to be developed under this Act by the Minister.*

Option 1 assumes that the access and transfer of PGRFA in the multilateral system will not be governed by the access and benefit-sharing law, and would instead be subject to the decisions, processes and clarifying amendments of existing policies. These materials are therefore excluded from the scope of the national access and benefit-sharing law. Option 2 subjects these materials to special regulations to be developed under the access and benefit-sharing law in order to implement the provisions of the multilateral system under the Treaty.

There is a practical problem in adopting Option 2: the focal point for the access and benefit-sharing law in Malaysia is the Ministry of Natural Resources and the Environment, while the focal point for the Treaty is the Ministry of Agriculture and Agro-Based Industry.

In addition, this discussion raises a more general issue. Implementing the Treaty requires coordination between two government agencies: the Ministries of Agriculture and Environment. If they do not work well together, it is possible that the Treaty's implementation could reach an administrative impasse. This is exacerbated by the fact that *in situ* materials are within the jurisdictions of different laws and agencies.<sup>2</sup> If indeed

<sup>2</sup> The lead agency responsible for drafting the access and benefit-sharing law, the Ministry of Natural Resources and the Environment, has opted for Option 1.

an impasse blocks Malaysia's implementation of the Treaty's multilateral system, the only realistic solutions would be: (i) a resolution of the jurisdiction issue through administrative arrangements; and (ii) as a last resort, a single stand-alone law that draws all these disparate elements under one agency, namely the Ministry of Agriculture and Agro-Based Industry.

## **5. OTHER ISSUES**

The law should also address the need to establish mechanisms to ensure that the recipients of materials under the multilateral system comply with the conditions of the SMTA, in cooperation with FAO acting as third party beneficiary under the SMTAs, and strengthen the capacity of national authorities to implement the Treaty.



## **PART V**

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### **MEASURES TO ENCOURAGE NATURAL AND LEGAL PERSONS TO INCLUDE ANNEX-1 PGRFA IN THE MULTILATERAL SYSTEM**

PGRFA held by the following bodies are not automatically included in the multilateral system:

- a. state (provincial) governments;
- b. public but non-government entities;
- c. private entities, and
- d. holders of intellectual property rights.

The Treaty requires Parties to take appropriate measures to encourage these holders of PGRFA ('legal and natural persons') to place their collections in the multilateral system. The Governing Body of the Treaty will assess progress in this regard and decide whether to allow facilitated access to the multilateral system by those that have not included their holdings in the system. This review will likely begin at the 5th Session of the Governing Body in 2013.

The measures to encourage inclusion are left to the discretion of Contracting Parties. They may include:

- financial or fiscal incentives such as eligibility for public funding schemes;
- policy and legal measures;
- administrative actions such as establishing domestic procedures for inclusion; and
- efforts to raise awareness (especially of farmers).

The measures taken by Malaysia's Government regarding state governments were referred to earlier. This could result in all states acceding to their collections' placement in the multilateral system through stipulations in the draft access and benefit-sharing law.

The number of accessions held privately is relatively small compared to those held by states and would not impair the facilitation of access to PGRFA.

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