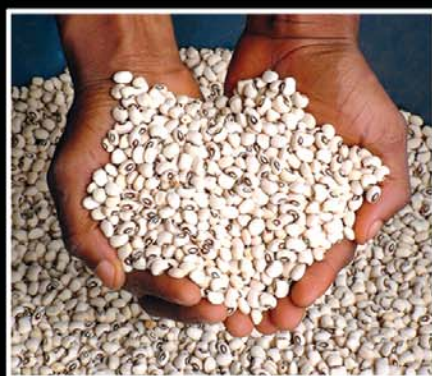


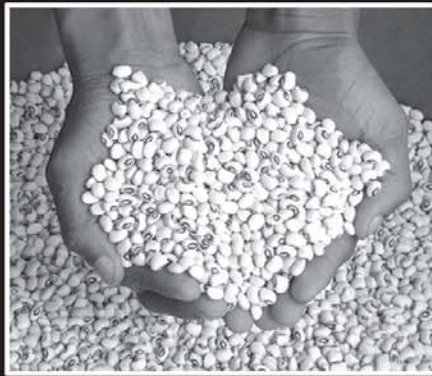
# The Plant Treaty and Farmers' Rights

Implementation Issues for South Asia



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Regine Andersen and Tone Winge

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*Views expressed in this Paper are of the authors and do not necessarily reflect the position of SAWTEE or its member institutions.*

## Acronyms and abbreviations

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ASSINSEL	International Association of Plant Breeders for the Protection of Plant Varieties
CBD	Convention on Biological Diversity
CGIAR	Consultative Group on International Agricultural Research
FAO	Food and Agriculture Organization of the United Nations
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GRAIN	Genetic Resources Action International
IARCs	International Agricultural Research Centres
IPRs	Intellectual Property Rights
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
MTA	Material Transfer Agreement
OECD	Organisation for Economic Co-operation and Development
PVPFR Act	Plant Variety Protection and Farmers' Rights Act
SAWTEE	South Asia Watch on Trade, Economics & Environment
SMTA	Standard Material Transfer Agreement
TRIPS Agreement	Agreement on Trade-Related Aspects of Intellectual Property Rights
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UPOV	Convention of the International Union for the Protection of New Varieties of Plants
US	United States
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

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# Introduction

Plant genetic diversity is crucial to the breeding of food crops and is, therefore, a central precondition for food security. Diverse genetic resources provide the genetic traits required to deal with crop pests and diseases, as well as changing climate conditions. Such diversity is also essential for the millions of people worldwide who depend on traditional small-scale farming for their livelihoods. Therefore, plant genetic diversity is an indispensable factor in the fight against poverty. For South Asia, where the majority of the population lives in rural areas and depends on traditional small-scale farming, the issue of plant genetic diversity is of vital importance.

The diversity of domesticated plant varieties is, however, disappearing at an alarming rate all over the world. Moreover, the interest in the commercial use of genetic resources has increased in line with the developments in biotechnology, followed by demands for intellectual property rights (IPRs) and new seed regulations. As a result, there has been an emergence of an anti-commons tragedy—a situation where multiple actors have the possibilities to exclude each other from the use of plant genetic resources in agriculture. Not only is this a threat to the conservation and sustainable use of these resources, but it may also seriously affect food security and the outlook for combating poverty in the world.

With the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA, hereafter called the Plant Treaty), which was adopted in 2001, the

international community has an instrument with the potential to change this negative trend. Whether that will happen, however, depends crucially on the political will of the Contracting Parties to the Plant Treaty.

The realization of Farmers' Rights is a cornerstone of the Plant Treaty as farmers are the custodians and developers of all crop genetic diversity in the fields and their rights in this regard are crucial for enabling them to maintain this vital role. Farmers' Rights are basically about enabling farmers to maintain and develop crop genetic resources as they have done since the dawn of agriculture, and recognizing and rewarding them for their indispensable contribution to the global pool of genetic resources.

South Asia has a significant stake in the developments in the area of biodiversity, including plant genetic resources for food and agriculture and Farmers' Rights. The region is endowed with rich biodiversity and has a predominance of traditional

*Farmers' Rights are basically about enabling farmers to maintain and develop crop genetic resources as they have done since the dawn of agriculture, and recognizing and rewarding them for this indispensable contribution to the global pool of genetic resources.*

**Table 1 South Asia's status on ITPGRFA**

Countries	Contracting party
Afghanistan	09.11.2006
Bangladesh	14.11.2003
Bhutan	03.09.2003
India	10.06.2002
Maldives	02.03.2006
Nepal	Not a Contracting Party
Pakistan	02.09.2003
Sri Lanka	Not a Contracting Party

Source: [www.planttreaty.org](http://www.planttreaty.org)



**Table 2 South Asia's status on CBD**

Countries	Contracting party
Afghanistan	19.09.2002
Bangladesh	03.05.1994
Bhutan	25.08.1995
India	18.02.1994
Maldives	09.11.1992
Nepal	23.11.1993
Pakistan	26.07.1994
Sri Lanka	23.03.1994

Source: [www.cbd.int](http://www.cbd.int)

**Table 3 WTO membership and South Asia**

Countries	Membership
Afghanistan	Not yet a member
Bangladesh	Member since 1995
Bhutan	Not yet a member
India	Member since 1995
Maldives	Member since 1995
Nepal	Member since 2004
Pakistan	Member since 1995
Sri Lanka	Member since 1995

Source: [www.wto.org](http://www.wto.org)

*Out of eight South Asian countries, not a single country is a UPOV member, most are already Contracting Parties to the Plant Treaty, all are Contracting Parties to the CBD, and all, except Afghanistan and Bhutan, are WTO members.*

farming systems. Two of the 12 megabiodiversity centres of the world are situated in this region, which has more than 15,000 endemic species of plants. The region is also a centre of diversity for many crop plants and owns large genetic diversity in these crops as well as in a few other crops introduced from elsewhere (Bala Ravi 2005; SAWTEE 2006).

Not all countries in the region are Contracting Parties to the Plant Treaty, which is the first legally binding international agreement exclusively on crop genetic resources. Nepal and Sri Lanka have not yet joined the Treaty (Table 1). All countries have, however, joined the Convention on Biological Diversity (CBD), which covers all biological diversity except for human beings, including crop genetic diversity (Table 2). All South Asian countries, except Afghanistan and Bhutan, are members of the World Trade Organization (WTO) (Table 3). The members have committed to implementing, *inter alia*, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), which comprises intellectual property rights related to crop genetic resources. None of the countries have,

however, become member of the Union for the Protection of New Varieties of Plants (UPOV), which is important to remember in the discussion of how to implement the TRIPS Agreement. Implementing the Plant Treaty and its provisions on Farmers' Rights within this framework of international agreements and processes is a challenging task for many countries, particularly in the South.

This discussion paper<sup>1</sup> looks into the contents of the Plant Treaty with a particular focus on Farmers' Rights. The paper also looks at the challenges from other international agreements such as the CBD, the TRIPS Agreement and UPOV; the state of negotiations with regard to Farmers' Rights; and prospects for their realization in developing countries in general and South Asia in particular. In addition, as India's law on plant variety protection and Farmers' Rights is an example of the most advanced legal recognition of Farmers' Rights at the national level, the paper also analyses various issues concerned with this Act before deriving conclusion and recommendations with regard to options available for the realization of Farmers' Rights.

# A brief introduction to the Plant Treaty

The Plant Treaty was adopted by the Conference of the Food and Agriculture Organization of the United Nations (FAO) in 2001. It entered into force in 2004, and is the first legally binding agreement exclusively pertaining to the management of plant genetic resources for food and agriculture (hereafter also called crop genetic resources). The Plant Treaty has 120 Contracting Parties, i.e., countries committed to implementing its provisions.<sup>2</sup>

The forerunner to the Plant Treaty was the International Undertaking on Plant Genetic resources, adopted at the Twenty-second Session of the FAO Conference in Rome in 1983 (Conference Resolution 8/83). The objective of the Undertaking, as stated in its original 1983 version, was to ensure that crop genetic resources would be explored, preserved, evaluated and made available for plant breeding and scientific purposes. Its two-pronged goal was clear: conservation and access. Unlike the Plant Treaty, the Undertaking was not legally binding. It remained formally in force until the adoption of the Plant Treaty. However, it received little attention after the adoption of the CBD in 1992, which set the stage for the renegotiation of the International Undertaking that was to result in the Plant Treaty in 2001.<sup>3</sup>

The objectives of the Plant Treaty are: the conservation and sustainable use of crop genetic resources, and the fair and equitable sharing of the benefits arising from their use for sustainable agriculture and food security. The most important benefit is that of access to the vital resources

for food and agriculture as no country is self-sufficient in crop genetic resources and all depend on plant genetic diversity from other countries and regions. International cooperation and open exchange of genetic resources are, therefore, essential for food security. The core of the Plant Treaty is a Multilateral System of Access and Benefit Sharing covering 35 food crops and 29 forage plants that are under the management and control of the Contracting Parties and in the public domain.

Farmers' Rights constitute a cornerstone in the Plant Treaty. In Article 9, the Contracting Parties recognize the enormous contribution that farmers of all regions of the world have made, and will continue to make, for the conservation and development of plant genetic resources as the basis of food and agriculture production throughout the world. Governments are to protect and promote Farmers' Rights, but can choose the measures to do so according to their needs and priorities.

The contents of the Plant Treaty can be grouped into four components:

- ensuring the conservation and sustainable use of crop genetic resources (Articles 5 and 6);
- promoting the realization of Farmers' Rights (Article 9);
- facilitating access to the genetic resources of specified plants (Articles 10–12); and
- providing for the sharing of benefits from the use of these plants (Articles 10–11 and 13).

*The core of the Plant Treaty is a Multilateral System covering 35 food crops and 29 forage plants that are under the management and control of the Contracting Parties and in the public domain.*

Further articles of the Treaty provide for national commitments, international co-operation, technical assistance, supporting components, and financial and institutional requirements for implementation.

## 2.1 Conservation and sustainable use of crop genetic resources

The conservation<sup>4</sup> and sustainable use of crop genetic resources are the primary two objectives of the Treaty, set out in Article 1. The Treaty stipulates that the Contracting Parties shall develop and maintain appropriate policies and legal measures for promoting the sustainable use of crop genetic resources (Paragraph 6.1). This is an obligation for all Parties and may include measures such as promoting diverse farming systems; research which enhances and conserves biological diversity; plant breeding with the participation of farmers in developing countries; broadening of the genetic bases of crops; increasing the range of genetic diversity available to farmers; expanded use of local and locally adopted crops and underutilized species; wider use of diversity of varieties and species in on-farm management, conservation and sustainable use; and the adjustment of breeding strategies and regulations on variety release and seed distribution (Paragraph 6.2).

The provisions on conservation (Article 5) are somewhat less mandatory. Here the Parties shall, 'subject to national legislation, and in co-operation with other Contracting Parties where appropriate', promote an integrated approach to the exploration, conservation and sustainable use of crop genetic resources (Paragraph 5.1). Suggested measures are the improvement of *ex situ* conservation of plant varieties—including crop wild species—and support to farmers for on-farm management and conservation of crop genetic resources. The latter is particularly relevant in the context of Farmers' Rights.

## 2.2 Realization of Farmers' Rights

In the Preamble to the Plant Treaty, the Contracting Parties affirm that the past,

present and future contributions of farmers in all regions of the world—particularly those in centres of origin and diversity—in conserving, improving and making available these resources, constitute the basis of Farmers' Rights. They also affirm that the rights recognized in the Plant Treaty to save, use, exchange and sell farm-saved seed and other propagating material, and to participate in relevant decision-making processes and in the fair and equitable benefit sharing are fundamental to the realization of Farmers' Rights.

Article 9 of the Plant Treaty recognizes that the enormous contribution of farmers for the conservation and development of crop genetic resources constitutes the basis of food and agriculture production throughout the world. It explicitly states that the responsibility for the implementation of Farmers' Rights, as they relate to the management of plant genetic resources for food and agriculture, rests with national governments. Certain measures to protect and promote Farmers' Rights are suggested. These encompass the protection of relevant traditional knowledge, equitable benefit sharing, and participation in decision making. The rights to save, use, exchange, and sell farm-saved seed and propagating material are addressed. Governments are free to choose the measures they deem appropriate, according to their needs and priorities.

## 2.3 Access to genetic resources of specified plants

The core of the Plant Treaty is the Multilateral System of Access and Benefit Sharing. The Contracting Parties are obliged to facilitate access to all plant genetic resources covered by a list of 35 food and 29 forage crops (referred to as the Annex 1 crops, because they are listed in an annex to the Plant Treaty) which are in the public domain and under their management and control.<sup>5</sup>

For these crops, access is facilitated in an efficient and unbureaucratic manner. This is possible due to the Standard Material Transfer Agreement (SMTA) that was

*The Plant Treaty requires the Contracting Parties to develop and maintain appropriate policies and legal measures for promoting the sustainable use of crop genetic resources.*

adopted at the First Session of the Governing Body of the Plant Treaty, held in Madrid, Spain on 12–16 June 2006. This is a standardized agreement between the provider and the recipient of a genetic resource stipulating the conditions upon which the material is to be transferred. The SMTA can be used by relevant actors in all countries that are Contracting Parties to the Plant Treaty and by international gene banks which have entered into agreements related to crop genetic resources with the FAO.

The conditions upon which materials can be transferred are derived from the Plant Treaty. They include, *inter alia*, measures for benefit sharing and the condition is that recipients of crop genetic resources from the Multilateral System are not to claim any patents or other rights that limit the facilitated access to these resources, or their genetic parts or components, in the form they are received from the Multilateral System (Paragraph 12.3 (d)). However, this provision leaves scope for interpretation. It is not specified exactly what constitutes the ‘public domain’, which is important because the system only covers the material of the 35 food crops and 29 forage plants that are in the public domain and under the control of the Parties.

Generally, the current understanding is that materials in public institutions are meant to be in the system, but the term has not been explicitly defined. Also, the formulation ‘in the form received from the Multilateral System’ is unclear. This is important with regard to IPRs: how much must a genetic resource be modified for claiming that it is different from the form in which it was received? In other words, how much modification is required to allow for IPRs?<sup>6</sup> So far, there have not been any test cases in this regard.

Nevertheless, the Multilateral System is a major breakthrough in terms of the facilitation of access to genetic resources, as it enables facilitated access to the resources covered within the system and benefit-sharing arrangements in this regard. However, the problem is that the

Multilateral System does not cover all the plant genetic resources for food and agriculture, the possible consequences of which have been briefly explained below.

- Annex 1 crops and forage plants are covered by the Multilateral System: These include such important food crops as rice, wheat, maize, rye, potatoes, beans, cassava and bananas. Other important crops, including soybeans, tomatoes, cotton, sugarcane, cocoa, groundnuts, many vegetables and important tropical forage plants, are not included. The Parties to the Treaty are obliged to facilitate access to all crop genetic resources under their management and control and within their public domain which are listed in Annex 1, for all legal and natural persons under the jurisdiction of any Party (Paragraph 12.2).<sup>7</sup> In addition, the Parties have agreed to encourage other holders of crop genetic resources in their country (private actors) to include in the Multilateral System those resources under their control that are listed in Annex 1 (Paragraph 11.3). Also the International Agricultural Research Centres (IARCs) of the Consultative Group on International Agricultural Research (CGIAR) which have signed agreements in accordance with the Plant Treaty are obliged to provide facilitated access for all Contracting Parties to materials listed in Annex 1 in accordance with the Multilateral System (Paragraph 15.1 (a)).<sup>8</sup>
- Non-Annex 1 materials collected before the entry into force of the Plant Treaty and after the entry into force of the CBD: Contracting Parties to the Plant Treaty are not obliged to provide access to such materials under the Treaty. Access is regulated internationally by the CBD, i.e., on a bilateral basis. This means that countries that are Parties to the CBD may provide access to these resources upon prior informed consent and on mutually agreed terms. The conditions may vary from country to country depending on their regulations, as there is no common multilateral system in

*The Multilateral System of the Plant Treaty is a major breakthrough, as it facilitates access to genetic resources but the problem is that it does not cover all the plant genetic resources for food and agriculture.*

*Contracting Parties to the Plant Treaty are not obliged to provide access to non-Annex 1 materials under the Treaty, and such access has to be regulated internationally by the CBD.*

place yet.<sup>9</sup> Those requesting such access must apply to national authorities, where such have been established, in order to obtain access to crop genetic resources. Whether they will obtain access, and on what conditions, depends on domestic policies and procedures in the respective countries. Materials stored by the IARCs shall, however, be made available in accordance with the provisions of a Material Transfer Agreement (MTA) pursuant to agreements between the IARCs and the FAO, as regulated in the Plant Treaty (Paragraph 15.1 (b)).

- Non-Annex 1 materials collected after the entry into force of the Plant Treaty: Access to these materials is internationally regulated by the CBD, which means that access can be facilitated on a bilateral basis. As for materials kept by the IARCs, these can be made available through agreements between the IARCs and ‘the country of origin or the country which has acquired the material in accordance with the CBD’ (Paragraph 15.3).
- Non-Annex 1 materials collected before the entry into force of the CBD: There is currently no international law that regulates access to such materials from countries directly. Thus, it is up to the national government to decide

whether to make such materials available, and on what terms. If access is denied or severely restricted, the effects for the further development and use of these resources and their contribution to food and agriculture may be severe. However, materials stored by the IARCs are to be made available in accordance with the provisions of the MTA between the IARCs and the FAO (Paragraph 15.1 (b)). The legal situation with regard to the facilitation of access to crop genetic resources after the entry into force of the Plant Treaty is illustrated in Table 4, and as this overview indicates, the future for the international management of crop genetic resources outside the Multilateral System is highly uncertain.

## 2.4 Sharing of benefits from the use of crop genetic resources

The fair and equitable sharing of benefits arising from the use of crop genetic resources is included in the objectives of the Plant Treaty (Article 1). Also, several of the provisions on benefit sharing in Article 13 are mandatory. The sharing of benefits arising from the use of crop genetic resources from the Multilateral System is comprised of four main elements, which are all related to the Annex 1 species (Paragraph 13.2):

**Table 4** Accessibility of resources after the entry into force of the Treaty in 2004

FAO ↓	CBD ⇒	Accessions acquired prior to entry into force of the CBD	Accessions acquired after entry into force of the CBD
Annex 1 crops under the management and control of a Contracting Party and in the public domain		Access to crop genetic resources from/by Contracting Parties is to be facilitated under the Multilateral System of the Plant Treaty.	Access to crop genetic resources from/by Contracting Parties is to be facilitated under the Multilateral System of the Plant Treaty.
Crop genetic resources not listed under the Multilateral System of the Plant Treaty		Access to crop genetic resources is not regulated by any international agreement, except for materials held by the IARCs, as specified in Article 15 of the Plant Treaty.	Access to crop genetic resources is regulated internationally by the CBD, although in the case of materials held by the IARCs, they may be made available under the Plant Treaty on specific conditions (Article 15).

- Information exchange with the sharing of inventories of crop genetic resources, and information of technologies pertaining to the growing utilization of crop genetic resources and other relevant research findings;
- Transfer of technology for the conservation, characterization, evaluation and use of crop genetic resources;
- Capacity building in developing countries and countries with economies in transition, through education and training in, and facilities for, the conservation and sustainable use of crop genetic resources, and by carrying out research together with institutions in these countries;
- Sharing of monetary and other benefits from commercialization, including payment and partnerships in research and technology development.

The first three items of benefit sharing are of a more general nature, accruing from the utilization of crop genetic resources at large and not linked to the utilization of any particular crop.<sup>10</sup> By contrast, the final item is linked directly to the commercialization of specified crop genetic resources obtained from the Multilateral System. If a recipient of genetic resources commercializes a resulting product and restricts access to it (for example through a patent), a fixed share of the benefits has to be paid to the Multilateral System (Paragraph 13.2 (c.ii)). If it is commercialized without access restrictions, a fixed share can be paid. The benefits are primarily to flow to farmers, especially in developing countries and countries with economies in transition, who conserve and sustainably use crop genetic resources (Paragraph 13.3).

As per the Treaty, this benefit-sharing mechanism is to be reviewed five years after the entry into force of the Plant Treaty, i.e., in 2009. In recent Governing Body negotiations, discussions have focused on the implementation of the funding strategy, including the benefit-sharing fund. A strategic plan has also been under negotiation, which, among others, is meant to raise voluntary contributions to

the benefit-sharing fund until mandatory payments to the Multilateral System under the SMTA materialize.

## 2.5 Central institutional and financial provisions

A Governing Body composed of all Contracting Parties is to oversee and promote the full implementation of the Plant Treaty (Article 19). This function includes a wide range of tasks such as providing policy guidance, adopting plans and programmes, adopting and reviewing the funding strategy, maintaining communication with the Conference of the Parties to the CBD and other relevant institutions, and monitoring the progress in Treaty implementation. Each Contracting Party has one vote in the Governing Body, which is to meet biannually. The Secretary of the Governing Body is appointed by the FAO Director-General, with the approval of the Governing Body, and is assisted by staff as required (Article 20).

Implementation of the Plant Treaty is to be financed through a funding strategy to be developed and adopted by the Governing Body (Article 18). As of 2008, the Contracting Parties are still struggling to develop this strategy. No funding obligations on the Contracting Parties are specified in the Plant Treaty. As funding proved to be the bottleneck for the implementation of the International Undertaking as well as negotiations of the Plant Treaty and its follow-up in the interim period, the design and implementation of the funding strategy is a central precondition to the implementation of the Plant Treaty.

## 2.6 Issues for discussion

The Plant Treaty is a crucial instrument for the international community to ensure the conservation and sustainable use of crop genetic resources and to ensure food security for present and future generations. It is also the most important instrument we have to provide for the equitable sharing of benefits from the use of these resources and for the realization of Farm-

*The function of the Governing Body includes a wide range of tasks such as providing policy guidance, adopting plans and programmes, adopting and reviewing the funding strategy, and generally monitoring the progress in Treaty implementation.*

ers' Rights. However, the Plant Treaty, as it is formulated, does not address all the challenges:<sup>11</sup>

- Access: Many important crops are still excluded from the Multilateral System of the Treaty. If these resources are not accessible, or access is made difficult, this might threaten their maintenance and existence in the long run. A central challenge for the Contracting Parties is, thus, to negotiate the conditions for the inclusion of as many of the remaining crops as possible into Annex 1.
- Benefits: Nobody knows exactly how much benefits will be shared through the benefit-sharing mechanism related to the SMTA. As the Plant Treaty is still relatively new, and it takes time to breed new plant varieties, it is still too early to tell. Thus, a central question is how the required funds for benefit sharing and the implementation of the Treaty can be made available. Norway has unilaterally announced to pay an amount equivalent to 0.1 percent of all its seed sales to the benefit-sharing mechanism, suggesting other countries to follow suit. This is approximately US\$100,000 per year. If other countries follow this, the benefit-sharing mechanism would soon amount to US\$40 million. Some European countries have followed, and, therefore, the first funds from the benefit-sharing mechanism are currently being distributed. But there is still a long way to go until the required funds have been secured.
- Benefit sharing: The mechanism of how to distribute benefits to farmers who conserve and sustainably use crop genetic resources is currently being developed and the first 11 projects have been approved for funding under the benefit-sharing fund, most of which are carried out by research institutes in the South. Still, many questions need to be sorted out, for example, how the funds can best be channelled to farmers in developing countries and coun-

tries with economies in transition, and how the approval, monitoring and evaluation of such benefit sharing can best be organized.

- IPRs: Recipients of genetic resources cannot claim IPRs on the material from the Multilateral System 'in the form it is received'. However, this is a vague formulation and may not provide sufficient protection against IPRs on the material. What is sure is that it is possible to claim IPRs on a material that has been modified in some way, as long as the original material is not made subject to such protection. Even in this case, the question is how much modification is required to allow for patent protection. Thus, an interpretation of this formulation that is acceptable for all the Contracting Parties is still missing.
- Funding strategy: The Governing Body is developing a funding strategy for the implementation of the Plant Treaty. However, the work is difficult, as many Parties are hesitant to pay funds to the FAO, which is regarded as somewhat inefficient.<sup>12</sup> On the other hand, the Global Crop Diversity Trust has received substantial funds for the support of gene banks all over the world. This is a success story—very positive for *ex situ* conservation—from which it could be possible to learn. The Trust is an independent institution with close ties to the FAO and the Plant Treaty. Perhaps this may provide lessons for the development of the funding strategy. In any case, further innovative mechanisms are needed to address the challenges in this regard.
- Coverage: The multilateral system covers genetic resources of the listed crops that are in the public domain and under the control of the Parties. A central question is what this means with regard to genetic resources that are kept under *in situ* conservation. It is not certain whether or under what conditions such genetic resources can be said to be in the public domain and

*There are no estimates with regard to how much benefits will be shared through the benefit-sharing mechanism related to the Standard Material Transfer Agreement, as the Treaty is still relatively new, and it takes time to breed new plant varieties.*

under the control of the Parties. If they are not, then they are not covered by the Multilateral System, which would mean that other rules could apply, for example, prior informed consent and mutually agreed terms derived from the CBD. Seeds kept in public seed banks would, however, be placed in the Multilateral System. So there is scope for an overlap here, which could cause confusion. This needs to be sorted out. If not, the results could be that gene banks would have greater difficulties in future to collect materials and make them available as intended by the Plant Treaty. Also, the sharing of seeds among farmers could become more difficult, because farmers—based on such legislation—could start expecting that their seeds could be interesting for professional plant breeding, which is normally not

the case. It is also important to note that the Plant Treaty as such covers all crop genetic resources; only the Multilateral System is limited in this regard. The first parts of the Plant Treaty, most importantly on the conservation and sustainable use of plant genetic resources, and on Farmers' Rights, apply to all crop genetic resources. Thus, a coherent system is required with regard to *in situ* conservation of resources.

Even if these issues highlight the serious weaknesses of the Plant Treaty, they do also point to some possibilities for improvements. All the issues are benign: they can be solved, if the Contracting Parties decide to do so. However, this is not easy and involves strong commitment, joint efforts and a significant amount of technical and financial assistance.

*The Plant Treaty as such covers all plant genetic resources for food and agriculture; only the Multilateral System is limited in this regard.*





# The Plant Treaty and other international agreements

The implementation of the Plant Treaty does not take place in isolation. Other agreements are also concerned with and affect the management of crop genetic diversity. The interaction between these different instruments—including the driving forces behind them—has, to a large extent, affected the negotiations leading to the Plant Treaty, the Treaty text itself, as well as the implementation of it. The most important agreements in this regard are the CBD, the TRIPS Agreement and the UPOV Convention. These regimes have emerged from differing rationales and interests, resulting in, more or less, different functional scopes, goals and emphases (Table 5).

What they all have in common is that they are, as noted above, concerned with and affect the management of crop genetic resources. Since multilateral agreements are the most important instruments available to the international community for influencing the management of crop genetic resources, it is central to understanding how they work and interact, and how they affect the national-level situation.

## 3.1 Relationship with the CBD<sup>13</sup>

The CBD was the first international treaty to address the conservation, sustainable use and equitable sharing of benefits derived from the utilization of biological diversity in general. It was opened for signing at the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, and entered into force on 29 December 1993 (Box 1).

In its general approach to biological diversity, it does not differentiate between types of biological diversity, for example, terrestrial and marine biological diversity or domesticated and non-domesticated biological diversity, but the provisions are aimed at all types of biodiversity. To understand the relation between the Plant Treaty and the CBD, it is important to first look into the history behind these international instruments.

In 1988, the Governing Council of the United Nations Environment Programme (UNEP) decided to establish

*Since multilateral agreements are the most important international instruments in relation to the management of crop genetic resources, it is central to understanding how they work and interact, and how they affect the situation at the national level.*

**Table 5** What the international regimes are about

	Conservation, sustainable use, access and benefit sharing	IPRs
Biological diversity in general (including plant genetic resources for food and agriculture)	The CBD	Article 27.3 (b) of the TRIPS Agreement
Plant genetic resources for food and agriculture	The Plant Treaty	The UPOV Convention

## Box 1 About the CBD

Negotiated under the auspices of the UNEP, the CBD opened for signature on 5 June 1992 at the Rio Earth Summit, and entered into force on 29 December 1993. The Convention is legally binding and Contracting Parties are obliged to implement its provisions. So far, 190 countries and the European Community are its members. The Convention has three objectives—the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising from the utilization of genetic resources. It also addresses issues relating to research and training, public education and awareness, and technical and scientific cooperation.

Article 15 of the Convention provides a framework for the implementation of access and benefit sharing. In recognition of the sovereign rights of states over their biological resources, national governments, subject to their national laws, are conferred the authority to determine access to genetic resources. The Convention requires its Parties to create conditions, subject to allowed safeguards, to facilitate access to genetic resources for environmentally sound uses by other Parties on a bilateral basis.

*Adapted from: UNEP/CBD (2003).*

an *Ad Hoc* Group of Experts on Biological Diversity mandated to investigate the desirability and possible form of an umbrella convention to coordinate the current activities in the field. This marked the beginning of the negotiations, and the conservation approach to non-domesticated biodiversity.

The *Ad Hoc* Group of Experts convened in Geneva for three meetings between 1988 and 1990. The group recommended that a new internationally binding instrument on biodiversity be established and also touched upon some of the issues that were to be more thoroughly addressed later on such as the links to development, transfer of technology, access to genetic resources and the specific situation of indigenous peoples (Rosendal 2000; McGraw 2002).

Norwegian representatives were the first to address the issue of agricultural biodiversity, proposing that it be included in an international agreement. During this period, developing countries maintained that they would not agree to genetic

resources being considered 'common heritage of mankind', and reaffirmed their national sovereignty over them. This was in many ways a response to the emerging IPR systems in many countries, as well as to the Uruguay Round of trade negotiations under the General Agreement on Tariffs and Trade (GATT), which finally led to the inclusion of TRIPS into the WTO. The United States (US) and other powerful industrialized countries were in leading positions in this forum, and developing countries later sought to counterbalance the output of those negotiations with provisions formulated under the CBD negotiations.

It became evident that a new convention would not get a 'classical' conservationist design, but would have to cover a wider range of interrelated issues. This was also confirmed in the decision of the Governing Council, August 1990, on an international instrument on biodiversity '... within a broad socio-economic context, taking particular account of the need to share costs and benefits between developed and developing countries, and ways and means to support innovation by local people...'<sup>14</sup>

On the basis of the above, a second expert group was formed—the *Ad Hoc* Group of Legal and Technical Experts on Biological Diversity. It met three times until mid-1991, when it was renamed the Intergovernmental Negotiating Committee for a Convention on Biological Diversity. This marked the start of the formal negotiations which took place in the next four meetings of the Committee. The final meeting culminated in the adoption of the Agreed Text of the Convention on Biological Diversity on 22 May 1992 at the UNEP Headquarters in Nairobi.

In addition to the Agreed Text of the Convention on Biological Diversity, the Nairobi Conference adopted the Nairobi Final Act on the adoption of the Agreed Text, with four related resolutions as well as declarations from several states. Resolution 3 of the Nairobi Final Act addresses

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the interrelationship between the CBD and the promotion of sustainable agriculture. It recalls, *inter alia*, the international consensus achieved in other international forums on the urgent need for action for the security and sustainable use of crop genetic resources.

Furthermore, it refers to the recommendations of the Preparatory Committee of the UNCED that policies and programmes of priority for the conservation of crop genetic resources, as integrated in agricultural policies, be adopted by the year 2000. It was also recommended that such policies and programmes of action should cover the promotion of crop diversification and the utilization of poorly known but potentially useful crops; capacity building for the utilization of crop genetic resources in specialized institutions as well as in farmers' communities; the regeneration of *ex situ* collections; and the establishment of *ex situ* networks.

The resolution also confirms the great importance of the provisions of the CBD for the conservation and utilization of crop genetic resources, and urges that complementarity between the Global System of the FAO and the CBD should be sought. It recognizes the need to seek solutions to outstanding matters concerning crop genetic resources which could not be solved in Nairobi, namely on access to *ex situ* collections not acquired in accordance with the CBD,<sup>15</sup> and the question of Farmers' Rights, and referred them to the FAO.

Resolution 3 of the Nairobi Final Act is important because it clearly states that crop genetic resources are covered by the CBD, while leaving to the FAO the responsibility for outstanding matters as well as further details on how to implement the CBD with regard to these resources. No one probably imagined that those negotiations would not be finalized until almost 10 years later. In hindsight, it can be said that the resolution marked the beginning of a difficult path for the Conference of the Parties to the CBD. On

the one hand, they should include the management of crop genetic resources in their work. On the other, they should await the results of the negotiations in the FAO, and avoid intervening in those processes.

At the initiative of the negotiating parties to the CBD, the International Undertaking on Plant Genetic Resources was under renegotiation. In the meantime, the CBD was the only legally binding agreement pertaining to the management of crop genetic resources. Negotiations took time, due not least to the challenges posed by the established regimes, particularly the TRIPS Agreement and the CBD. The Conference of the Parties to the CBD urged for, and awaited, the finalization of the negotiations leading to the Plant Treaty, but took no action in this regard until 2002—in the form of a coordination plan. On the other hand, a positive effect of the interaction was that the CBD negotiators initiated the renegotiation of the International Undertaking in their resolution adopting the CBD in 1992. This was probably decisive for the formation of the Plant Treaty as a legally binding international regime.

The CBD provided for the establishment of access legislation on genetic resources, including crop genetic diversity, among the Contracting Parties. An important aim was to ensure control over and the equitable sharing of benefits from the use of genetic resources—not least as a reaction to the emerging IPR regimes. As the CBD covers all biological diversity, including crop genetic resources, no distinction was made between domesticated and non-domesticated plants.

However, most regulations took the wild biodiversity as the point of departure. Since access to domesticated plant genetic resources is vital to the further maintenance of these resources, general regulation of access—without taking into account the specific management requirements for crop genetic diversity—meant new problems for the management of crop genetic resources. The decisive point with regard to access is whether the sys-

*As the CBD covers all biological diversity, including crop genetic resources, no distinction was made between domesticated and non-domesticated plants, and most regulations took the wild biodiversity as the point of departure.*

tems facilitate expeditious access to crop genetic resources. The first generation of CBD-derived regulations—developed in response to the emerging IPR regime—led to reduced legal access to crop genetic resources in many countries. They still do for crops which are not covered by the Multilateral System of the Plant Treaty. This is not conducive to the management of crop diversity and may seriously hamper the further maintenance and use of these resources.

Although the CBD-based access regulations should provide for benefit sharing, so far, there has not been any example of direct monetary benefit sharing between providers and recipients of crop genetic resources based on such regulations. On the contrary, access—the most important benefit—was reduced. However, there are possible synergy effects between the provisions on Farmers' Rights under the Plant Treaty and the CBD, particularly with the latter's Article 8 (j) on traditional knowledge. In a note to the Conference of the Parties to the CBD in 2004 (UNEP 2004), the Executive Secretary of the Convention confirmed that several similarities and parallels can be identified between the norms on Farmers' Rights under the Plant Treaty (Article 9) and those of indigenous and local communities under the CBD (Article 8 (j)).

The provisions of the two agreements can to some extent be seen as mutually reinforcing, though 'not necessarily covering the same ground or at least not from the same precise perspective', he stated. Particular reference was made to Article 9.2 (a) of the Plant Treaty, which provides for the protection of traditional knowledge relevant to crop genetic resources, as one of several possible measures for Contracting Parties to take to protect and promote Farmers' Rights. Extensive examinations of the best ways and means of providing protection for traditional knowledge, innovations and practices have been carried out by the Conference of Parties.

Whereas it is useful to seek to generate

synergy effects with the CBD, its provisions do not cover all aspects of Farmers' Rights as set out in the Plant Treaty. It is, thus, recommended to choose the Plant Treaty as the main platform for the realization of Farmers' Rights.

### 3.2 Relationship with TRIPS<sup>16</sup>

The TRIPS Agreement was adopted on 14 April 1994 as one of the three basic agreements on which the WTO was built.<sup>17</sup> The Agreement Establishing the World Trade Organization entered into force on 1 January 1995, and TRIPS came into effect one year later, on 1 January 1996 (Article 65.1). However, developing countries were allowed to extend their implementation of the TRIPS Agreement until 1 January 2000, and the least-developed countries were granted a 10-year extension, up to 1 January 2006 (Article 65.2). Least-developed countries unable to meet this deadline were originally given the possibility of extensions on a case-to-case basis, provided they put an application before the TRIPS Council (Article 66.1). However, they have now all been granted a general extension till 30 June 2013.

The purpose of the TRIPS Agreement is, as stated in its preamble, to promote the effective and adequate protection of IPRs as a means to reduce distortions and impediments to international trade. This is intended to contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users, balancing rights and obligations (Article 7). It provides minimum standards for the protection of IPRs in member states, covering such rights as copyrights, trademarks, geographical indications, industrial designs, and patents. The provisions on patents (Article 27) relevant to the management of crop genetic resources<sup>18</sup> cover any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application (Article 27.1).<sup>19</sup> There are three exceptions:

*There are possible synergy effects between the provisions on Farmers' Rights under the Plant Treaty and the CBD, particularly with the CBD's Article 8 (j) on traditional knowledge.*

- Inventions can be excluded from patentability if they must be prevented within the territory of the respective state because they are detrimental to the *ordre public* or morality (Article 27.2). Reference is made to, *inter alia*, human, animal or plant life or health and to the environment.
- Diagnostic, therapeutic and surgical methods for the treatment of humans or animals can be excluded from patentability (Article 27.3 (a)).
- Plants and animals other than microorganisms, and biological processes essential to the production of plants or animals other than non-biological and microbiological processes, can be excluded from patentability on the condition that the members ‘provide for the protection of plant varieties, either by patents or by an effective *sui generis* system or by any combination thereof’ (Article 27.3 (b)).

Article 27.3 (b) is relevant with regard to crop genetic resources—with several other provisions of TRIPS and other WTO Agreements establishing the context for its implementation.

The scope of interpretation of Article 27.3 (b) is related to the term ‘*sui generis* system’—which means a system of its own kind—and the word ‘effective’. The limits for a *sui generis* system and the meaning of an ‘effective’ *sui generis* system are not explicitly defined in the text. The UPOV Secretariat has held that the most effective way to comply with the provision of an effective *sui generis* system is to follow the model of the UPOV Convention. There are several proponents of this stand (see Helfer 2002).

Some of these advocate compliance with UPOV 1978, whereas others promote UPOV 1991, which is the stricter model. Those in favour of UPOV 1991 emphasize that it provides the most extensive protection for plant breeders, whereas those endorsing UPOV 1978 maintain that this was the version of UPOV in force when the TRIPS Agreement was adopted (It was closed for new accessions in 1998).

The International Association of Plant Breeders for the Protection of Plant Varieties (ASSINSEL) held an international congress in 1999 with representatives from more than 1,000 seed companies, where they recommended that developing countries adopt a *sui generis* system based on UPOV 1991 (Crucible II Group 2000).

The formulation in Article 27.3 (b) reflects the lack of consensus among the negotiating parties on the form of protection to be set as a minimum standard in the TRIPS Agreement (Correa 1998). At the time of negotiations, plant varieties were protectable in terms of plant breeders’ rights and were not patentable in Europe.<sup>20</sup> In the US and in Japan, they were, and still are, patentable. Additionally, in the US, it was, and still is, possible to protect a variety with plant breeders’ rights and patents, i.e., a combination of both (‘double protection’). In the vast majority of developing countries, plant varieties were neither patentable nor protectable in terms of plant breeders’ rights or other IPRs. The text of Article 27.3 (b) is in its formulation a compromise between the European system on the one side, and the US and the Japanese system on the other. The minimum standard is set much higher than common practice in developing countries.

It should be noted, though, that the text does not explicitly refer to plant breeders’ rights as a *sui generis* system. Subsequently, there is no reference to the international convention in force with regard to the intellectual property protection for plant varieties—the UPOV Convention. If WTO members develop other systems which are considered effective by the TRIPS Council, these systems would also have to be accepted as *sui generis* systems. Among civil society organizations and many academics, this possibility is regarded as an option for developing countries (for example, CIPR 2002; Helfer 2002; Correa 1998; GRAIN 1998 and 1997; Leskien and Flitner 1997), as their farming systems are so different from those of developed countries, and because

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most of them have no tradition of plant breeders' rights or patents in the field of plant varieties.

So far, however, the UPOV model seems to be the most prevalent in implementing the TRIPS Agreement in developing countries when it comes to Article 27.3 (b). The most likely reasons for that are:

- that such a model appears to have the best prospects for being accepted by the TRIPS Council in the process of the review of implementation;
- that it is advocated by the UPOV Secretariat and most notably by the US;
- that it is often a requirement in bilateral trade agreements;
- that UPOV and the World Intellectual Property Organization (WIPO) offer technical and administrative assistance for developing such legislation; and
- that it is regarded as a shortcut to compliance with the TRIPS Agreement, as compared to the development of a *sui generis* system in countries with scarce legal and administrative resources.

### 3.3 Relationship with UPOV<sup>21</sup>

The UPOV Convention was adopted in Paris in 1961 to ensure that member states acknowledge the achievements of breeders of new plant varieties, by making available to them exclusive property rights for a given period of time. At the same time, it established *the International Union for the Protection of New Varieties of Plants*.

The UPOV Convention provides uniform and clearly defined principles for the protection of plant breeders' rights over plant varieties that are novel, distinct, genetically uniform and stable. It entered into force in 1968 and was revised in Geneva in 1972, 1978 and 1991—with UPOV 1978 entering into force on 8 November 1981 and UPOV 1991 on 24 April 1998.

With each revision, the protection of plant breeders' rights over the new varieties of plants that breeders have developed has been strengthened.

Even though there is no direct and explicit conflict between the UPOV and the Plant Treaty in terms of the formulations of their provisions, UPOV 1991 is particularly problematic in relation to the Plant Treaty for three reasons:

- Among traditional farmers: UPOV 1991 does not allow farmers to exchange and sell seeds from their harvest of protected varieties, thereby reducing the number of farmers from whom traditional farmers can obtain necessary genetic materials.
- In the seed market: When plant variety protection is introduced in a country, multilateral corporations tend to increase their market shares decisively, thereby replacing local varieties and reducing the access to seed diversity.
- Establishing prior art: The seed sector in developing countries never had the chance to adapt to a slowly emerging IPR regime, as in the North. This makes it extremely difficult to establish 'prior art'—formal knowledge of already existing plant varieties—which is necessary to establish whether a variety over which plant breeders' rights are sought is really 'new'. Normally, the burden of proof lies with the farmers, but they tend to have only marginal institutional and financial capacity to challenge the rights conferred on breeders.

Moreover, many countries, particularly in the South, have established legislation on access and benefit sharing as a response to IPRs in the North. In practice, this has meant additional restrictions on access to genetic resources, as explained above. Table 6 shows the differences among plant variety protection regimes based on UPOV 1978, UPOV 1991 and Organisation for Economic Co-operation and Development (OECD) patent laws.

### 3.4 Seed laws and certification systems<sup>22</sup>

Seed laws cover exchange and sale of seed and propagating material—regardless of whether they are protected through IPRs

*Though there is no direct and explicit conflict between the UPOV Convention and the Plant Treaty in terms of the formulations of their provisions, UPOV 1991 is particularly problematic in relation to the Plant Treaty for certain reasons.*

**Table 6 Comparing UPOV 1978, UPOV 1991 and OECD patent laws on select topics**

Provisions	UPOV 1978	UPOV 1991	OECD patent laws
<b>Protection coverage</b>	Plant varieties of nationally defined species or genera	Plant varieties of all genera and species	Inventions
<b>Requirements</b>	Novelty, distinctness, uniformity, stability and variety denomination	Novelty, distinctness, uniformity, stability and variety denomination	Novelty, inventive step, industrial application, enabling disclosure
<b>Protection period</b>	Minimum 15 years	Minimum 20 years	20 years
<b>Protection scope</b>	Producing for purposes of commercial marketing, offering for sale and marketing of propagating material of the variety.	Producing, conditioning, offering for sale, selling or other marketing, exporting, importing and stocking for above purposes of propagating materials of the variety. If harvested materials are obtained through the unauthorized use of the propagating material, certain acts are prohibited if the breeder has had no reasonable opportunity to exercise his/her right in relation to the propagating material.	In respect of a product: Making, importing, offering for sale, selling and using the product; stocking for purposes of offering for sale, etc. In respect of a process: Using the process; doing any of the above-mentioned acts in respect of a product obtained directly by means of the process.
<b>Breeders' exemption</b>	Yes. Breeders are free to use a protected variety to develop a new variety. However, repeated use of the protected variety for the commercial production of another variety is not exempted.	Yes. However, in addition to the 1978 provision, essentially derived varieties and varieties which are not distinguishable from the protected variety are not included in the breeders' exemption.	No.
<b>Farmers' privilege</b>	Yes. Farmers are implicitly free to use and exchange their harvested material when it stems from a protected variety, but are normally not allowed to sell such material.	Governments are entitled to decide whether farmers shall be allowed—within reasonable limits and safeguarding the legitimate interests of the right holder—to reuse the harvest of protected varieties on their own land holdings without the authorization of the right holder.	No.
<b>Prohibition of double protection</b>	Yes. Any species eligible for plant breeders' rights cannot be patented.	No.	Up to national laws.

*From Andersen (2008). Based on Dutfield (2000), in turn based on van Wijck et al (1993), Helfer (2002), and the 1978 and 1991 Acts of UPOV.*



or not—for plant-health and seed quality reasons. Their certification rules are normally based on criteria that are relevant to genetically homogeneous plant varieties from professional plant breeders, but not to farmers' varieties. The result is that farmers' varieties are excluded from the formal market in many countries—in Europe, farmers are even prohibited from exchanging seeds or giving them away, and a new directive on 'conservation varieties' does not change the situation: it only allows a few more varieties on to the market under very strict conditions. Combined with plant breeders' rights, such laws deprive farmers from any possibility to continue their vital function of upholding and developing crop genetic diversity for the benefit of present and future generations. This is a major threat to food security and poverty eradication, mainly in developing and least-developed countries.

*The interaction between IPR regimes and the CBD has led to regulations on access and fair and equitable benefit-sharing systems, but these have not been instrumental in increasing the accessibility to crop genetic resources.*

### 3.5 Issues for discussion

The interaction between IPR regimes and the CBD has led to strict regulations on access and fair and equitable benefit-sharing. However, these systems have largely failed to increase the accessibility to crop genetic resources. In this regard, it is important to note that without access to crop genetic resources, no benefits can be generated and, therefore, shared. Moreover, without access, the conservation and sustainable use of crop genetic resources are also hampered. However, as mentioned earlier, with the emergence of IPR systems, benefit-sharing arrangements seem necessary to ensure equity and have led to an 'arms race' (Rosendal 2006). It is indeed a matter of concern that both benefit-sharing arrangements and IPR regimes have significantly contributed to restricting access to crop genetic resources, ultimately leading to a 'tragedy of the anti-commons'.

The term 'anti-commons tragedy', in contrast to Hardin's classic 'tragedy of the commons' (1968), was first coined by Heller and Eisenberg (1998),<sup>23</sup> referring to the situation of biomedical research.

Ramanna (2003) used the term to highlight how India's legislation on IPRs over crop genetic resources and Farmers' Rights (see Chapter 5) may pose problems through overlapping claims of ownership to genetic resources, resulting in an 'anti-commons tragedy' with negative effects on agricultural development.

This stand is developed further in Ramanna and Smale (2004). Brush (2004 and 2005) uses the concept to describe how the tension between IPRs and access and benefit-sharing regulations leads to a situation where multiple owners have the right to exclude others from utilizing scarce resources and no one gets the effective privilege of use. He highlights the dangers of an access system based on market negotiations between purported 'owners' and 'users' of genetic resources, as this is likely to 'abuse the rights of people who have long been involved in the common pool of genetic resources but find themselves arbitrarily excluded in contracting' (Brush 2004).

This discussion paper underscores the gravity of this point and documents how crop genetic resources management is emerging as a tragedy of the anti-commons in the South: a lose-lose situation for all, including future generations.

The Plant Treaty aims at facilitating access to genetic resources that are covered by the Multilateral System, attempting to ensure that no IPR will be claimed for resources from the system—in the form they are received. This is a promising approach with regard to Annex 1 crops. For all other crops than those covered by the Multilateral System, access will have to be organized on a bilateral basis.

This has proven problematic in cases where access legislation has been introduced—and such legislation is being introduced in more and more developing countries in response to IPR regimes. Although the Multilateral System of the Plant Treaty is limited to the Annex 1 crops, it is, nevertheless, the most conducive approach today to international regulation

of crop genetic resources management, and is a platform from which further strengthening of the international governance of the management of crop genetic resources can be developed.

The trade agreements are much stronger than the CBD and the Plant Treaty, simply due to their sanction mechanisms. Thus, it is important to seek to implement the objectives of the Plant Treaty not only at the national level but also at the international level through the negotiations under other relevant international agreements such as the TRIPS Agreement and the UPOV Convention.

There are two avenues of seeking influence in this regard—through the Secretariat of the Plant Treaty; and through the individual country members of these organizations. Whereas the Secretariat can only express the joint understanding of its Contracting Parties, and, thus, only the lowest common denominator, individual country members can exercise far more pressure. Hence, it is important that those countries, which wish to promote the international implementation of the Plant Treaty, also take action in other relevant forums. In order to seek to harmonize other international agreements with the Plant Treaty, the following issues seem particularly important.

- The CBD: Under the CBD, an International Regime on Access and Benefit Sharing is being negotiated. It is vital that the negotiating Parties understand that this regime might also affect the access to and use of important crop genetic resources. For this reason, they should derive lessons from the Multilateral System of the Plant Treaty. For example, different instruments could be developed for different types or uses of genetic resources. A model based on the Multilateral System could serve as a useful supplement to the bilateral approach discussed in the current negotiations—for example, for cases where the country of origin or legal provenance cannot be established, or where the
- countries in question wish to apply such a simplified system.
- The TRIPS Agreement: While benefit sharing has largely been a concern within negotiations among the Conference of Parties to the CBD and the Governing Body of the Plant Treaty, there has been great resistance in the TRIPS Council to proposals addressing such concerns within the IPR framework. However, it should be noted that only when user countries adopt measures to ensure benefit sharing will such a system become effective. Moreover, if the emerging tragedy of the anti-commons is to be halted, it is vital to get the focus of attention shifted to the use of genetic resources and to the users. If benefit-sharing arrangements can be linked to the use of genetic resources rather than to access, much would be gained in terms of facilitated access to these resources and relieving provider countries—often developing countries with scarce institutional capacities—of burdensome procedures. Thus, proposals regarding ‘disclosure of origin’ or legal provenance as well as further required measures to ensure benefit sharing from the use of genetic resources related to IPRs would need careful consideration in the TRIPS Council.
- The UPOV Conventions: Many developing countries have been under pressure to implement IPRs over plants and plant varieties that by far exceed the minimum standards set by the TRIPS Agreement, often in line with UPOV 1991. There seems to be a widespread perception that this is required for compliance with Article 27.3 (b) of the TRIPS Agreement. That is, however, not the case. Norway is an example of a country that is still a member of UPOV 1978, and which—in order to balance breeders’ rights with Farmers’ Rights—has decided *not* to accede to UPOV 1991. In this way, Norway fulfils its obligations towards the TRIPS Agree-

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*A greater focus on the support to countries seeking genuine sui generis systems could help developing countries in working out such IPR systems that are more appropriate for their own needs and priorities.*

ment with regard to the protection of plant varieties. A greater focus on the variety of possibilities for implementing Article 27.3 (b) and support to countries seeking genuine *sui generis* systems could help developing countries in working out such IPR systems that are more appropriate for their own needs and priorities. Although it may be debatable, particularly in the context of such countries that have predominance of traditional agriculture systems, a 'Development Agenda' for UPOV may include the demand that UPOV 1978 is re-opened so that countries willing to

become a UPOV member are able to join it without any obligations to implement the stricter provisions of UPOV 1991.

- Seed laws: Seed laws are often based on OECD Seed Schemes that severely hamper the possibilities for farmers to maintain traditional varieties of crops. Therefore, it is vital for developing countries to evaluate such seed laws and ensure that there is sufficient legal space for the conservation and sustainable use of plant genetic resources for food and agriculture in the fields.

# Farmers' Rights in the Plant Treaty

The realization of Farmers' Rights is a precondition for the further maintenance and development of plant genetic diversity in the fields, as well as a cornerstone in the Plant Treaty. This chapter looks into the history of Farmers' Rights as a basis of understanding the Treaty text. Subsequently, the chapter addresses the text itself, before analyzing what the realization of Farmers' Rights means in practice.

## 4.1 History of Farmers' Rights<sup>24</sup>

The concept of Farmers' Rights was addressed in the FAO for the first time at a working group meeting in 1986 (CPGR 87/3, October 1986). At that time, the signatories to the FAO International Undertaking on Plant Genetic Resources discussed how they could attract more countries, as this was pivotal to realizing the objectives of conserving these resources and making them available.<sup>25</sup>

The recognition of plant breeders' rights was set as a precondition for many Northern countries to join the International Undertaking. However, many developing countries were opposed, seeing such rights as against the objectives of the Undertaking and in addition as unfair. Their argument was that the plant breeders add only the final few links to the hard work and innovations that farmers, particularly in developing countries, have carried out for hundreds and thousands of years (Andersen 2005).

The solution to this conflict was that plant breeders' rights were recognized

along with Farmers' Rights by the FAO Conference in 1989, in the form of an agreed interpretation in the International Undertaking (FAO Conference Resolution 5/89):

*"Farmers' Rights mean rights arising from the past, present and future contributions of farmers' in conserving, improving, and making available plant genetic resources (...). These rights are vested in the International Community, as trustee for present and future generations of farmers, for the purpose of ensuring full benefits to farmers, and supporting the continuation of their contributions (...)"*

This recognition of Farmers' Rights was achieved in exchange for something that already existed—plant breeders' rights. As such, this can be seen as a breakthrough for the advocates of Farmers' Rights. However, the concept was not defined, and there was great uncertainty as to what it should cover. There seemed to be a consensus that these rights applied to entire peoples who have bred and maintained plant varieties, and not to individual farmers or communities (FAO–CL 91/14, appendix F, 1987).

Also, there was consensus that the best way to implement Farmers' Rights would be to ensure the conservation, management and use of plant genetic resources for the benefit of present and future generations of farmers, and, for this purpose, an international fund was proposed (Resolution 4/89). These are the roots of the 'stewardship approach' to Farmers' Rights (see section 4.3).

*There was consensus that the best way to implement Farmers' Rights would be to ensure the conservation, management and use of plant genetic resources for the benefit of present and future generations of farmers.*

In 1991, the Conference decided that the concept of genetic resources as the 'common heritage of mankind', as applied in the International Undertaking, was subject to the sovereignty of states over their plant genetic resources, and decided to set up an international fund for the realization of Farmers' Rights (FAO Conference Resolution 3/91). This was a reaction to what happened under the negotiations leading to the CBD in 1992, which had, in turn, been a reaction to the Uruguay Round that led to the establishment of the WTO and the inclusion of TRIPS within its multilateral trading system.

Under the CBD negotiations, in response to the emerging IPR regime, negotiators from developing countries demanded control over access to their genetic resources, and fair and equitable sharing of the benefits arising from their use. This introduced a shift in the thinking of genetic resources in many circles, from the 'common heritage of mankind' model towards a bilateral approach to benefit sharing. It can be seen as the roots of the 'ownership approach' to Farmers' Rights (see section 4.3). As for the international fund, a few contributions were received, but it never materialized as envisioned.

Then the CBD was adopted in May 1992, and, with it, a resolution on the interrelationship between the CBD and the promotion of sustainable agriculture (Nairobi Final Act of the Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity, Resolution 3). In this resolution, the FAO was urged to commence negotiations for a legally binding international regime on the management of crop genetic resources, and, in this context, to include the question of Farmers' Rights.<sup>26</sup> This marked the start of the lengthy negotiations<sup>27</sup> which finally led to the Plant Treaty.<sup>28</sup>

Farmers' Rights was a hot topic and one of the most contested issues during the negotiations leading to the Plant Treaty. The controversies were deep and a breakthrough seemed unlikely when negotiators from the North in 1999 decided to

meet some of the demands from the South—resulting in the long-awaited breakthrough. Most developing countries as well as some industrialized countries like Norway advocated comprehensive and internationally binding recognition of Farmers' Rights, whereas countries like the US and Australia did not support this stand. In 1999, the heated debates resulted in a compromise in the form of the final text of the Plant Treaty on Farmers' Rights.<sup>29</sup>

## 4.2 Farmers' Rights text in the Plant Treaty

Article 9 of the Plant Treaty is devoted to the realization of Farmers' Rights (Box 2). Importantly, many other provisions are also relevant to the realization of Farmers' Rights, and there are several angles from which implementation issues can be derived. For example, the Plant Treaty provides that countries shall promote or support, as appropriate, farmers' and local communities' efforts to manage and conserve on-farm their crop genetic resources (Article 5.1 (c)) and take steps to minimize or, if possible, eliminate threats to crop genetic resources (Article 5.2).

Article 6 states that the Contracting Parties shall develop and maintain appropriate policy and legal measures that promote the sustainable use of crop genetic resources. A range of measures are listed for this purpose such as 'reviewing, and as appropriate, adjusting breeding strategies and regulations concerning variety release and seed distribution' (Article 6.2 (g)). In addition, the Plant Treaty supports the implementation of the Global Plan of Action (Article 14), with its provisions on Farmers' Rights. Articles 7 and 8 provide for international cooperation and technical assistance, with a particular view to strengthening developing countries' capabilities to implement the Plant Treaty.

Two other provisions in Paragraphs 13.3 and 18.5 state that funding priority will be given to farmers contributing to maintaining agricultural biodiversity. Paragraph 13.3 states that farmers who contribute

*Under the CBD negotiations, in response to the emerging IPR regime, negotiators from developing countries demanded control over access to their genetic resources, and fair and equitable sharing of the benefits arising from their use.*

to maintaining crop genetic resources are entitled to receive benefits arising from the Multilateral System of Access and Benefit Sharing established under the Treaty. Paragraph 18.5 ensures that funding priority will be given to the implementation of agreed plans and programmes for farmers in developing countries who conserve and sustainably utilize crop genetic resources.

According to Article 21, the Governing Body is to ensure compliance with all provisions of the Plant Treaty (not only obligations), and the Preamble highlights the necessity of promoting Farmers' Rights at the national as well as the international levels.

#### 4.3 Realization of Farmers' Rights

As mentioned earlier, there are no official definitions of Farmers' Rights and countries are free to realize them according to their needs and priorities. One reason why the negotiators of the Plant Treaty were not able to agree on a definition on Farmers' Rights was that the situation of farmers differs so greatly from country to country, as do the perceptions

of Farmers' Rights. With no official definition of Farmers' Rights, there is uncertainty as to what the concept involves and how Farmers' Rights can be realized. Therefore, it is important to establish a common ground of understanding of the contents in order to develop a fruitful dialogue among stakeholders on necessary measures to be taken.

According to the Plant Treaty and earlier FAO decisions, Farmers' Rights are the rights arising from farmers' customary practices of conserving and developing crop genetic resources, and aimed at recognizing and promoting this enormous contribution. The optional measures in Paragraph 9.2 of the Plant Treaty together with Paragraph 9.3 enable the Contracting Parties to define Farmers' Rights in their own local and national contexts as well as to devise mechanisms to implement them.<sup>30</sup>

However, there are different ways to understand these provisions. Basically, there are two approaches in the debate, which can be labeled as the stewardship and the ownership approaches.<sup>31</sup> The stewardship approach<sup>32</sup> refers to the rights that farmers must be granted in order to enable

*According to the Plant Treaty and earlier FAO decisions, Farmers' Rights are the rights arising from farmers' customary practices of conserving and developing crop genetic resources, and aimed at recognizing and promoting this enormous contribution.*

### Box 2 Provisions on farmers' rights in Article 9 of the Plant Treaty

Article 9 of the Plant Treaty has the following provisions on farmers' rights:

9.1 The Contracting Parties recognise the enormous contribution that the local and indigenous communities and farmers of all regions of the world, particularly those in the centers of origin and crop diversity, have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world.

9.2 The Contracting Parties agree that the responsibility for realising Farmers' Rights, as they relate to plant genetic resources for food and agriculture, rests with national governments. In accordance with their needs and priorities, each Contracting Party

should, as appropriate, and subject to its national legislation, take measures to protect and promote Farmers' Rights, including: (a) protection of traditional knowledge relevant to plant genetic resources for food and agriculture; (b) the right to equitably participate in sharing benefits arising from the utilisation of plant genetic resources for food and agriculture; and (c) the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture.

9.3 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.

them to continue as stewards and innovators of agricultural biodiversity. The idea is that the 'legal space'<sup>33</sup> required for farmers to continue this role must be upheld and that farmers involved in maintaining agricultural biodiversity—on behalf of our generation and for the benefit of all humankind—should be recognized and rewarded for their contributions.

The ownership approach refers to the right of farmers to be rewarded for genetic materials obtained from their fields and used in commercial varieties and/or protected through IPRs. The idea is that such a reward system is necessary to enable equitable sharing of the benefits arising from the use of agricultural biodiversity and to establish an incentive structure for continued maintenance of this diversity. Access and benefit-sharing legislation and farmers' IPRs are suggested as central instruments (see Andersen 2007).

A potential problem with the ownership approach is that it may reduce access to genetic resources among farmers and thus counteract the objectives of the Plant Treaty of conservation and sustainable use. The expectations that single farmers or communities may be rewarded for their genetic materials can provide incentives for them to keep the materials among themselves and thus not to share them. On the other hand, there are extremely few cases of commercial interest in farmers' varieties, and only very few farmers would be rewarded if this approach should prevail—not the entire peoples of farmers who actually maintain these resources for present and future generations. So the ownership approach may limit access to these vital resources for the sake of benefit sharing—with little or nothing in return.

Although there is some potential for conflicts between these two approaches, it is possible to combine them. If conflict should arise, however, the principles of the stewardship approach will have to prevail, since these are in line with the overall objectives of the Plant Treaty and

have constituted the main avenue of the FAO since the issue of Farmers' Rights was first addressed in the 1980s.<sup>34</sup> This is because these principles are vital to the further existence and maintenance of the resources that ensure food security.

When combining these two approaches in a way conducive to the implementation of the Plant Treaty, realizing Farmers' Rights in practice may comprise, *inter alia*, such activities as:<sup>35</sup>

- evaluating legislation, policies and programmes with a view to improvements needed to enabling and/or strengthening Farmers' Rights to save, use, exchange, and sell farm-saved seed (Paragraph 9.3);
- policies, projects or initiatives on traditional knowledge related to plant genetic resources for food and agriculture (Paragraph 9.2 (a))—such as projects documenting traditional knowledge to be shared among farmers in order to avoid loss of such knowledge; or projects to protect farmers' traditional knowledge against misappropriation while also ensuring that such knowledge can be shared;
- benefit-sharing measures (Paragraph 9.2 (b))—such as national-level funding mechanisms that support farmers in conserving and sustainably using plant genetic resources; participatory plant breeding projects resulting in added value to farmers' varieties; community gene banks that are effectively used in farmers' breeding strategies as well as in ensuring seed security; other means to ensure access to relevant seed; marketing strategies to create a demand for diverse crop products; other incentive structures to motivate conservation and sustainable use of genetic resources; recognition of farmers' contributions, for example, in the form of awards, and other measures;
- farmers' participation in decision making (Paragraph 9.2 (c)), for example, involving farmers in national consultative processes related to the management of crop genetic resources, and

*The stewardship approach refers to the rights that farmers must be granted to enable them to continue as stewards and innovators of agricultural biodiversity.*

more specifically, to implementation of Farmers' Rights, seed regulations and breeder's rights; capacity-building activities leading to greater involvement of farmers in relevant decision making; and advocacy by farmers' organizations leading to improved policies on genetic resources and Farmers' Rights. Also, raising of awareness of the important role played by farmers in conserving and developing crop genetic resources is relevant here.

#### 4.4 Ongoing negotiations on Farmers' Rights

Norway, with the support of a range of developing countries, proposed at the First Session of the Governing Body that the topic of Farmers' Rights be put on the Working Agenda of the Governing Body. Thus, the Governing Body discussed Farmers' Rights at its Second Session, which was held from 29 October to 2 November 2007. Towards this end, an informal international consultation was organized in Lusaka, Zambia.<sup>36</sup> Following this process, a resolution was proposed by Angola on behalf of the G77 and China and later adopted at the Second Session of the Governing Body in which:

- Contracting Parties and other relevant organizations were encouraged to submit views and experiences on the implementation of Farmers' Rights as set out in Article 9 of the Plant Treaty, involving, as appropriate, farmers' organizations and other stakeholders.
- The Secretariat of the Governing Body was requested to collect these views and experiences as a basis for an agenda item for consideration by the Governing Body at its Third Session to promote the realization of Farmers' Rights at the national level.
- The commitment to continue to involve farmers' organizations in the work of the Governing Body—as appropriate and according to the Rules of Procedures—was affirmed.

At the Third Session of the Plant Treaty in Tunisia, in June 2009, governments

agreed to invite Contracting Parties to review and adjust measures affecting Farmers' Rights. Among the important measures to review and adjust are seed regulations which affect Farmers' Rights to save, use, exchange and sell farm-saved seed. This is particularly important to enable farmers to continue to conserve and sustainably use crop genetic resources. Governments also agreed to request the Secretariat to convene regional workshops on the implementation of Farmers' Rights and to encourage Contracting Parties and other relevant organizations to submit their views and experiences on Farmers' Rights to the Secretariat as a basis for an agenda item at the next session in Indonesia in 2011. Not least, the Governing Body appreciated the involvement of farmers and will continue to involve farmers in its work.<sup>37</sup>

#### 4.5 Issues for discussion

As discussed, the realization of Farmers' Rights is crucial to the implementation of the Plant Treaty. Without the protection of Farmers' Rights, the conservation and sustainable use of crop genetic resources in the field will increasingly be more difficult. Since the implementation of Farmers' Rights is up to the national governments, they should be able to develop adequate policy, legal and institutional mechanisms to protect and promote Farmers' Rights.

Experiences with the implementation of Farmers' Rights are currently being generated at the international level in the Governing Body, with a view to providing further guidance to the Contracting Parties on how to protect and promote these rights at the national level.

It is important to note that steps for the realization of Farmers' Rights can and should be taken at the national level, regardless of the processes at the international level. The implementation of Farmers' Rights is urgent for developing and least-developed countries, including those in South Asia, due to the mounting barriers to the management of crop genetic diversity in farmers' fields.

*The implementation of Farmers' Rights is up to the national governments, and they should develop adequate policy, legal and institutional mechanisms to protect and promote these rights.*





# Experiences from India

When it comes to the Plant Treaty and the realization of Farmers' Rights, India is a very interesting country and a case worth taking a closer look at. India has a history of contributing internationally to the debates and negotiations on Farmers' Rights, and it is the first country to have passed a comprehensive legislation that recognizes Farmers' Rights as well as plant breeders' rights. With its Plant Variety Protection and Farmers' Rights Act of 2001 (the PVPFR Act), India has formally granted Farmers' Rights in a law that aims to protect the rights of both breeders and farmers.

As an emerging economy and a leader in the developing world, the case of India can be a useful example to illustrate the possibilities and challenges with regard to implementation of the Plant Treaty, and the implementation of Farmers' Rights.

## 5.1 The Plant Variety Protection and Farmers' Rights Act, 2001

After about five revisions to the original draft, the PVPFR Act was passed in 2001. The Act originally emerged as a response to the seed industry's demands for breeders' rights, and the chapter on Farmers' Rights was added due to the pressure from the non-governmental organizations. Until this law was passed, there was no system for the protection of IPRs in agriculture in India. Plant breeders' rights were not awarded, and the principle of free exchange and 'common heritage' dominated the governance of genetic resources. Farmers were free to save, use, sell and exchange seeds, and since the

breeders were not granted plant variety protection, there was no system for benefit sharing or compensation (Ramanna 2006).

The initial demands for introducing IPRs in agriculture surfaced when the New Seed Policy changed the seed sector in 1988 by allowing entry to the private sector. It was the Seed Association of India, formed in 1985, which first promoted the need for plant breeders' rights in the country. In addition, the TRIPS Agreement put external pressure on India to establish plant breeders' rights over plant varieties. A range of non-governmental organizations and farm lobbies protested the implementation of TRIPS and plant breeders' rights over plant varieties. They feared that the agricultural biodiversity cultivated by India's farmers would get exploited by commercial companies without consent and compensation (Ramanna 2006).

A draft bill, granting plant breeders' rights, was first formulated in 1994. Despite the government's attempts to take into account various demands when writing the bill, the draft led to enormous controversy. This draft provided for plant breeders' rights through provisions based on UPOV, though it also contained a clause on Farmers' Rights and community rights. Without containing any references to the concept of ownership for farmers' varieties or the right to register these varieties, the draft addressed Farmers' Rights through the right to save, use and exchange propagating material and through the mention of benefit sharing.

*It was the Seed Association of India, formed in 1985, which first promoted the need for plant breeders' rights in the country and later on, the TRIPS Agreement provided external pressure on India to establish plant breeders' rights.*

Revisions to the draft began when it was opposed by both the non-governmental organizations and the seed industry. A second draft was prepared by the Ministry of Agriculture in 1996 and a third in 1997. These drafts were also criticized by the non-governmental organizations, though the third draft included 'Farmers' Rights' in its title.

It was felt that they did not provide enough protection to farmers, that the provisions on benefit sharing were too vague, that farmers needed to be represented in the Authority (that was going to be set up to administer the Act) and that there should be a system for registration of farmers' varieties. A process aiming to accommodate the interests of various actors began, and a committee traveled across the country to gather the views of non-governmental organizations, the seed industry, scientists and farmers on yet another draft introduced in the parliament in 1999.

Following this, a new version of the draft was introduced in 2000 which tried to incorporate the demands of different stakeholders, the main revision being the inclusion of a separate chapter on Farmers' Rights. The bill was passed as the PVPFR Act in 2001, which was by and large accepted by the major stakeholders. It provided a mechanism for granting protection to farmers' varieties as well as breeders' varieties, which made the non-governmental organizations in question accept it.

At the same time, it also received the acceptance of the industry, since the underlying understanding of Farmers' Rights as an alternative system of ownership rights actually strengthened their position with regard to IPRs and the acceptance of plant breeders' rights in India (Ramanna 2006).

According to Bala Ravi (2004),<sup>38</sup> the PVPFR Act, together with breeders' rights, recognizes the following nine rights for farmers:

- Right to seed: This right includes the right to save, use, exchange, share and sell farm-saved seeds. Under the PVPFR Act, the traditional practice of using and exchanging farm-saved seeds has been allowed for all varieties, including registered varieties. The Act only restricts farmers from selling seeds of a protected variety if packages are labeled with the registered name.
- Right to register varieties: In the same way breeders can apply for plant breeders' rights for their varieties, under the PVPFR Act, farmers are also entitled to apply for the registration of and protection of their traditional varieties. The criteria are similar to those used to determine if commercial varieties should be awarded plant variety protection (distinctness, uniformity, stability), but, as in the case of breeders' varieties, novelty is not a requirement. A farmers' variety is defined as 'a variety which has been traditionally cultivated and evolved by farmers in their fields, or is a wild relative or landrace of a variety about which the farmers possess common knowledge', and the plant breeders' right granted for farmers' varieties awards the right holder(s) with exclusive rights to produce and market the seed of the registered variety.
- Right to reward and recognition: As per the Act, farmers who have made contributions to the conservation and development of varieties shall be recognized and rewarded through a National Gene Fund.
- Right to benefit sharing: Benefit sharing is to be facilitated through the National Gene Fund, and the Authority set up under the Act is required to publish all registered varieties and invite claims for benefit sharing. Rewards from the gene fund can only be granted to a farmer or a community that can prove a contribution to the selection and preservation of materials used in the registered variety in question.
- Right to information and compensation for crop failure: The breeder of

*India enacted the Plant Variety Protection and Farmers' Rights Act in 2001, providing a mechanism for granting protection to farmers' varieties alongside breeders' varieties.*

a registered variety is required to provide information regarding expected performance of the variety, and if the registered variety fails to perform, farmers may claim compensation. This requirement is an attempt to ensure that seed companies do not make exaggerated claims about the performance of their varieties.

- **Right to compensation for undisclosed use of traditional varieties:** When it has been established that a breeder has not disclosed the source of varieties belonging to a particular community, compensation can be granted through the Gene Fund.
- **Right to adequate availability of registered materials:** If the breeder fails to provide an adequate supply of seeds or materials of the registered variety to the public at a reasonable price, after three years a compulsory licence can revoke the exclusive rights originally given to the breeder. Anybody can apply to the Authority for a compulsory licence.
- **Right to free services:** Farmers are exempt from paying fees for the registration of a variety and the proceedings involved.
- **Protection from legal infringement in case of lack of awareness:** Farmers are protected against innocent infringement through a provision in the Act. A farmer who unknowingly violates the rights of a breeder shall not be punished if s/he did not know that they were doing so.

The PVPFR Act is considered a success by many stakeholders. There are differing opinions on the implications of the Act, with some seeing it as progressive while others questioning whether it will have a real impact on farmers. But most agree that the process leading up to the passing of the Act can provide some useful insights. In India, it was the first time the issue of Farmers' Rights received such wide attention within as well as outside the parliament. In addition, the government was forced to enter into a dialogue with a range of stakeholders, since it

would not have been possible to pass the law without meeting some of their demands. The process of consultation established as part of this dialogue seems to be continuing as the Authority attempts to involve various stakeholders in the implementation of the Act. However, while some non-governmental organizations, prominent groups and farmers' lobbies were heard, individual farmers and local, smaller non-governmental organizations were not consulted and many were not even made aware of the process or the bill.

In any case, the PVPFR Act of India is the most far-reaching law in terms of Farmers' Rights in the world and a landmark for the implementation of the Plant Treaty in this regard. Its implementation will provide important lessons for other countries.

## 5.2 Barriers to the realization of Farmers' Rights<sup>39</sup>

Despite all the good efforts, there are many barriers to the realization of Farmers' Rights in India. These barriers are also of relevance to other South Asian countries, as well as developing countries in general. In India, it has been argued that Farmers' Rights have largely been defined by national-level decision-makers without the necessary mechanisms to incorporate regional and local perspectives. This 'top down' approach represents a barrier to the realization of Farmers' Rights in the country, and an approach that is more 'bottom up' would perhaps be more advantageous. It is important that farmers are able to voice their demands and interests directly to ensure an interpretation of Farmers' Rights that actually benefits farmers. A 'top down' approach is more likely to enable the more powerful groups, like large-scale farmers and big non-governmental organizations, rather than small-scale farmers and community organizations (Ramanna 2006).

Lack of adequate policies to promote the effective utilization of crop genetic

*A lack of adequate policies to promote effective utilization of crop genetic resources is a barrier to the realization of Farmers' Rights in India.*

resources is another barrier to the realization of Farmers' Rights in India. There seems to be more focus on asserting and assigning ownership rights, than on utilizing traditional knowledge and genetic resources for the benefit of farmers. Actual utilization of crop genetic resources for the purpose of achieving food security and sustainable agriculture is an important part of the implementation of the Plant Treaty, and necessary to reach its goal of conservation and sustainable use of plant genetic resources (Ramanna 2006). It is important to be aware that the Indian PPVFR Act highlights the necessity of balancing ownership rights with measures promoting access to and sharing of crop genetic resources.

*The realization of Farmers' Rights requires a strong and well-functioning public sector that communicates well with farmers but this is difficult to achieve without the necessary funds and attention.*

In India, lack of coordination between various laws and bodies has also posed problems for the realization of Farmers' Rights. A clear and comprehensive policy aimed at benefiting farmers, and coordination between different institutions focusing on the promotion of India's agriculture has been lacking. This means that each organization only covers one aspect of this issue, while the overall picture of agricultural development is not being evaluated. Ensuring linkages among the PVPFR Act and the Biodiversity Act 2002, as well as agricultural policies is an enormous and important task (Ramanna 2006).

Another possible barrier to the realization of Farmers' Rights is the lack of resources and attention given to the public sector. The realization of Farmers' Rights requires a strong and well-functioning public sector that communicates well with farmers. This is difficult to achieve without the necessary funds and attention (Ramanna 2006).

To address the above-mentioned barriers, it is important that the governments of all the Contracting Parties to the Plant Treaty consider how to prevent the 'tragedy of the anti-commons' from happening. This can be done by promoting access to and sharing of resources. This means that any laws and regulations func-

tioning in this area should be revised to better allow for access to and sharing of crop genetic resources. Creating a national system similar to the Multilateral System of the Plant Treaty could be one way of doing this. Currently, the domestic policies of developing countries reflect the provisions of the CBD than those of the Plant Treaty. Since the Plant Treaty is the legal foundation for the conservation of crop genetic resources and Farmers' Rights internationally, it should also be the starting point when drawing up domestic policies targeted at the realization of Farmers Rights.

### 5.3 Issues for discussion

Some important lessons can be derived from the case of India with regard to the realization of Farmers' Rights. The two broad approaches to Farmers' Rights in India reflect the choices that face other South Asian countries and developing countries in general. The first of these is an approach that sees Farmers' Rights as a form of IPRs and promotes these rights as a response to plant breeders' rights. The argument is that if commercial breeders can acquire exclusive IPRs over their varieties, then the innovations of farmers must also be recognized and rewarded by a similar system. This approach can be seen as located within the wider discourse on property rights, and does not contest breeders' rights or IPRs, *per se*.

The other approach to Farmers' Rights identifies these rights as development rights, and represents a broader strategy to Farmers' Rights realization than the promotion of ownership. Some of the provisions in the PVPFR Act can be seen as attempts to promote Farmers' Rights as development rights—for example, the right to compensation in case of crop failure, the right to an adequate supply of registered materials, and the measures to promote conservation and benefit sharing. The attempt to situate Farmers' Rights within the development discourse has not received the same amount of attention as the approach focusing on IPRs. While one of the main advantages of the de-

velopment-centred approach is its potential to focus on the economic and social needs of farmers, it is rather vaguely defined. But depending on how it is implemented, this approach might ensure greater economic and social advantages than the approach focusing on IPRs for farmers. There is also a potential for linking this approach with various other movements and issues. A main limitation, however, is that the attempt to include many rights within the scope of Farmers' Rights runs the danger of diluting the concept and making it unworkable in practice (Ramanna 2006).

It is important to be aware of these two trends in the realization of Farmers' Rights, and the two different Indian approaches are in many ways similar to the ownership and stewardship approaches briefly outlined in the earlier chapter. The two approaches can be combined, but it is necessary to be aware of the potential for conflict, to avoid creating any. The India's PVPFR Act highlights the importance of balancing ownership rights with measures promoting access to and sharing of crop genetic resources.

Some studies, for example, Srinivasan (2003)<sup>40</sup>, have concluded that ownership-based approaches to Farmers' Rights are

unlikely to provide significant economic returns to farmers and farming communities. In addition, the legal and practical difficulties for farmers in relation to meeting the criteria for variety registration under the PVPFR Act might pose a hindrance for a successful implementation of this part of the Act. Channelling returns to farmers through the National Gene Fund might also prove difficult and not yield as high returns as hoped. Some government officials have acknowledged that it is unlikely that much money would flow into the Funds established under the Act.

It might be more beneficial for developing countries to employ Farmers' Rights as a tool to demand more access to public services and goods, rather than to work for an extension of IPR protection to also cover farmers' varieties. This could be done in a similar way to how campaigns focusing on access to medicines have called on limitations or reductions in the scope of patent protection within TRIPS and drawn on human rights to insist that the right to life trumps IPRs.

In any case, the PVPFR Act is the most far-reaching legislation on Farmers' Rights in the world so far, which deserves recognition, and will provide us with many lessons in the time to come.

*India's Plant Variety Protection and Farmers' Rights Act is the most far-reaching legislation on Farmers' Rights in the world so far and it may provide us with many lessons in the time to come.*



# Conclusion and recommendations

The Plant Treaty is a crucial instrument for the international community in the effort to ensure the conservation and sustainable use of crop genetic resources, as well as in the fight for food security for present and future generations.

However, as it is formulated, the Plant Treaty does not solve all problems. The following challenges are among the most important left to address: ensure access to the crops not included in Annex 1; accumulate the required funds for benefit sharing; decide how best to distribute benefits; decide on an acceptable interpretation of the term ‘in the form received’; and operationalize the funding strategy for the implementation of the Treaty. These issues can be solved if the Contracting Parties demonstrate the required political will and subsequently mobilize the required financial and institutional resources.

Because access to crop genetic resources is both one of the most important benefits from the use of these resources and a precondition for the generation of benefits and continued maintenance of these resources, it is crucial to ensure that the interaction between the different regimes and their implementation at the national level do not limit the accessibility of crop genetic resources. It is vital to stop the ‘tragedy of the anti-commons’, as it is emerging due to the overlapping claims for ownership over crop genetic resources.

This paper has demonstrated the importance of harmonizing other international agreements with the Plant Treaty, and the

following issues were deemed to be particularly important: that the International Regime on Access and Benefit Sharing of the CBD will not affect the maintenance of crop genetic resources negatively; that proposals regarding user-country measures to ensure benefit sharing from the use of genetic resources related to IPRs receive careful consideration in the TRIPS Council; that there is a greater focus on the variety of possibilities for implementing TRIPS Article 27.3 (b); and that the evaluation of seed laws is done to ensure sufficient legal space for the conservation and sustainable use of crop genetic resources in the fields.

The realization of Farmers’ Rights is crucial to the implementation of the Plant Treaty and to the management of crop genetic resources in general. Steps towards the implementation of the Treaty’s provisions on Farmers’ Rights at the national level are urgent, due to the mounting barriers to the conservation and sustainable use of crop genetic resources. In the Plant Treaty, the implementation of Farmers’ Rights is left to the national governments. How the Governing Body will engage in this process to promote such implementation is up to the Contracting Parties. The response to the resolution on Farmers’ Rights of the Governing Body is, therefore, very important. Governments as well as organizations working in the area of plant genetic resources and Farmers’ Rights (for example, farmers’ groups and non-governmental organizations) should, therefore, submit their experiences and proposals to the Governing Body.

*The International Regime on Access and Benefit Sharing, which is being negotiated within the CBD, should not affect the use and maintenance of crop genetic resources negatively.*



India is a pioneer in terms of Farmers' Rights implementation, due to its PVPFR Act. The two approaches to Farmers' Rights found in India are similar to the ownership and stewardship approaches, and in many ways, they reflect the choice facing other developing countries regarding how to realize Farmers' Rights. It can be useful to combine the two approaches, but if so, it must be done in a manner that does not create conflicts. The experiences from India show that for developing countries, it might be more beneficial to use Farmers' Rights as a tool to develop legal space, combined with reward and recognition systems, rather than to extend exclusive IPRs over farmer varieties. The latter might further reduce farmers' access to crop genetic resources and trigger the anti-commons tragedy.

*While drawing up policies and laws on crop genetic resources, developing and least-developed countries need to ensure that there is sufficient legal space for farmers to maintain their practices of saving, using and exchanging crop genetic resources.*

Countries following in the footsteps of India should take care to ensure that legal space for farmers to maintain their practices of saving, using and exchanging crop genetic resources is among the top priorities when drawing up policies and legislation—in addition to ensuring conducive incentive structures, reward systems and recognition of farmers for their vital contributions to global food security and poverty alleviation. In this process, for developing and least-developed countries, including those in South Asia, it may be useful to consider the following aspects when they make efforts to realize Farmers' Rights.

#### **A. Recommendations for the implementation of the Plant Treaty**

- Ensure that the country complies with the provisions on conservation and sustainable use of crop genetic resources (Articles 5 and 6).
- Ensure that the country has taken the needed steps to comply with the Multilateral System of Access and Benefit Sharing under the Plant Treaty (Articles 10–13).
- Work for the inclusion of further crops in Annex 1 of the Plant Treaty.
- Work for strengthening the benefit-sharing components of the Treaty, for

example, by demanding from large-scale seed companies that 0.1 percent of their seed sales in the country be paid to the benefit-sharing mechanism of the Treaty's Multilateral System.

- Identify the most efficient and effective ways to share the benefits from the Multilateral System with farmers in developing countries and countries with economies in transition, and provide recommendations for actions to the Governing Body of the Treaty.

#### **B. Recommendations for the harmonization of the Plant Treaty with other international instruments**

- Ensure that the International Regime on Access and Benefit Sharing, which is currently under negotiation within the CBD, takes into account the specific requirements for conducive management of crop genetic resources, ensuring conditions conducive to the further conservation and sustainable use of the crop species covered by the new regime.
- Ensure that proposals regarding user-country measures to ensure benefit sharing from the use of genetic resources related to IPRs receive careful consideration in the TRIPS Council.
- Demand that countries not willing to join UPOV 1991 are not pressurized to become its member. Though it is debatable, UPOV 1978 may be reopened for membership for those countries which desire to join it. However, countries not willing to join UPOV can consider devising their own *sui generis* plant variety protection laws, as this provides them an opportunity to balance the interests and rights of both breeders and farmers.

#### **C. Recommendations for the implementation of Farmers' Rights**

- Ensure that sufficient legal space is provided for the conservation and sustainable use of crop genetic resources in seed laws, certification rules and IPR legislation, with a particular view to ensuring Farmers' Rights to saving,

using and sharing crop genetic resources.

- Ensure that incentive structures, reward systems and recognition are developed to support farmers in their vital functions as custodians and developers of crop genetic resources—as measures of implementing Farmers' Rights.
- Ensure broad participation of stakeholders, particularly farmers in decision making processes, and extend

support to their organizations so that they are able to develop awareness and capacity, and ensure participative procedures.<sup>41</sup>

- Governments and organizations should submit their views on, and experiences with, the implementation of Farmers' Rights to the Governing Body of the Plant Treaty so that measures needed to implement Farmers' Rights are identified.

*When implementing Farmers' Rights, countries need to make sure to respect the right of farmers to participate in relevant decision-making processes.*



# Endnotes

- <sup>1</sup> The discussion paper is, to a large extent, based on Andersen (2008) and findings from the studies of the Farmers' Rights Project, based at the Fridtjof Nansen Institute in Norway. All findings and reports from this project are available at [www.farmersrights.org](http://www.farmersrights.org).
- <sup>2</sup> This figure is from September 2008. For an updated list of Contracting Parties, see: <http://www.fao.org/Legal/treaties/033s-e.htm>.
- <sup>3</sup> As proposed in UNEP (1992).
- <sup>4</sup> Sustainable use of crop genetic resources is a way of maintaining on-farm diversity, and, as such, it has to do with conservation. However, strictly speaking, *in situ conservation* of crop genetic resources is not possible, since these resources and their traits are in constant change as living organisms. Therefore, it will be more appropriate to concentrate on *in situ management* of resources. The provisions elaborated above address such *management*, and what is often termed *in situ conservation* (Andersen 2008).
- <sup>5</sup> Parties may also voluntarily make other crop genetic resources available on the same terms and conditions as under the Multilateral System of the Plant Treaty.
- <sup>6</sup> Also the isolation of a gene may be considered a change that qualifies as 'another form than the one received'.
- <sup>7</sup> Whereas the Parties have to provide access to the listed resources, this does not mean that they cannot provide access to other genetic resources. Each Party is free to provide access to any, and as many, additional crop genetic resources under similar terms and conditions as under the Multilateral System of the Plant Treaty.
- <sup>8</sup> The Contracting Parties are also obliged to provide facilitated access for the IARCs of the CGIAR which have signed agreements with the Governing Body in accordance with the Treaty (Article 15.2) for all crops listed under the Multilateral System. There is no such obligation with regard to material not listed in Annex 1. The IARCs have no mandate to ensure *ex situ* conservation of these crops under the Plant Treaty.
- <sup>9</sup> An International Regime on Access and Benefit Sharing is currently being negotiated under the CBD, but the process is challenging for many reasons. For example, different types of resources are covered by the CBD and different interests are related to these resources. Thus, negotiations may take time.
- <sup>10</sup> Although Paragraph 13.2 indicates that these mechanisms are related to the crops covered in the Multilateral System of the Plant Treaty, there are different opinions as to whether they can be implemented so strictly, as it may be difficult to distinguish between the crops that are covered and those that are not in the context of these mechanisms.
- <sup>11</sup> Chapter 4 deals with the challenges relating to the realization of Farmers' Rights.
- <sup>12</sup> Based on personal communication with several European negotiators during the Second Session of the Governing Body of the Plant Treaty.
- <sup>13</sup> This section is based on Andersen (2008).

- <sup>14</sup> See UNEP (1990).
- <sup>15</sup> This refers to genetic resources acquired before the entry into force of the CBD, or not acquired from countries of origin of the resources.
- <sup>16</sup> This section is based on Andersen (2008).
- <sup>17</sup> The other two were the General Agreement on Tariffs and Trade (GATT), which pertains to goods; and the General Agreement on Trade in Services (GATS), which pertains to services. In addition, there is the Agreement Establishing the World Trade Organization, and several additional agreements and annexes dealing with the particular requirements of specific sectors and issues.
- <sup>18</sup> Also the provisions on geographical indication could be relevant to the management of crop genetic diversity. Geographical indications 'identify a good as originating in the territory, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin' (Article 22.1 of the TRIPS Agreement). So far, this provision has been applied for beverages, for example, wines from the Champagne region in France, and, to some extent, for foodstuffs and other articles. There are also a few examples pertaining to plant genetic resources (see also Dutfield 2000).
- <sup>19</sup> 'Inventive step' and 'capable of industrial application' may be deemed by WTO members to be synonymous with 'non-obvious' and 'useful', according to the text of the TRIPS Agreement.
- <sup>20</sup> They are still not patentable, according to the EU patent directive. However, there is a heated debate as to whether new legislation on patents in the EU countries will in practice enable the patentability of plant varieties.
- <sup>21</sup> This section is based on Andersen (2008).
- <sup>22</sup> This section is based on Andersen (2008).
- <sup>23</sup> See also Heller (1998), who presented some aspects of the anti-commons tragedy in an earlier article, and Aoki (1998), who analysed the contributions of Heller and Eisenberg in the context of IPRs.
- <sup>24</sup> The contents of this text are largely derived from Andersen (2005a).
- <sup>25</sup> The first use of Farmers' Rights as a political concept dates back to the early 1980s, when Pat Roy Mooney and Cary Fowler coined the term to highlight the valuable but unrewarded contributions of farmers to plant genetic resources for food and agriculture. The idea came up as a countermove to the increased demand for plant breeders' rights, as voiced in international negotiations, to draw attention to the unremunerated innovations of farmers that were seen as the foundation of all modern plant breeding. According to Fowler, the concept can be traced back to the work of, *inter alia*, the renowned plant explorer, geneticist and plant breeder Jack R. Harlan (1917–1988). He spoke of farmers as the 'amateurs' who had, in fact, created the genetic diversity that had become subject to controversies (see Fowler 1994).
- <sup>26</sup> Also Agenda 21 voiced this demand (Paragraph 14.60 (a)).
- <sup>27</sup> In between, in 1996, the Global Plan for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture was adopted by the International Technical Conference on Plant Genetic Resources in Leipzig. It, too, addressed the issue of Farmers' Rights.
- <sup>28</sup> For a detailed account and analysis of the negotiation process, see Batta Bjoernstad (2004).
- <sup>29</sup> A thorough analysis of the recognition of Farmers' Rights in the Plant Treaty is found in Batta Bjoernstad (2004). Further analyses of the Plant Treaty provisions on Farmers' Rights are also provided by the Farmers' Rights Project of the Fridtjof Nansen Institute ([www.farmersrights.org](http://www.farmersrights.org)).
- <sup>30</sup> A range of other provisions of the Plant Treaty are also important for the realization of Farmers' Rights and can be regarded as supportive components in this context.
- <sup>31</sup> This is based on a literature survey, document analysis and an international stakeholder questionnaire

survey carried out by the Farmers' Rights Project of the Fridtjof Nansen Institute. See Andersen (2005a), Andersen (2005b) and Andersen (2006).

<sup>32</sup> Stewardship is used as a term here although it does not sufficiently cover the innovative work that farmers do as breeders of plant genetic resources. As no other term was found that could sufficiently cover farmers' maintenance and innovations, this term has been used.

<sup>33</sup> This concept was first applied in this context in Andersen (2006).

<sup>34</sup> See [www.farmersrights.org](http://www.farmersrights.org) for more information on the history of Farmers' Rights.

<sup>35</sup> Based on the findings from 'The Farmers' Rights Project. See: Andersen (2005b); Andersen and Winge (2008).

<sup>36</sup> The consultation was co-hosted by Zambia Agricultural Research Institute, Ministry of Agriculture and Food, Norway, and the Fridtjof Nansen Institute, Norway. A full report can be found at: [http://www.fni.no/doc&pdf/farmers\\_rights\\_lusaka\\_consultation\\_final\\_report.pdf](http://www.fni.no/doc&pdf/farmers_rights_lusaka_consultation_final_report.pdf).

<sup>37</sup> Updated information can be found at: [http://www.farmersrights.org/about/fr\\_in\\_Plant\\_Treaty\\_3.html](http://www.farmersrights.org/about/fr_in_Plant_Treaty_3.html).

<sup>38</sup> Bala Ravi (2004).

<sup>39</sup> This section is derived from Ramanna (2006).

<sup>40</sup> Srinivasan (2003).

<sup>41</sup> See <http://www.farmersrights.org/realization/index.html>.



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## SAWTEE

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 liberalization and globalization.

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

