

REPORT:

“Workshop on the International Treaty on Plant Genetic Resources for Food and Agriculture: Benefit-sharing in the Multilateral System”

Bogor, Indonesia, 9-11 March 2010



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Preface

The International Treaty on Plant Genetic Resources for Food and Agriculture is now fully operational and facilitates the exchange of a high number of accessions of seeds of major food crops every year. This exchange is, however, part of a wider set of obligations including, inter alia, non-monetary sharing of benefits (article 13). These obligations include information, access to and transfer of technology of characterisation, evaluation and use of genetic resources, and capacity building. These benefits must be shared in a fair and equitable way with particular attention to needs in developing countries and countries with economies in transition. Until now the obligations on non-monetary benefit sharing according to article 13 of the ITPGRFA seem not to be implemented or followed up as expected. Article 13 resembles Article 16 in the Convention on Biological Diversity which also deals with the transfer of technology. The same is reflected in the Cartagena Protocol. In this way the international community has made repeated promises and created expectations.

The success of the IT depends on a balanced enforcement of all its components and particular initiatives for filling gaps are seen as urgently needed. In order to provide an arena for informal discussions on the implementation of Non-Monetary Benefit Sharing in relation to the Treaty, The Indonesian Center for Agricultural Biotechnology and Genetic Resources Research and Development, Ministry of Agriculture and the Norwegian Ministry for Agriculture and Food co-hosted a workshop in Bogor, Indonesia, from 9-11 March 2010. The workshop participants were invited experts in their own right.

The workshop organisers wish to thank all the participants who generously gave time to share their insights and experiences on the State of the IT: Achievements and gaps and on the Needs regarding Article 13: Intentions, Expectations and Way Forward, and for contributing towards the recommendations for proposals of action.

We also thank Dr. Trygve Berg, Associate Professor, Norwegian University of Life Sciences, who acted as workshop technical adviser and rapporteur. Furthermore we wish to thank Ms Ketty Karyati and the ICABIOGRAD team for excellent logistic coordination, practical preparations and workshop arrangements, providing for the best conditions of work.

Oslo and Bogor, 26 May 2010

Grethe Helene Evjen, Senior Adviser, Norwegian Ministry of Agriculture and Food

Sugiono Moeljopawiro, Plant Breeder and Senior Scientist, Indonesian Center for Agricultural Biotechnology and Genetic Resources Research and Development - Ministry of Agriculture

Acronyms

CBD	Convention on Biological Diversity
CGIAR	Consultative Group on International Agricultural Research
CP	Contracting Party
GPA	Global Plan of Action
IT	International Treaty on Plant Genetic Resources for Food and Agriculture
MLS	The Multilateral System of Access and Benefit-sharing
PBR	Plant Breeders' Rights
PGRFA	Plant Genetic Resources for Food and Agriculture
PPB	Participatory Plant Breeding
sMTA	Standard Material Transfer Agreement
WIPO	World Intellectual Property Organization

Summary of Presentations and Recommendations

The meeting was opened by **Mr. Karden Mulya**, Director of the Indonesian Center for Agricultural Biotechnology and Genetic Resources Research and Development, and by Ms. Grethe Evjen, Senior Advisor, Norwegian Ministry of Agriculture and Food.

Mr. Mulya said in his opening speech that the success of the IT depends on a balanced enforcement of all its components. Particular initiatives for the filling of the gaps are needed. This Consultation shall address the state and the needs regarding Article 13 – Non-Monetary Benefit Sharing – and work out proposals for action. The intention of the consultation is to provide an informal arena for discussions on the implementation of Non-Monetary Benefit Sharing in relation to the Treaty.

He also referred to the importance of Plant Genetic Resources for food security and adaptation to climate change and the importance of genetic resources for those purposes.

Ms. Evjen thanked the Indonesian co-hosts for the excellent cooperation in planning of the workshop and for the first class preparations and the well organized accomplishment. She emphasized their shared concern for the need for increased focus on capacity building, tech transfer and information sharing under the Treaty in order to make its multilateral system beneficial for all countries.

In the first presentation, **Mr Shakeel Bhatti**, Secretary of the International Treaty on Plant Genetic Resources for Food and Agriculture, gave an overview of the Treaty, the Multilateral System (MLS), and the Benefit Sharing Fund. Under the objectives of Conservation, Sustainable use, Benefit-sharing in harmony with the CBD, and for sustainable agriculture and food security, the Treaty has been operational since 2007. The scope of the Treaty includes all plant genetic resources for food and agriculture, but the MLS is limited to the species listed in Annex I and covers materials that are under management of Contracting Parties and in the Public Domain. These crops provide 80 percent of the world's food.

MLS is implemented through standard material transfer agreements (sMTA) and currently formalize more than 600 transfers a day.

The multilateral system now includes 1.3 million accessions that are available for distribution for research, breeding and educational purposes. When commercial products that are restricted for use by others contain materials from the multilateral system, 1.1 percent of net sales shall be paid to the benefit sharing funds. Also voluntary contributions from the industry and from contracting parties are encouraged. The benefit sharing fund supports on-farm conservation, information and technology transfers, and sustainable use.

Ms. Kakoli Ghosh, FAO: State of the World's Plant Genetic Resources: Gaps and Needs.

The first State of the World's Plant Genetic Resources (SoW-1) is now updated with information on changes since the SoW-1 was presented in 1996. The SoW contains information on Diversity, *In situ* management, *Ex situ* conservation, Use, National programmes, Regional - International collaboration, and ABS and Farmers' Rights. The SoW-2 compiles data from 109 country-reports, most of them submitted in 2009. Changes since SoW-1 include: Better scientific understanding of on-farm management, more interest and awareness of the importance of conserving crops' wild resources, more interest in neglected and under-utilized species, new methods for the study of genetic erosion and vulnerability, but still magnitude and extent are not clearly understood.

A large number of surveys and inventories of PGRFA have been conducted since SoW-1 and the use of participatory approaches in on-farm conservation has increased.

The world now has 1750 gene banks (15% > 1996) and among these 130 with more than 10 000 accessions. Total number of accessions is 7,4 million, 1,4 million more than in 1996. 6,6 million accessions are held in national gene banks and 45 percent within only 7 countries. 2 million accessions are estimated to be distinct.

The SoW-2 identifies lack of human capacity, funds and facilities to conserve PGRFA under the required standards, high level of unintended global duplications, crop wild resources of many under-utilized species are not collected, and needs for documentation, characterization and evaluation to be strengthened and making data more accessible. There is lack of trained people and staff renewal, and lack of long-term funding security.

There is growing interest in the relationship between agriculture and the provision of ecosystem services, the importance of PGRFA as a response to climate change, and there are rapidly expanding niche and high-value markets.

The SoW-2 will be used to update the *Global Plan of Action* in consultation with the Secretariat of the International Treaty. This work is planned to be completed in 2011.

Mr Eng Siang Lim, Malaysia: Sharing of Benefits, intentions, expectations and realities.

Mr Lim reviewed the development of the international systems since the Undertaking, the CBD and Agenda 21, the Global Plan of Action, the International Treaty and the Benefit Sharing Fund. Major achievements in the Treaty include the sMTA that spells out the obligations of the recipients; payment from commercial benefits and sharing of information. The establishment of the Benefit-sharing Fund is another important achievement. The Global Crop Diversity Trust has also come into existence after the Treaty. Institutions and mechanisms complement others; the GPA, The Global Information System, the CGIAR and the International PGR networks are also crucial contributors. We still see gaps in the capacity to implement Article 13.2 on all of its requirements; Exchange of

information, Access to and transfer of technology, and Capacity-building. We are also far from meeting expectations in terms of commercial benefit-sharing.

Mr. Bert Visser, Centre for Genetic Resources, the Netherlands, talked about PGR for food security and adaptation under climate change. He reviewed patterns of climate change, threats to food security, adaptation strategies, information needs, and role of the International Treaty.

Climate change affects crop productivity in various ways. Temperature effects include not only general warming, but also specific effects of high temperature at sensitive stages (rice sensitive at flowering). There will be more irregular and extreme rainfall, lower spring and river levels (affecting paddy rice), and rising sea levels result in salinization of low lying coastal areas and loss of productive land. There is a major drought threat to southern Africa and the Mediterranean. Bert Visser added from his own research how the effect of climate change has already started to have negative impacts on productivity of agriculture in Indonesia.

Adaptation includes plant breeding in the formal sector as well as strengthening of the informal sector and involvement of farmers in participatory approaches, all requiring new breeding materials, access to foreign genetic resources, and access to new technologies.

Ms Anja von der Ropp, WIPO, explained some intellectual property rights issues that could be relevant when information, resources and technology are exchanged and accessed. Patent applications mean disclosure of information to the public. Until recently this information has been difficult to access. Now, however, this information is available on-line in a 'patent scope' hosted by WIPO. To make this database more accessible WIPO has worked out so-called 'patent landscapes' based on pre-define questions. A landscape on the rice-genome found that patent-applications cover a large part of the genome including a number of 'bulk sequence applications'. But granted patents only amount to 0,26 percent of the rice genome. The most active applicants are multinational firms. WIPO offers training programmes in licensing negotiations and patent drafting.

Advances in technology for conservation and characterisation were reviewed by **Mr Michael Thompson**, Molecular geneticist, International Rice Research Institute (IRRI). He referred to the domestication bottlenecks that narrowed genetic diversity in cultivated plants relative to the wild progenitors, and explained the use of molecular markers to measure precisely relatedness among accessions and help understand the accessions as sources for breeding. This includes allele mining: exploring germplasm-collections to find novel beneficial alleles at key genetic loci.

The molecular data can be combined with farmers' knowledge for a better understanding of the genetic resources, as has been done with rice in SE Asia.

Technology of genome sequencing is developing fast and is now about to be quick and cheap enough for extensive use in germplasm exploration including the sequencing of many varieties of single crops

and also sequencing minor crop species. This may result in a rapid increase in the need for training to build capacity for management and productive use of all the data.

Mr. Agung Karuniawan, Department of Agronomy, Fac. of Agriculture, University Padjadjaran, Indonesia: Access to and Transfer of Technology.

Indonesia is one of the world's great "Mega biodiversity" areas. The parliament agreed to ratify the IT February 2006 and provides access to Annex 1 crops in accordance with the IT. To achieve the objectives according to the GPA, the country needs assistance for *in situ/ex situ* conservation for endangered plant species, high value plants and plants which are lost in natural disasters, and assistance to explore, collect, describe, evaluate and document PGRFA. The country also needs to strengthen institutional capacity and human resources in the field of conservation and sustainable utilization of PGRFA both in the central or local areas, and to strengthen its research capacity.

Specific needs include laboratories and equipment, flexibility in material exchange for research or commercial uses, improvement of the IT system to operate the Gene banks, and methods of *in situ* management. Universities should be more involved.

Ms Wilhelmina Pelegrina, South-East Asia Regional Initiatives for Community Empowerment (SEARICE): Access to and Transfer of Technology for Use.

Ms Pelegrina used experiences and cases from SEARICE's work in Bhutan, Laos, Thailand, Vietnam and the Philippines including contexts ranging from subsistence to commercial farming and marginal to favourable environments. The projects involve multiple stakeholders; farmers, local and national government bodies, extension services, research institutes, academia and civil society organizations.

In Laos more than 600 participating farmers have, during a 9 year period developed 114 farmer varieties with adaptation to specific environments. Achievements include dramatic improvement in seed security, significantly increased yields, and reduced food insecurity. Some of the farmers' varieties are adopted for distribution by government seed centres. These results are achieved by distribution of more than 100 segregating populations and advanced lines (F2 to F6) from National Agricultural Research Centre directly to farmers fields (innovative technology development). Some of the farmers' varieties are outstanding in terms of drought tolerance and adaptation to flooding.

Also in Bhutan the project resulted in a number of new publicly recognized varieties selected by farmers, most in rice, but also some in maize. Policy works resulted in inclusion of Farmers' Rights to save and use seeds in the Biodiversity Act 2003, and support to farmers' technology development in the 10th Five Year Plan in Agriculture.

In the Philippines the government research station refuses to give out segregating populations for on-farm selection and the project has depended entirely on own genetic resources as well as contact with other academic institutions. Still the project has recorded achievements in terms of breeding of

both rice and maize. In the case of maize, farmers are developing open pollinated varieties that take over from hybrids in quite extensive areas.

The Thailand project has produced 72 rice varieties, mostly by crosses that involve traditional varieties. A great number of 'lost' varieties of many different species have been restored to the communities. From the project area in Nan province, farmers' varieties are spread to 8 other provinces. Seed sale has become an additional source of income for some farmers. Provincial and local government units in Nan Province support farmers' on-farm conservation, crop improvement and seed production work as part of its agricultural strategy.

In Vietnam project-farmers have developed 182 varieties that are now grown in more than 33,500 hectares. 388 traditional varieties and locally adapted varieties are conserved on-farm. Seed club and farmer network supplied 100,000 tons of seeds/year (meeting 20% of seed demand; in contrast formal seed system supply only 4-5%) supplying 45-97% of seed demands in their respective communities.

The work by farmers is recognized by the Ministry of Agriculture and Rural Development through Decision 35/2008 that regulates on-farm variety development and calls for all MARD institutions to provide technical support to work by farmers. The work of farmers on varietal development has received: 3rd class Labour Medal citation from the Prime Minister of Vietnam.

These achievements were possible because there were no IPR claims on materials developed/being shared (co-generation of knowledge and technology). We need discussion on how to deal with PBR in connection with farmers' access to pre-breeding materials, and on public-private partnerships vs farmer-public research partnerships. All these benefits come without sMTA; what will be the incentives for farmers and for contracting parties undertaking these types of work to include their materials in the MLS?

Ms. Normita Ignacio, South-East Asia Regional Initiatives for Community Empowerment (SEARICE): Building capacity for use of PGR.

Ms Ignacio presented the ideas and approaches of a participatory plant breeding programme (PPB) that is implemented in Bhutan, Thailand, Laos, Vietnam and the Philippines. The triangle of objectives covers biological, social and political issues; enhance farmers' PGR-diversity, strengthen community management, and influence policies towards better protection of farmers' rights. All of this is expected to lead towards empowerment of farming communities.

The approach is to change farmers' culture through an experiential learning process. Thus PPB becomes more than technical – it is a development process. The learning includes technical knowledge and skills, analytical skills and critical thinking, problem-solving capacity, and research capacity. The Empowerment is achieved by farmers' recognition of their potentials, when self-confidence is enhanced, when collective action is facilitated, and through self-mobilization and policy advocacies. The learning facilitates skills, uses field trials (instead of books) as learning materials, uses participatory tools and methods, and relies on skills on how to simplify science.

This results in the change of farmers from being dependent to being interdependent; they become active researchers and innovators, creative adapters and users of scientific developments from their own perspectives and for their own interests, they build their own socio-economic and political structures to enable them to critically interact with forces, institutions and issues, and they become self-reliant and confident.

The project involves more than 18,000 farmers, more than 2,000 farmer trainers, and more than 800 farmer groups. Where such activities are established, farmers develop and release new varieties (rice) and multiply and sell improved seeds. They tend to take over as main supplier of varieties and seeds. The project in South Vietnam has sent out 78 new rice varieties between 2002 and 2008. Organised farmers engage policymakers and governments. The link to government and the institutional research sector is strengthened.

Ms. Xuan Li, ITPGRFA Secretariat: The Role of ITPGRFA to Address Climate Change Challenges.

Ms Li reviewed climate change patterns and predictions and stressed the complex ways through which climate change affects agriculture. It includes plant disease damage that can be explained by a triangle of (1) the pathogen, (2) the environment, and (3) the plant itself. Change in any of these may affect yield damage in ways that are hard to predict.

Characteristics of adaptive capacities include: First, access to information on the anticipated effects of climate change (in the short, medium and long term). Second, the opportunity and ability to learn, experiment, innovate and make decisions in response to climate change information, and third, the amount and diversity of assets available to an individual or community to: Build resilience, and develop the alternative strategies that can be pursued in adapting to climate change.

Needs: Conserve an as wide as possible spectrum of PGRFA; Characterize and evaluate PGRFA, in particular with regard to climate change relevant traits; Plant breeding to react urgently; Making use of the potential of minor crops, incl. underutilized and neglected crops; Develop new crops; Technology transfer and Sharing information.

To these needs the Treaty offers facilitated access to important PGRFA within the MLS, an operational mechanism of the benefit sharing funds, a Funding Strategy to promote, in particular on-farm conservation and sustainable use of PGRFA, and to promote technology transfer, information sharing and capacity building.

A case study of potato germplasm development was highlighted as an example. Previously unexplored germplasm from Costa Rica is being explored for climate-change adaptation including heat tolerance and resistance to diseases. Valuable genes are identified and transferred to germplasm that can be more easily used by potato breeders worldwide. Considering the huge and still growing relative importance of potato for food security worldwide the availability and access to genes that can protect and improve the crop cannot be overestimated.

Ms Melissa Wood, Director of Operations in the Global Diversity Trust: On-ground experiences in implementing the ITPGRFA - the case of Article 13.2.

The Trust's activities generate benefits (article 13) by safeguarding collections of crop diversity of global importance, rescuing threatened valuable diversity, and promoting the use of diversity. The Trust has classified the PGR collections according to standard and funding status and identified where support is needed for long-term funding, or for regeneration, characterization and duplication of unique accessions. On *ex situ* conservation in key gene banks, the Trust is involved in facilitation of access, access to technology, and capacity building. Annual grants for long-term funding was in 2009 US\$ 1.825 for a total of 17 crop collections.

Most of the distribution of samples comes from international research centres and a few large national gene banks. Of 211 national gene banks the majority (61 %), do not distribute any samples outside the country, 36 % distribute less than 100 samples annually and only 3 % distribute more than 100 samples.

The Trust is involved in safety duplication (Svalbard) and supports national efforts to regenerate and characterize key collections, evaluation for essential traits, development of gene bank data management software, equipment supply, and emergency funding (after typhoon Philippines).

The Trust's findings and experiences show that the general state of *ex situ* conservation is weaker than anticipated. There is lack of resources for conservation (Art. 5), and poor access to information. For utilization there is lack of capacity (Art. 7) including lack of plant breeders, and lack of organized links between gene banks and communities. MLS and implementation of Treaty contractual requirements have not yet become institutionalized.

Compilation of Recommendations

In order to sustain food security worldwide and help agriculture adapt to climate change plant breeding must play a central role and continuously be undertaken. Realizing that most people's food security depends on locally produced food and that adaptation occurs at a local scale; plant breeding should be decentralized and relevant to the local scale, reflecting local community needs. While climate change poses great challenges on agriculture and food production, the Treaty offers solutions for adaptation to (and to a limited extent for mitigation of) climate change. By providing facilitated access to important PGRFA within the MLS and a Funding Strategy to promote on farm conservation and sustainable use of PGRFA as well as technology transfer, information sharing and capacity building, the ITPGRFA could provide a framework for a joint global initiative. The meeting discussed shortcomings (gaps) of the current systems, identified priorities and pointed to strategic opportunities:

Gaps

1. Sufficient and appropriate germplasm is not adequately available for all stakeholders
 - Local seed systems need to be improved and seed regulations reviewed relative to functions and needs at community level.
 - Stakeholders need improved access to information about existing germplasm that could provide valuable source material in local plant breeding, also with a view of climate change already occurring.
2. Insufficient capacity to manage germplasm
 - More sustainable systems of research and extension facilitating interaction between stakeholders are needed.
 - More active networking and partnerships in developing and distributing new PGRFA and varieties are also needed.
 - More training and facilitation for breeders (both formal and farmer) on the utilization and management of PGRFA is needed.
3. Inadequate access to information and technology
 - Popularization of information around the Treaty and its specific details in forms best suited to the target audiences is needed.
 - Ensuring breeding-relevant information on PGRFA is accessible for all users.
 - Ensuring existing information, technology, and capacity is put to more effective use.
 - Contracting Parties to provide greater levels of technology and capacity.
 - Appropriate transfer of technology (including knowledge and skills) between actors within and between different communities, countries and regions– South-South, South-North and North-South.
 - Information on consumer preferences is also needed.

- Lack of technology for utilization of PGRFA, including techniques for prebreeding, use orientated sub sets, breeding activities and for the development of new PGRFA or new varieties, as well as seed technology.

Priorities:

1. Strengthening access to appropriate plant genetic resources.
2. Improving access to information, and promoting active distribution of appropriate. Information about materials with relevant characters.
3. Strengthen plant breeding capacity at all levels including participatory approaches.
4. Promoting cooperation between stakeholders to use genetic resources more effectively.

Strategies:

1. Strengthen decentralized plant breeding capacity for adaptation to local growing conditions and the demand in local or regional markets, including appropriate involvement of farmers and breeders by:
 - Broadening base of germplasm for breeding
 - Ensuring information availability and access
 - Building farmers' capacity in germplasm management and breeding
 - Securing and providing access to all available genetic diversity
 - Recognising the differing but valuable contributions of various stakeholders and establishing a formal cooperation between them for upscaling, mainstreaming, economizing, financing and facilitating cultural change, such as:

Stakeholder:	Contributions:
Farmers' organizations	materials, land, time, labour
Researchers/breeders	techniques, info, materials, equipment
Genebanks	materials, info
NGOs	facilitation, info
Government - local and national	equipment, funding, policy
Private sector	All
Donors	Funds

2. Increase support for Treaty National Focal Points in Contracting Parties – through FAO and other bodies at country and regional level
 - to increase priority to the work of the Treaty at national and regional level;
 - to improve linkages with other bodies, programmes and institutions that provide similar or complementary services (ecosystem approach).

3. Organize an intersessional *ad hoc*, working group, including CPs, representatives of international small-scale farmers' organizations, NGOs, and others on an equal footing, that will define a framework for the implementation of on-farm / *in situ* conservation and sustainable use and development of PGRFA.
4. Establish stakeholder network at regional level as a platform to absorb the benefit of available information, technology and capacity. This should be driven by programmes based on study on regional needs and the view of stakeholders on how they can take advantage of this new scheme.

More knowledge on the current situation could also be supplemented with other tools like patent landscape, which is part of the implementation of the WIPO Development Agenda, may be sought to identify technology trends and provide an analysis of specific technologies and related existing IP rights for selected areas of technology.

WORKSHOP PROGRAMME

Monday 8th March - Arrival of participants

19:00 – 21:00 Dinner at the **Edelweiss Restaurant** - 3rd Floor - Hotel Santika

Tuesday 9th March

09:00 **Opening at Rafflesia Room 2 and 3**

Representative of Indonesian hosts: **Mr. Karden MULYA**, Director of ICABIOGRAD

Representative of Norway: **Ms. Grethe Helen EVJEN**

09:15-09:30 Introduction of participants – **Mr. Sugiono MOELJOPAWIRO**

Session 1

The State of the IT: Achievements and gaps.

09:30 - 12:00 Chairperson: **Mr. M. SABRAN**

09:30 – 09:50 The Multilateral System: How it functions now – **Mr. Shakeel BHATTI**

09:50 – 10:30 Sharing of Benefits according to the Convention on Biological Diversity, the Cartagena Protocol, and the IT: What were the Intentions and the Expectations, and what are the Realities? – **Mr. Eng Siang LIM**

10:30 – 10:45 ***Coffee break***

10:45 – 12:00 General discussion on gaps and needs.

12:00- 13:00 ***Lunch at Edelweiss Restaurant in 3rd Floor of the Hotel Santika***

Session 2

The IT Article 13: Intentions, Expectations and Way Forward.

a) The Article 13. 2A: Information

13:00 - 14:30 Chairperson: **Mr. Javad MOZAFARI**

13:00 – 13:20 PGR for Food Security and Adaptation under Climate Change: Information Needs –**Mr. Bert VISSER.**

13:20 – 13:40 IP issues related to patenting plant genetic resources - **Ms. Anja von der ROPP**

13:40 – 14:30 Discussion with emphasis on gaps and needs and needed steps to be taken at national level, at international level and by the Governing Body.

14:30 – 14:45 ***Coffee break***

b) The Article 13. 2B: Access to and Transfer of Technology.

14:45 -17:00 Chairperson: **Mr. Daniel van GILST**

14:45 – 15:05 Technology for conservation and Characterisation – **Mr. Michael THOMPSON**

15:05 – 15:25 Technology for evaluation - **Mr. Agung KARUNIAWAN**

15:25 – 15:45 Technology for use – **Ms. Wilhelmina PELEGRINA**

15:45 – 16:05 Transfer of Technology for Climate Change – **Ms. Xuan LI**

16:05 – 17:00 Discussion with emphasis on needed steps to be taken at national level, at international level and by the Governing Body.

19:00 – 21:00 ***Dinner at the Kintamani Restaurant (Jl. Raya Pajajaran)***

Wednesday 10th March

c) The Article 13.2C: Capacity Building

09:00 – 11:00 Chairperson: **Mr. Eng Siang LIM**

09:00 – 09:25 State of the world's Plant genetic Resources: Gaps and needs – **Ms. Kakoli GHOSH**

09:25 – 09:50 On- Ground Experiences in Implementing the International Treaty, the case of article 13.2. – **Ms. Mellissa WOOD**

09:50 – 10:10 Building capacity for use of PGRFA with a focus on participatory plant breeding – **Ms. Normita Ignacio – SEARICE**

10:10 – 10:45 Discussion with emphasis on needed steps to be taken at national level, at international level and by the Governing Body.

10:45 – 11:00 ***Coffee break***

Session 3

11:00-17:00 ***Trip to Mekarsari Amazing Tourism Park – Mr. M. R. TIRTAWINATA***

Mekarsari Amazing Tourism Park (MATP) is a place where one can find the wealth of Indonesia's fruit species gathered together in a single location. It is also intended to develop and breeding of superior varieties of fruit. Mekarsari is one of the biggest tropical fruit garden in the world.

The garden is intended to create a model market garden which will nurture germplasm collection representing fruit trees, vegetables, and flowering plants. The aim here is to safeguard the genetic diversity of these plants. The 264-hectare garden is conceived as a tourist attraction located between Jakarta and Bogor

Lunch in the Park

Thursday, 11th March

Session 4

09:00-12:00 Chairperson: **Ms. Grethe Helene EVJEN**

The way forward at national level, international level and the Governing Body

Panel discussions and the formulation of statements from the consultation

(Ms. Mellissa WOOD, Mr. Javad MOZAFARI, and Mr. Patrick MULVANY)

10:45 – 11:00 ***Coffee break***

11:00 – 12:00 Session continued

12:00 – 13:00 ***Lunch at Edelweiss Restaurant in 3rd Floor of the Hotel Santika***

Session 5

13:00-17:00 Chairperson: **Mr. Sugiono MOELJOPAWIRO**

Formulation of recommendations and conclusions

14:30 – 14:45 ***Coffee break***

Friday 12nd March: Departure of participants

LIST OF PARTICIPANTS

1.	Mr. M. SABRAN (Indonesia) Head of Public Relation and Cooperation of Indonesian Agency of Agricultural Research & Development Jl. Ragunan No.29 - Pasarminggu, Jakarta Selatan - Indonesia Phone: +62 8125 172 870 Email: sabran@litbang.deptan.go.id msbran23@yahoo.com	6.	Mr. Agung KARUNIAWAN (Indonesia) University of Padjadjaran, Bandung, Bandung – Indonesia Mobile-phone: +62 813 2228 2762 Email: akaruni@yahoo.com
2.	Mr. Karden MULYA (Indonesia) Director of Indonesian Centre for Agricultural Biotechnology, Genetic Resources Research & Development Jl. Tentara Pelajar No.3A Bogor 16111 – Indonesia Phone: +62 8138 525 5544 Email: krdnmulya@yahoo.com	7.	Mr. M. HERMAN (Indonesia) Indonesian Centre for Agricultural Biotechnology, Genetic Resources Research & Development, Ministry of Agriculture, Jl. Tentara Pelajar 3A, Bogor 16114 – Indonesia Phone: +62 251 8337975 – 8339793; Fax: +62 251 833 8820 Email: mherman@indo.net.id
3.	Mr. Sugiono MOELJOPAWIRO (Indonesia) Plant Breeder and Senior Scientist Indonesian Centre for Agricultural Biotechnology and Genetic Resources Research & Development - Ministry of Agriculture Jl. Tentara Pelajar 3A, Bogor 16111 - , Indonesia Phone: +62 251 316897; Fax: +62 251 338820 E-mail: sugionom@indo.net.id	8.	Mr. SUTRISNO (Indonesia) Indonesian Centre for Agricultural Biotechnology, Genetic Resources Research & Development, Ministry of Agriculture, Jl. Tentara Pelajar 3A, Bogor 16114 – Indonesia Phone: +62 251 8337975 – 8339793; Fax: +62 251 833 8820 Email: s.trisno@indo.net.id
4.	Mr. Nugroho WIENARTO (Indonesia) - Observer Executive Director FIELD Indonesia Jalan Teluk Jakarta 1 Rawa Bambu Pasar Minggu, Jakarta 12520 – Indonesia Tel./Fax +62-21-7803740; +62-811-973008 E-mail: nugie63@yahoo.com	9.	Mr. Agus NURHADI, (Indonesia) Executive Secretary National Committee on Genetic Resources, Jl. Tentara Pelajar 3A, Bogor 16114 - Indonesia Phone: +62 811 110 8051, Fax: +62 251 832 7031 Email: agus.nurhadi@gmail.com
5.	Ms. Anja von der ROPP (Switzerland) Consultant Public, Health and Life Sciences Section, Global Challenges Division World Intellectual Property Organization (WIPO) 34, Chemin des Colombettes 1211,	10.	Mrs. Romana KÖNIGSBRUN - Observer Minister Counsellor / Deputy Head of Mission of the Austrian Embassy in Indonesia Jakarta

	Geneve – Switzerland E-mail: anja.vonderropp@wipo.int		E-mail: Romana.KOENIGSBRUN@bmeia.gv.at
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11.	Mr. Shakeel BHATTI (Italy) Secretary International Treaty on Plant Genetic Resources for Food and Agriculture Food and Agriculture Organization of the United Nations Viale delle Terme di Caracalla 1 00153 Rome – Italy Phone: +39 0657053441 Fax: +39 0657056347 Email: shakeel.bhatti@fao.org	16.	Ms. Grethe Helene EVJEN (Norway) Senior Adviser Ministry of Agriculture and Food P.O. Box 8007 Dep N-0030 Oslo – Norway Phone: +47 22 24 90 90; Fax: +47 22 24 95 55 E-mail: grethe-helene.evjen@lmd.dep.no
12.	Ms. Xuan LI (Italy) Secretary International Treaty on Plant Genetic Resources for Food and Agriculture Food and Agriculture Organization of the United Nations Viale delle Terme di Caracalla 1 00153 Rome – Italy E-mail: Xuan.Li@fao.org	17.	Ms. Elisabeth KOREN (Norway) Norway's Ministry of Agriculture and Food P.O. Box 8007 Dep N-0030 Oslo - Norway Email: Elisabeth.Koren@lmd.dep.no
13.	Ms. Kakoli GHOSH (Italy) Crop and Grassland Service Food and Agriculture Organization of the United Nations Viale delle Terme di Caracalla 00153 Rome – Italy Phone: +39 0657053926; Fax: +39 0657053152 Email: Kakoli.Ghosh@fao.org	18.	Mr. Trygve BERG (Norway) Norwegian University of Life Sciences Email: trygve.berg@umb.no
14.	Ms. Mellissa S. WOOD (Italy) Director of Programme Development Global Crop Diversity Trust c/o FAO Viale delle Terme di Caracalla 00153 Rome, Italy Tel.+39 - 0657055142 Fax. +39 - 0657055634 www.croptrust.org E-mail: mellissa.wood@croptrust.org	19.	Ms. Isabelle CLEMENT-NISSOU (France) Chef de service Relations internationales GNIS 44 rue du Louvre 75001 PARIS Tél: +33 1 42 33 85 04 Fax: +33 1 40 28 40 16 Email: Isabelle.CLEMENT-NISSOU@gnis.fr
15.	Mr. Bert VISSER (The Netherlands) Director of Centre for Genetic Resources - Wageningen University P.O. Box 16; 6700 AA Wageningen The Netherlands Phone: +31 317 477184; Fax: +31 317 418094	20.	Mr. Patrick MULVANY (United Kingdom) Senior Policy Advisor Practical Action The Schumacher Centre for Technology and Development Bourton on Dunsmore - Rugby Warwickshire CV23 9QZ - United Kingdom

	E-mail: bert.visser@wur.nl		Phone: +44 01926 634400; Fax: +44 01926 634401 Email: practicalaction@practicalaction.org.uk patrickmulvany@clara.co.uk
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21.	Mr. Evans Olonyi SIKINYI, (Kenya) Manager of Plant Variety Protection Office Kenya Plant Health Inspectorate Service P.O. Box 49592, 00100 Nairobi – Kenya Phone: +254 020 3536171/2; Fax: +254 020 3536175 E-mail: esikinyi@kephis.org	27.	Mr. Lawrent L.M. PUNGULANI (Malawi) Curator Malawi Plant Genetic Resources Centre Chitedze Research Station P.O. Box 158 – Lilongwe – Malawi Phone: +265 (0) 1 707219/220 Email: lawrentp@yahoo.co.uk agric_research@sdnp.org.mw , Alternate e-mail: genebank@malawi.net / jetupungu@gmail.com
22.	Ms. Wilhelmina R. PELEGRINA (Philippines) Executive Director Southeast Asian Regional Initiatives for Community Empowerment (SEARICE) 29 Magiting Street Diliman, Teachers Village Quezon City 1101 – Philippines Phone: +63 2 4337182 – 9226710; Fax: +63 2 9216170 Email: ditdit_pelegrina@searice.org.ph ; searice@searice.org.ph	28.	Dr. Michael J. THOMSON (Philippines) Scientist, Molecular Genetics International Rice Research Institute DAPO Box 7777, Metro Manila, Philippines Phone: +63 (2) 580-5600 ext. 2842 Mobile: +63 917-596-4305 Fax: +63 (2) 580-5699 Email: m.thomson@cgiar.org
23.	Mr. Javad MOZAFARI (Iran) Director, Dept. Plant Genetics & National Plant Gene-Bank of Iran, P.O.Box 31585-4119, Shahid Fahmideh Boulevard, Karaj – Iran Email: jmozafar@yahoo.com	29.	Mr. LIM Eng Siang, (Malaysia) No.8SS 15/5C Subang Jaya 47500 Selangor Malaysia Phone: +60 3 56338221 Email: e.lim@CGIAR.ORG eslim_choi@yahoo.com
24.	Mr. Didier BALMA (Burkina Faso) Directeur de la Recherche Scientifique, 01BP476 Ouagaoulougao 01, Burkina Faso : balma_didier@yahoo.fr ; dbal@fasonet.bf	30.	Mr. Daniel van GILST (Norway) Representative of NORAD The Norwegian Agency for Development Cooperation E-mail: Daniel.van.Gilst@norad.no dvg@norad.no , danielvangilst@hotmail.com
25.	Mr. Ali Abdulla AL-SHURAI (Yemen) National Focal Point for the International Treaty on Plant Genetic Resources for Food and Agriculture Director General National Genetic Resources Centre P.O. Box 3411 Hodeidah – Dhamar - Yemen Phone: +967 6423917; Fax: +967 6423917 - 6423914 E-mail: ngrc_yemen@yahoo.com ;	31.	Ms. Ketty Karyati Indonesian Centre for Agricultural Biotechnology, Genetic Resources Research & Development, Ministry of Agriculture, Jl. Tentara Pelajar 3A, Bogor 16114 – Indonesia Phone: +62 251 8337975 – 8339793; Fax: +62 251 833 8820 Email: absp2ind@indo.net.id

	shuraiaa@yahoo.com; shurai@y.net.ye		
26.	Mrs. Normita IGNACIO (Philippines) SEARICE Philippines E-mail: nori_ignacio@searice.org.ph		