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Food and Agriculture
Organization of the
United Nations



The International Treaty
ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE

**INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES
FOR FOOD AND AGRICULTURE**

**FIRST ELECTRONIC CONSULTATION OF THE *AD HOC* TECHNICAL
COMMITTEE ON SUSTAINABLE USE OF PLANT GENETIC RESOURCES FOR
FOOD AND AGRICULTURE**

8 – 26 April 2019

DRAFT SURVEY

**IDENTIFICATION OF GAPS BETWEEN TECHNOLOGIES AVAILABLE AND
TECHNOLOGIES NEEDED AT NATIONAL LEVEL FOR PLANT GENETIC
RESOURCES FOR FOOD AND AGRICULTURE**

I. Introduction

We are pleased to present the survey for the identification of gaps between technologies available and technologies needed at national level for Plant Genetic Resources for Food and Agriculture (PGRFA),

The present survey is being conducted in the framework of the Platform and the need for gathering key information for make decisions. The responses will be analyzed anonymously and reported in a synthesis document at the Eighth Session of the Governing Body of the Treaty in November 2019.

II. Background

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) is a legally binding instrument with the objectives of facilitating conservation and sustainable use of plant genetic resources for food and agriculture (PGRFA) and the fair and equitable sharing of benefits derived from their use, in harmony with the Convention on Biological Diversity (CBD). In particular, Articles 5.1 e, 7.2, 8,13.2 and 17 of the Treaty emphasize:

- Promoting the development and transfer of appropriate technologies for efficient conservation and sustainable use of PGRFA.
- Establishing or strengthening the capabilities of contracting parties respect to conservation and sustainable use of PGRFA.
- Providing technical assistance to Contracting Parties, especially those that are developing countries or countries with economies in transition.

- The contracting parties agree to promote the exchange of information, access to and transfer of appropriate technology and implement plans and programmes on capacity building, particularly in scientific and technical education and training in conservation and sustainable use of PGRFA.
- In the context of the Global Information System, the exchange of information among Contracting Parties will contribute to the sharing of benefits by making available sources of information and technology on PGRFA.

According to these guidelines, the International Treaty has made the establishment of a Platform for technology transfer a priority for its Multilateral System of Access and Benefit Sharing, namely as a primary form of non-monetary benefit sharing Technology co-development and transfer. The Platform for the Co-Development and Transfer of Technologies is intended to provide important information and capacity building tools to farmers, organizations, breeders and practitioners in developing countries which would allow them to profit from the transfer of technology.

This survey comprises three sections as follow:

1. Information about you: Affiliation, role in PGRFA and some contact details
2. Constrains of the current technology available for PGRFA conservation and utilization.
3. Needs and requirements of technology to improve PGRFA conservation and utilization at national level.

Section 1 – Basic information

1.1 Please select the main country in which you work in order that we can assess the representativeness of the survey responses in terms of geographic range

Select your country

Other country?

Please specify here

1.2 Please provide your name, affiliation (the name of the organization you represent, if applicable) and email address. Please be assured that no identifiable personal data will be published

Family name

Given name

Affiliation

Email

1.3 At which main geographic level does your institution / organization (or do you as an individual) operate? You may select more than one

National

Regional

Global

1.4 What is the role of your institution in the PGRFA context at national level. You may select more than one

Governmental/Policy institution

National Program on PGRFA

Support to the National Program of PGRFA

Independent institution

No role at national level

Other (specify here)

1.5 What is your role or main activity in PGRFA? You may select more than one

Germplasm collecting

Ex situ conservation

In situ conservation

- Characterization
- Evaluation (including “omics” studies)
- Germplasm data analysis
- Documentation
- Policy and legal aspects
- Genebank management
- Project management
- Plant breeder
- Other

Please specify here

1.6 In terms of technology in PGRFA, please specify what would be your greater interest (select up to 3 items):

- Collecting design and optimization
- Botanic and taxonomic research
- Phylogenetic studies
- Seed conservation
- In vitro conservation
- Cryoconservation
- Field conservation
- Crop wild relatives conservation and utilization
- Landrace conservation
- On farm conservation
- Protected areas
- Ex situ conservation representativeness
- Phenotypic characterization
- Metabolite, protein and enzyme characterization
- DNA characterization
- Genomics, proteomics or metabolomics
- Agronomic and physiologic germplasm evaluation
- Documentation and PGRFA information systems

- Trait mining for crop improvement
- Conventional plant breeding
- Participatory plant breeding
- Varieties testing and certification
- Traditional knowledge
- Genetic engineering
- GMO
- Climate change
- Ecogeographic analysis
- Characterization and evaluation data analysis
- Bioinformatics
- Farmer rights
- Access and benefit sharing
- International PGRFA laws and regulations
- Development of international policies on PGRFA
- National and regional PGRFA laws and regulations
- Development of national/regional policy on PGRFA
- Different aspects about the ITPGRFA
- Training and capacity building in PGRFA
- Food security
- Ecosystems services
- Nutritional aspects of PGRFA
- Other

Please specify here

Section 2 - Characterization of the current technology available

2.1 In your case the term “technology” is related to (You may select more than one):

- Scientific/modern equipment
- Physical infrastructure – laboratories
- Data analysis software
- Specific germplasm (i.e. modern varieties)
- Genes, DNA sequence, protein and related data
- Technical literature – published methodologies
- Germplasm information systems (including databases software)
- All above
- Other

Please specify here

2.2 According to your experience, what is the level of technology dependence of your field of action on PGRFA?

Click here to select the level

2.3 Which level of technology access do you consider you have in your country and in your PGRFA field?

Click here to select the level

2.4 In case you have any kind of access, in a 0 to 10 scale please define your level of satisfaction or usability respect to the technology you can access.

Write here the level (0-10 scale or star rating question)

2.5 Please specify your opinion about the technology you can access:

- Appropriated and focused on your needs
- Useful in general terms
- Sometimes applicable, sometimes not
- Very little application
- Unhelpful
- Other

Please specify here

2.6 With regard to the PGRFA field you work, do you know of the existence of better technologies unavailable for you / your institution?

- Yes, there is a better technology available

No, I am using the latest technology available

No, I have no information on better or more advanced technology

2.7 If answer for the question 2.6 is yes, please rate in a 0-10 scale the gap or difference between the technology offered and transferred to your country/institution and PGRFA field and the technology used by the most advanced centres and institutes (0 means no differences, 10 maximum difference between technologies)

Please enter here the value

2.8 What would be the type of technology you require for your PGRFA activities but you cannot access? (You may select more than one)

Products

Methods of production

Services

Other specific type?

Please specify here

2.9 Might you specify the reason (or reasons) you cannot access that technology (You may select more than one):

It is not fully developed

High cost inherent to the required technology

High cost or great obstacles (because the technology origin or owner) for bringing or transferring this technology

Lack of institutional or governmental (national or international) agreements to transfer this technology

Lack of technology transfer programmes

Lack of logistic infrastructure (deficient communications, access roads, no internet access, etc.)

Some restrictions to transfer the required technology (intellectual property, patents, copyrights, etc.)

Local/institutional/national low interest in such technologies

Deficiencies in technical training and capacity building to utilize this technology

Other

Please specify here

2.10 What is the type of your main technology provider?

- Self production
- Your own institution
- Other national public institutions/organizations
- Other national private institutions/organizations
- National NGOs
- International NGOs (including CGIAR centres)
- FAO and other UN organizations.
- Development aid agencies
- International public institutions/organizations
- International private institutions/organizations
- Other

Please specify here

2.11 Please indicate in your words, what have been the main obstacles that prevent technology transfer programmes reach your country or institution, or if they reached, why they have not been successful.

(Up to 200 words)

Section 3 - Needs and expectations for future programmes on technology transfer

3.1 In your opinion, which type of institute must lead any technology transfer effort in your country?

- National institution/organization with the role of National Program on PGRFA
- Other national public institutions/organizations
- Other national private institutions/organizations
- National or international institutions/organizations who fund the programme
- National NGOs
- International NGOs
- CGIAR centers/organizations
- FAO and other UN organizations.
- Other

Please specify here

Please use the text box below to explain your answer (why that type of institution and no other)

3.2 Please indicate in which fields should be included in future technology transfer programs for your country (you may select more than one option)

- Taxonomy of PGRFA
- Crop wild relatives checklists and national strategies
- Germplasm collecting techniques
- Optimized germplasm collecting designs
- Ex situ PGRFA conservation planning
- Ex situ PGRFA conservation techniques
- In situ PGRFA conservation planning
- In situ PGRFA conservation techniques
- Conventional characterization techniques (phenotypic and genotypic markers)
- Ecogeographic characterization techniques and ecogeographic representativeness of ex situ conservation

- Climate change impact in PGRFA
- Novel characterization techniques to speed up the identification of target trait sources (phenomics, genomics and transcriptomics)
- Predictive characterization techniques (or focused identification of germplasm strategy)
- Germplasm field evaluation (yield, pest and disease resistance, physiological traits)
- Prebreeding
- Ethnobotanic approach in PGRFA
- Neglected and underutilized species
- Setting up and managing seed networks
- Empowering conservationists and farmer rights
- Providing / improving market opportunities for landraces / farmers varieties
- Managing and providing access to PGRFA-related data
- PGRFA access and benefit sharing from its use
- Standard material transfer agreements and the use of easy SMTA
- Documentation, databases and information systems capacity
- PGRFA policy and legal aspects
- PGRFA projects formulation and management
- National and/or regional PGRFA plans of action implementation
- National PGRFA programmes management and networks implementation
- Other

Please specify here

3.3 Please indicate in your words, what do you expect from a future technology transfer programme to be implemented in your country and field of PGRFA? Which elements and details have to be considered for a succeed programme.

(Up to 200 words)

3.4 Please use the text box below to express any views that have not been covered by the survey or to provide feedback on the survey

Thanks for completing this survey

We appreciate your participation and contribution. Your answers will be used to improve our understanding of the needs on technology transfer among parties of the ITPGRFA. Please feel free to distribute the link to this survey among potential respondents in your network.