FAO International Technical Conference on Agricultural Biotechnologies in Developing Countries

Technology Transfer Aspects of the Multilateral System of the ITPGRFA

Dr. Shakeel Bhatti
Secretary
International Treaty on Plant Genetic Resources for Food & Agriculture,
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Outline

1. Overview of the International Treaty
   - Basic background and functioning

2. Main Treaty Systems under direct control of the Governing Body
   - Multilateral System of Access and Benefit-sharing
   - Benefit-sharing Fund of the Funding Strategy

3. Technology transfer under the Multilateral System

4. Outlook

5. Discussion
Past Sessions of Governing Body (GB) Timeline

2001 - Adopted by the FAO Conference

2004 - Entry into force

2006 – 1st Governing Body (GB): SMTA adopted

2007 – launched Multilateral System

2009 – 3rd GB: launched Benefit-sharing Fund

March 2011 – 4th GB Session (Bali, Indonesia)

March 2010: 123 Contracting Parties
The scope of the Treaty is all plant genetic resources for food and agriculture
What Are the Treaty’s Objectives?

- The conservation and sustainable use of plant genetic resources for food and agriculture
- The fair and equitable sharing of benefits derived from their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security
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International Treaty Main Operational Systems & Mechanisms

Multilateral System

- 100,000+ transfers 07
- 600+ transfers/day

Voluntary contributions (eg, NW, IT)

Benefit-sharing fund

Private Sector

Others

Priorities Criteria

Operational Procedures

priority: farmers in developing countries who conserve and sustainably utilize PGRFA

On-farm conservation

information exchange & tech.transfer

sustainable use

1.1% of net sales

P1

R1

R2

SMTA1

SMTA2

SMTA3

CP

Int’l org

Natural and legal person

Others

Voluntary contributions

Voluntary contributions
Article 13.2(b):
Access to and transfer of technology

BLAST search of Gramene genomics database and IRRI-SMTA database …
MLS - Number of Accessions Notified

Thousands

2004  2005  2006  2007  2008  2009

600   650   670   770   1,070  1,170

http://www.planttreaty.org
Progress in past 2 years:

**Inclusions of genetic material:** 1.3 million samples: governments, private sector, indigenous peoples

- **Information infrastructure for MLS**
  - PID server
  - Datastore
  - Ordering Toolkit

- **Alternative dispute resolution** for SMTAs: Third Party Beneficiary
- **SMTA reporting requirements**

- **Adopted non-Annex I MTA**

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**Benefit-sharing Fund**

- ½ million USD granted for benefit-sharing projects from Benefit-sharing Fund
- **Strategic Plan developed for 116 million USD** for Benefit-sharing Fund in 5 years
- **First Round of Project Cycle** 11 benefit-sharing projects under way
Projects 2009-2011 under the Benefit-sharing Fund

CUBA
- Contribution of traditional methods for in situ conservation and management of maize (Zea mays L.) and bean (Phaseolus vulgaris) to agricultural families in Cuba
  - FUNDAMENTAL RESEARCH INSTITUTE ON TROPICAL AGRICULTURE
  - Maize, bean

MOROCCO
- On-farm conservation and mining of local durum and bread wheat landraces of Morocco for biotic stresses and incorporating UC99 resistance
  - NATIONAL AGRICULTURAL RESEARCH INSTITUTE
  - Wheat

EGYPT
- On-farm conservation and in vitro preservation of citrus local varieties and sustainable utilization in Egypt
  - NATIONAL GENE BANK AND GENETIC RESOURCES
  - Citrus

INDIA
- Conservation, dissemination and popularization of local specific farmer-developed varieties by establishing village level enterprises
  - PEERMADU DEVELOPMENT SOCIETY
  - Cassava, yam, bean, pea, ash gourd, chamar, pepper, amlas, cardamom, nutmeg

NIGERIA
- Rescue, conservation and sustainable management of ecotocols of Nigeria (Zea mays var. mays)
  - NIL ISRAEL INSTITUTE
  - Wheat

COSTA RICA
- Identification of useful potato germplasm adapted to biotic and abiotic stresses caused by global climatic change
  - UNIVERSITY OF COSTA RICA, AGRICULTURAL RESEARCH CENTRE (CIAT)
  - Potato

PERU
- Conservation and sustainable use of native potato diversity in the Potato Park, Cusco
  - ASSOCIATION FOR NATURE AND SUSTAINABLE DEVELOPMENT (ANDES)
  - Potato

URUGUAY
- Broadening of potato (Solanum tuberosum) genetic basis through introgression of local wild species, Solanum commersonii
  - NATIONAL INSTITUTE OF AGRICULTURAL RESEARCH (INIA)
  - Potato

SENEGAL
- Conservation of agrobiodiversity of local cultivars: millet, maize and sorghum through improved participation in Senegal
  - INSTITUTE FOR AGRICULTURAL RESEARCH (ISRA)
  - Millet, Maize, Sorghum

KENYA
- Characterization, genetic enhancement and revitalization of finger millet in western Kenya
  - MASENO UNIVERSITY
  - Finger millet

Tanzania
- Strengthening on-farm conservation and use of sorghum, finger millet, lablab beans and yam crop diversities for improved food security and adaptation to climate change in Tanzania
  - NATIONAL PLANT GENETIC RESOURCES CENTRE
  - Sorghum, finger millet, lablab bean, yam
Benefit-sharing Fund priority #2: Information exchange, Technology transfer, Capacity Bldg

Example:
- Ketchua farmers in Peru of the Association for Nature and Sustainable Development (ANDES), Cusco, Peru

- “Conservation & Sustainable Use of Native Potato Diversity in the Potato Park in Cusco, Peru”
International Training Workshop, 20-29 September 2009, Potato Park, Cusco, Peru

Peruvian and Ethiopian scientists and farmers

“Technology transfer and exchange of information in the context of the International Treaty relevant to the conservation of agrobiodiversity areas in particular, of indigenous territories biocultural”

“The Participatory Plant Breeding for Climate Change Project under the auspices of the International Treaty of the FAO”
Benefit-sharing under the Multilateral System: Including non-commercial benefit-sharing

Four benefit-sharing mechanisms under the Multilateral System:
- the exchange of information
- transfer of technology
- capacity-building
- the sharing of the benefits arising from commercialization

(Art.13.2)
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Article 13.2(b): Access to and transfer of technology

The Multilateral System as a pool of intangibles and a system for exchange of technologies:

“Recognizing that some technologies can only be transferred through genetic material, the Contracting Parties shall ... facilitate access to such technologies and genetic material which is under the Multilateral System and to improved varieties and genetic material developed through the use of PGRFA under the Multilateral System, in conformity with the provisions of Article 12.”

(Art.13.2b(i))
Article 13.2(b): Access to and transfer of technology

Basic undertaking:

“Contracting Parties undertake to provide and/or facilitate access to technologies for:

• conservation
• characterization
• evaluation and
• use

of PGRFA which are under the Multilateral System.”

(Art.13.2b(i))
Article 13.2(b): Access to and transfer of technology

Proviso:

“Access to these technologies, improved varieties and genetic material shall be provided and/or facilitated, while respecting applicable property rights and access laws, and in accordance with national capabilities.”

(Art.13.2b(i))
Article 13.2(b):
Access to and transfer of technology

interactive BLAST search on BIOS Rice Genome Patent Landscape …
Article 13.2(b):
Access to and transfer of technology

A “set of measures”:

“access to and transfer of technology … shall be carried out through a set of measures, such as:

- the establishment and maintenance of … crop-based thematic groups on utilization of PGRFA,
- all types of partnership in research and development and in commercial joint ventures relating to the material received,
- human resource development, and
- effective access to research facilities.”

(Art.13.2b(ii))
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Benefit-sharing under the Treaty: International Consultation

- Bogor, 9-11 March 2010
- Organized by Indonesia and Norway
- Focus on non-commercial benefit-sharing
- Recommendations for GB-4
- GB-4 in Bali, Indonesia, from 7-11 March 2011
- recommendations from Technical Conference may be considered, if any
- transfer of technologies making use of PGRFA as a benefit-sharing mechanism under the Multilateral System of the Treaty
The International Treaty on Plant Genetic Resources for Food and Agriculture
- a unique, high impact, fully operational global instrument
Challenges for the Treaty

- Further operationalize Multilateral System, especially non-commercial benefit-sharing:
  - Exchange of information
  - Transfer of technology
  - Capacity building
- Include more material in the Multilateral System
- Recognize two-fold nature of the Treaty:
  - Operational systems & mechanisms;
  - Intergovernmental process;
- Maintain policy and operational coherence in Treaty implementation;
- Improve communication on Treaty & ongoing operation and evolution;
- Facilitate interaction between Contracting Parties & users & other stakeholders;
- Focus the Project Cycle of Benefit-sharing Fund;
- Leverage Treaty as a model for other sectors.
Policy relevance of the Governing Body

• The only fully operational, international Access and Benefit-sharing System for plant genetic resources;
• Represents the agricultural sector and its specificity within Plant Genetic Resources policy, while:
• Providing innovative instrument to address simultaneously several global challenges:
  – crop adaptation to climate change;
  – genetic erosion and biodiversity loss;
  – food crisis and escalation of food prices;
  – rural poverty of small-holder farmers;
  – bottom-up approach to development policy in agriculture;
• Becoming a model for numerous other sectors, eg. WHO, animal genetic resources, UNCLOS, etc.
¡Gracias! / Thank you! / Merci!

For any further information, please contact:

Dr Shakeel Bhatti, Secretary
International Treaty on Plant Genetic Resources
at FAO, Building B, 6th floor
Tel.: +39-06-570-53554
E-mail: pgrfa-treaty@fao.org