INTRODUCTION

Plant genetic resources for food and agriculture (PGRFA) are vital for feeding humankind. These resources are the raw materials that farmers and plant breeders use to improve the quality and productivity of crops. They serve as a reservoir to desirable traits for yield improvement, disease resistance and quality traits. However, no country is sufficient in itself and all countries depend one way or another on crops and the genetic diversity from other countries and regions.

Therefore, the future of agriculture largely depends on continuous availability of genetic resources, on international cooperation and on the open exchange of the crops and their genes that farmers all over the world have developed and exchanged since agriculture began over 10,000 years ago.

Realising this need, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) came into being in November 2001. After more than 15 sessions of the United Nations Food and Agriculture Organisation (FAO) Commission on Genetic Resources and its subsidiary bodies (See Table:1), the ITPGRFA was approved during the FAO Conference (31st Session, Resolution 3/2001), with 116 votes and 2 abstentions (USA and Japan), both of them citing concerns about a lack of clarity regarding the effect of the Treaty on intellectual property rights (IPRs). The USA later on signed the Treaty on 6 November 2002.

The Treaty was purposively introduced to harmonise the International Undertaking on Plant Genetic Resources (IUPGR) signed in 1983 with the Convention on Biological Diversity (CBD) signed in 1992. This legally binding Treaty covers all plant genetic resources (PGRs) relevant for food and agriculture. The Treaty is critical in ensuring the continued availability of the PGRs that countries will need to feed their people and guarantee food security at national and global levels. It is of profound importance in the face of the current rate of genetic erosion and environmental changes and to enhance in situ and ex situ conservation and sustainable use of genetic resources.

The general provisions of the Treaty require member states to survey, prepare an inventory, and otherwise conserve PGRFA, and to take policy and legal mea-
The Treaty came into force on 29 June 2004. Its implementation is to be governed and monitored by a Governing Body (GB) comprising of all parties (Article 19 of the Treaty). The Treaty will also be overseen by the Commission on Genetic Resources in Food and Agriculture (CGFRA), a permanent body established in 1983, with the original role of overseeing the IUPGR.

**OBJECTIVES OF THE TREATY**

The Treaty has two main objectives: conservation and sustainable use of PGRs; and fair and equitable sharing of the benefits arising out of their use for sustainable agriculture and food security.

Though the Treaty seeks to ensure sustainable use of PGRs, the definition of such use has not been provided. Instead, it has been suggested to attain the objectives of the Treaty by closely linking the same to the FAO's Rome Declaration on World Food Security and the World Food Summit Plan of Action, and the CBD. The CBD defines sustainable use as use in a manner and at a rate that does not lead to the long-term decline of resources, maintaining the potential to meet the needs and aspirations of the present and future generations.

The Treaty, however, specifies some measures for sustainable use of PGRs that have direct bearing on the rights and interests of the traditional farmers and as such have been described as obligations of Contracting Parties (CPs).

**OBLIGATIONS OF THE STATES**

The Treaty recognises that the management of PGRs is the meeting point between agriculture, environment and commerce and hence strives to bring in synergy among the three sectors.

While the sovereign right of the national governments over their PGRs has been reasserted in the Treaty, it requires the CPs to establish an efficient, effective and transparent multilateral system to: facilitate access to PGRs; and share, in a fair and equitable way, the benefits that may arise from the utilisation of such resources.

The Treaty has imposed certain specific obligations on the CPs. In general, the CPs are required to ensure the conformity of its laws, regulations and procedures with the Treaty obligations and shall promote an integrated approach in the use and conservation of PGRs.

The specific responsibilities of the CPs shall include, amongst others, the followings:

**Conservation, Exploration, Collection, Characterisation, Evaluation and Documentation of PGRs**

- undertake survey and prepare inventory on PGRs;
- assess the threats to the PGRs and take steps to minimise the same;
- promote efforts of the farmers and local communities to manage and conserve on-farm their PGRs; and
- promote *in situ* conservation of wild crop relatives and wild plants by supporting the efforts of the indigenous and local communities.

**MAIN FEATURES OF THE TREATY**

For the purposes of the Treaty, the term ‘plant genetic resources’ shall mean any genetic material of plant origin of actual or potential value for food and agriculture. ‘Genetic material’ under the Treaty means any material of plant origin, including reproductive and vegetative propagating material, containing functional units of heredity.

The Treaty recognises the PGRs as raw materials indispensable for crop genetic improvement, whether by means of farmers’ selection, classical plant breeding or modern biotechnologies. The Treaty has recognised the contributions of the farmers in conserving, improving and making available PGRs for sustainable agriculture and food security and has given express recognition to the rights of the farmers to benefit from such contribution through a multilateral system. The application of the Treaty provisions shall be limited to 64 listed PGRs (food and forages) that, according to FAO, are fundamental to food security and may be either be in the public domain or under the hold of natural and legal persons.

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Sustainable Use of PGR

- pursue fair agricultural policies that promote the development and maintenance of diverse farming systems that enhance the sustainable use of agricultural biological diversity and other natural resources; 

- strengthen research that enhances and conserves biological diversity by maximising intra and inter specific variation for the benefit of farmers, especially those who generate and use their own varieties and apply ecological principles in maintaining soil fertility and in combating diseases, weeds and pests; 

- promote plant breeding efforts that, with the participation of farmers particularly in the developing countries, strengthen the capacity to develop varieties adapted to the social, economic and ecological conditions including in marginal areas; 

- broaden the genetic base of crops and increasing the range of genetic diversity available to farmers; and 

- promote the expanded use of local and locally adopted crops, varieties and underutilised crops.

National Commitments and International Cooperation

At the national level, the activities referred to under Article 5 and 6 for promoting conservation and sustainable use of PGRs shall be integrated into agriculture and rural development policies and programmes.

FARMERS’ RIGHTS

In an attempt to provide counterbalance to intellectual property rights (IPRs) of the commercial breeders, the debates over farmers’ rights focus on their contribution in developing the vast portfolio of genetic resources that form the raw material of modern agricultural activity, and hence allow the farmers to benefit, in some way, from the value that they have contributed in creating.

Accordingly in laying down the basis for farmers’ rights, the FAO Resolution 5/89, November 1989 states: Farmers’ rights arise from the past, present and future contribution of the farmers in conserving, improving and making available PGRs. These rights are vested in the international community, as trustees for present and future generations of farmers, for the purpose of ensuring full benefits to farmers and supporting the continuation of their contributions.

Recognition of farmers’ rights is necessary in order to:

- ensure that the need for conservation is globally recognised and that sufficient funds for these purposes will be available; 

- assist farmers and farming communities, in all regions of the world, but especially in the areas of origin/diversity of PGRs, in the protection and conservation of their PGRs, and of the natural biosphere; and 

- allow farmers, their communities, and countries in all regions to participate fully in the benefits derived, at present and in the future, from the improved use of PGRs, through plant breeding and other scientific methods.

The FAO Resolution 3/91 states that farmers’ rights will be implemented through international funding on PGRs, which will support plant genetic conservation and utilisation programmes, particularly, but not exclusively, in the developing countries.

The FAO Resolution 5/89 does specify why farmers should have rights, but it does not identify the rights of the farmers. The global debate on the same demands the inclusion of other rights of the farmers (See Chart:1).

Farmers, their contribution and corresponding rights have found place in the ITPGRFA right from the preamble. The Treaty has recognised the role of farmers as custodian of the PGRs. In addition to Part III of the Treaty that specifically deals with farmers’ rights, the provisions on general obligations and financial resources also refer to the farmers.

The ITPGRFA has exclusively recognised the rights of the farmers to save, use, exchange and sell farm-saved seed/propagating material. In addition, three sets of rights have been recognised for the farmers.

<table>
<thead>
<tr>
<th>Other farmers' rights</th>
<th>to dispose of sufficient variability for their farming activities</th>
<th>to protect their indigenous knowledge, plant and seed varieties</th>
<th>to do their own breeding work</th>
<th>to acquire skills in cultivating and reaping the crops</th>
<th>to use freely seed harvested on their holdings</th>
<th>to dispose of enough food</th>
<th>to reuse and share the plant varieties and store crop and seed</th>
<th>to have sufficient water</th>
<th>to be financially rewarded for what they have done in the past for biodiversity conservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHART 1: INCLUSION OF OTHER FARMERS' RIGHTS</td>
<td>to acquire piece of land and knowledge about soil and protection against eviction and displacement</td>
<td>to dispose of sufficient variability for their farming activities</td>
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</tr>
</tbody>
</table>
(Part III, Article 9). These include:

- protection of traditional knowledge relevant to PGRs;\(^{17}\)
- right to equitably participate in sharing benefits arising from the utilisation of PGRs;\(^{18}\) and
- right to participate in making decisions on matters related to conservation and sustainable use of PGRs.\(^{19}\)

The Treaty has harnessed the responsibility for realising farmers’ rights with the national governments that are required to protect and promote such rights in accordance with their needs and priorities and subject to national legislation.

**TREATY MECHANISM**

The Treaty requires the CPs to establish a multilateral system that is efficient, effective and transparent to facilitate both access to PGRs and benefit sharing arising out of such access.

**Facilitated Access to PGRs**

Article 12 of the Treaty lays down detailed guidelines for facilitated access to the listed PGRs under the multilateral system. The CPs to the Treaty have been put under obligation to provide access to other parties and legal and natural persons under legal or other appropriate arrangements.\(^{20}\) As stipulated in Article 12.3, the conditions for such access must adhere to the following:

- Access shall be provided solely for the purpose of utilisation and conservation for research, breeding and training for food and agriculture;
- Access shall be accorded expeditiously, with a minimal or no charge at all;
- All available non-confidential descriptive information shall be made available;
- No IPR or other rights so as to limit access shall be claimed over the PGRs or their genetic parts or components in the form received from the multilateral system;
- However, access to PGRs protected by IPR shall be consistent with international and national arrangements;
- PGRs accessed under the multilateral system shall continue to be made available to the system; and
- Access to PGRs in *in situ* conditions shall be provided subject to national legislation.

The facilitated access as envisaged under the Treaty shall be provided pursuant to a standard material transfer agreement (MTA).\(^{21}\) The MTA shall contain the provisions of Article 12.3 as well as the benefit sharing provision set forth in Article 13.2.d (ii).

**Benefit Sharing Mechanism in the Treaty**

Recognising the facilitated access to PGRs as a benefit itself, the Treaty calls for fair and equitable benefit sharing of such access through four major ways. These include:

**Exchange of Information (Article 13.2.a)**

Article 17 of the Treaty seeks to establish a Global Information System to facilitate exchange of information by the parties on scientific, technical and environmental matters related to PGRs under the multilateral system. As noted above, such non-confidential information shall be made available subject to applicable law and in accordance with national capabilities.

**Access to and Transfer of Technology (Article 13.2.b)**

Access to technologies, improved varieties and genetic materials developed through the use of PGRs under the multilateral system shall be provided and/or facilitated respecting applicable property rights and access laws and in accordance with national capabilities. For developing countries, such access/transfer shall be carried out through a set of measures including partnership in research and development and in commercial joint ventures relating to the material received, human resource development and access to research facilities.

Such access to and transfer of technology including those protected by IPR shall be facilitated under fair and most favourable terms, on concessional and preferential terms for the developing countries where the technology is for use in conservation and for the benefit of farmers. Such access and transfer, however, shall be provided on terms that recognise and are consistent with adequate and effective protection of IPR.

**Capacity Building (Article 13.2.c)**

The parties to the Treaty shall give priority to establishing/strengthening/developing scientific and technical education and training, facilities for conservation and sustainable use of PGRs and carry out scientific research in the developing countries.

**Sharing of Monetary and Other Benefits of Commercialisation (Article 13.2.d)**

The parties to the Treaty have agreed to achieve commercial benefit sharing. To this effect, the MTA shall require a recipient who commercialises a product that incorporates material accessed from the multilateral system to pay an equitable share of benefits arising from the commercialisation to a Trust Account. The Treaty says that access shall be provided pursuant to a standard MTA (Article 12.4) and such MTA shall include a requirement that a recipient who commercialises a product that is a PGRFA and that incorporates material accessed from the multilateral system, shall pay an equitable share of the benefits…(Article 13.2.d.ii). It further says that, the GB may, from time to time, review the levels of payment with a view to achieving fair and equitable sharing of benefits, and it may also assess, within a period of five years from the date of entry into force of this Treaty, whether the mandatory payment required in MTA shall apply also in cases where such commercialised products are available without re-
restrictions to others for further research and breeding.

The level, form and manner of payment of such benefits shall be determined by the GB. The GB may decide on the need to exempt small farmers in developing countries from such payments. The benefits shall primarily flow to the farmers of developing countries.

**International PGR Networks**

With the participation of governmental, private, non-governmental, research, breeding and other institutions, the networks shall attempt to achieve as complete coverage as possible of PGRs.

**Global Information System on PGR**

The information system as envisaged shall facilitate the exchange of information with the expectation that such exchange will contribute to the sharing of benefits by making information available to all.

**Financial Resources**

The GB shall establish a periodic target for funding priority activities, plans and programmes in the developing countries. The developed country shall provide such funds through a Trust Account that the GB shall establish for receiving and utilising financial resources that will accrue to it for implementing the Treaty. Priority will be given to the implementation of agreed plans and programmes for farmers in developing countries.

**PRESENT STATUS**

In accordance with its Article 25, the Treaty was opened for signature until 4 November 2002 by all member states of the FAO or any state who is not a member of the FAO, but of the United Nations or of any of its specialised agencies or of the International Atomic Energy Agency. On its subsequent ratification, acceptance or approval (Article 26) by at least 40 countries, among which at least 20 are FAO members (Article 28), the Treaty will enter into force, 90 days after such ratification, acceptance or approval.

As on 30 June 2004, 78 countries have signed the Treaty with 32 among them having ratified, accepted and approved and another 22 countries acceded to the Treaty. Table 2 shows the status of the South Asian countries with regard to the endorsement of the Treaty.

**LIMITATIONS OF THE TREATY**

According to many, the Treaty has left some of the central issues unresolved while some of its provisions are open to interpretation. The concerns raised by them include:

First, though the important staples such as wheat and maize are included, and collectively the annexes list crops representing 80 percent of the world’s calorific intake, the list of food crops, forage and their relatives included in the Treaty is not exhaustive (soya, sugar cane, palm oil and groundnut etc.).

Second, the extent to which implementation of the Treaty will conflict with IPRs, if at all, is uncertain, due to the fact that the Treaty represents an attempt to satisfy constituents whose interests are often seen as irreconcilable. The preamble to the Treaty states that "nothing in this Treaty shall be interpreted as implying in any way a change in the rights and obligations of the CPs under other international agreements" and it "is not intended to create a hierarchy between this Treaty and other international agreements." Article 12.3(f) provides that access through the multilateral system to PGRFA "protected by intellectual and other property rights shall be consistent with relevant international agreements, and with relevant national laws." Likewise, Article 13.2(b), which concerns access to and transfer of technologies, improved varieties and genetic material, states that such access shall be provided "while respecting applicable property rights and access laws." These provisions appear designed to reassure developed nations that IPRs obtained in conformity with conventions such as the International Union for the Protection of New Varieties of Plants (UPOV) Conventions and the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement will remain unaffected by the Treaty.

Third, the extent to which farmers will be allowed to freely use, exchange and breed the seeds is unclear. The preamble of the Treaty affirms "the rights recognised in this Treaty to save, use, exchange and sell farm-saved seed and other propagating material ... are fundamental to the realisation of farmers' rights." The Treaty itself does not expressly create any such rights to save, use, exchange and sell seed. Indeed, an unqualified grant of such rights would contradict IPR laws in many countries. The only other reference to such rights appears in Article 9.3, which appears to say that whether such rights exist is left to be determined by national law: "Nothing in this Article shall be interpreted to limit any rights that farmers have to save, use, exchange and sell farm-saved seed/propagating material, subject to national law and as appropriate."

Fourth, benefits shared under the multilateral system are
required to flow primarily to farmers, especially in developing countries, and countries with economies in transition, who conserve and sustainably utilise PGRFA. However, the mechanism for sharing benefits over the commercial use of genetic material in terms of amount, form and conditions remain unclear. For the first five years after the Treaty takes effect, benefit sharing payments will be merely encouraged, but not mandatory, if the product is made available without restriction to others for further research and breeding. Practically, it appears to mean that payments would not be mandatory if the materials are commercialised under UPOV-style plant breeders’ rights (PBRs), which are subject to a "breeders exemption" allowing further breeding and research with a protected variety without the PBR holder’s consent.

Fifth, enforcement procedure to be used by national governments for ensuring compliance is not detailed out.

Sixth, although the Treaty is more specific in some respects than the CBD, its policies are stated broadly, and often without significant practical detail. For these and other reasons, the Treaty can be thought of as a platform on which a detailed structure of an international policy for PGRs can be built. What that structure will look like will depend upon a variety of political, economic, and scientific influences that are already at work to shape the policies of the future.

**CONCLUSION AND RECOMMENDATION**

The issue of farmers’ rights is a major concern for gene-rich developing countries. The recognition of their rights is imperative not only from the perspective of maintaining harmony in the ecology but also from the perspective of feeding the humankind. However, their rights are at stake in the present world.

ITPGRFA has given due recognition to farmers’ rights in many ways. However, the Treaty has also left some of the central issues relating to farmers’ rights unresolved. For example, the extent to which farmers will be allowed to freely use, exchange and breed the seeds is unclear in the Treaty.

Notwithstanding the fact that the Treaty is more specific in some respects than the CBD, its policies are too broad, and in some cases do not seem practical too. Still, the Treaty can be thought of as a platform on which a detailed structure of an international policy for PGRs can be built.

Therefore, considerable work is still needed to determine exactly how the various provisions of the Treaty will be implemented. This is true also for farmers’ rights, which the Treaty recognises in Article 9 but leaves to CPs to realise as they wish. Since the Treaty leaves it entirely up to national governments to implement farmers’ rights, they should develop measures to protect and promote farmers’ rights by utilising the provisions of the Treaty.

**ENDNOTES**

1. Article 11.2, 11.3 of the Treaty
2. Article 1 of the Treaty
3. Preamble of the Treaty
4. Article 10.2 of the Treaty
5. Article 5 of the Treaty
6. Article 5.1(a) of the Treaty
7. Ibid
8. Article 5.1 (c) of the Treaty
9. Article 5.1 (d) of the Treaty
10. Article 6 of the Treaty
11. Article 6.2 (a) of the Treaty
12. Article 6.2 (b) of the Treaty
13. Article 6.2 (c) of the Treaty
14. Article 6.2 (d) of the Treaty
15. Article 6.2 (e) of the Treaty
16. Article 7 of the Treaty
17. Article 9.2 (a) of the Treaty
18. Article 9.2 (b) of the Treaty
19. Article 9.2 (c) of the Treaty
21. Article 12.4 of the Treaty
22. Article 16 of the Treaty
23. Article 18 of the Treaty
24. Most of the interpretations in this section are adapted from http://www.plantphysiol.org

Launched in December 1994 at Nagarkot, Nepal by a consortium of South Asian NGOs, South Asia Watch on Trade, Economics & Environment (SAWTEE) is a regional network that operates through its secretariat in Kathmandu and 11 member institutions from five South Asian countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lanka. Registered in Kathmandu in 1999, the overall objective of SAWTEE is to build the capacity of concerned stakeholders in South Asia in the context of liberalisation and globalisation.

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