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Briefing paper

*Food, biological diversity
and intellectual property*

QUNO's Briefing papers on Intellectual Property and Agriculture aim to inform discussion about what kind of intellectual property systems can best encourage innovation and economic development, whilst also fostering resilient, equitable and sustainable food systems.

We envision an international system that ensures long-term food security, protects fragile livelihoods and provides incentives to maintaining biological and genetic diversity.

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Developing country *sui generis* options

India's *sui generis* system of plant variety protection

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Many people believe that a country must join UPOV 1991 in order to comply with WTO intellectual property obligations.

This is not the case.

*WTO rules do require Members to protect intellectual property in plant varieties.¹ This can be a *sui generis* system, i.e. one developed to suit each country's needs and priorities. Regrettably, there is limited information and awareness about the *sui generis* options available to countries. Most technical assistance and advice simply encourages countries to adopt a UPOV-type system, in spite of the fact that UPOV is suited to industrial-type agriculture, and not to the diversity of agricultures that co-exist in developing countries.*

*The purpose of this briefing paper on *sui generis* options is to describe areas in which developing countries have had experience with *sui generis* systems, with a view to encouraging and supporting those who wish to develop a plant variety protection (PVP) system that matches their country's needs. This briefing paper is the second in a series on TRIPS-compatible alternatives to UPOV.*

1. Please visit www.quno.org/areas-of-work/intellectual-property-and-agriculture for QUNO's briefing paper on the PVP flexibilities currently available to specific WTO Members

Agriculture: the Country Context

Agriculture is the principal source of income for about half of India's population and a source of raw material for a large number of industries. Small and marginal farmers constitute more than 67 percent of the total farming population in India.² The unorganized sector accounts for 86 percent of the work force (395 million persons) and most of these workers (253 million) are engaged in agriculture, mainly on a self-employed basis.³ Food grain production during 2011-2012 has been estimated as 259.32 million tonnes consisting of 242.23 million tonnes of cereals and 17.09 million tonnes of pulses. Other major crops are cotton, jute, oil seeds and sugarcane.⁴ India is, by and large, self-sufficient in food grain production, although food security is a critical issue at the household and individual level.⁵

Research and Innovation in Agriculture

Major players in agricultural research and innovation are the Indian Council of Agricultural Research (ICAR), its network of institutes and State Agricultural Universities (SAUs). They conduct more than 75 percent of the agricultural research in India. The contribution of the private sector is about 16 percent and that of international centres is about 8 percent.⁶ Around 80 percent of the seed requirement in India is met by the unorganized sector which mainly comprises of farm-saved seeds and the remaining by organized public and private sector.⁷

Public-sector research programmes continue to dominate agriculture research in India especially by developing new varieties of self-pollinated crops like rice, wheat, pulses, and oilseeds. Private sector has been focusing almost entirely on hybrids such as cotton, maize and vegetables. Other areas where private sector is active in terms of research and innovation are pesticide industry and farm machinery industry.⁸

Plant Variety Protection Law in India

Agricultural innovations were not subjected to intellectual property protection in India before the coming into force of the TRIPS Agreement.⁹ Article 27.3(b) of the TRIPS Agreement requires WTO members to provide intellectual property protection for plant varieties by 'patents or by an effective *sui generis* system or by any combination thereof'. India adopted the *sui generis* method, and enacted the Protection of Plant Varieties and Farmers' Rights Act, 2001 (PVPFR Act), which became fully operational in 2007.

Registration of new plant varieties and plant breeders' rights

The PVPFR Act lays down the procedure and mechanism for registration of new plant varieties that fulfil the conditions of novelty, distinctiveness, uniformity and stability (DUS).

2. Mrinalini Kochupillai (2011) *India's Plant Variety Protection Law – Historical and Implementation Perspectives*

3. National Commission for Enterprises in the Unorganised Sector (2007) *Report on Conditions of Work and Promotion of Livelihoods in the Unorganised Sector*

4. Government of India, *State of Indian Agriculture 2012-2013*, 1

5. S. Mahendra Dev and Alakh N. Sharma (2010) *Food Security in India – Performance, Challenges and Policies* (Oxfam India Working Paper Series – VII), available at www.oxfamindia.org/sites/default/files/VII_Food_Security_in_India-Performance_Challenges_and_Policies.pdf (accessed 29 December 2013). A response to this has been the adoption of the National Food Security Act, 2013, see www.prsindia.org/uploads/media/Food_Security/National_Food_Security_Act_2013.pdf (accessed 29 December 2013)

6. See Kochupillai (n 2)

7. See Government of India (n 3), 14 and Anitha Ramanna (2006) *Farmers' Rights in India: A Case Study*

8. See Kochupillai (n 2). See also Carl E. Pray and Latha Nagarajan (2012), *Innovation and Research by Private Agribusiness in India, Discussion Paper 01181*

9. Philippe Cullet and Radhika Kolluru (2002-03) 'Plant Variety Protection and Farmers' Rights – Towards a Broader Understanding', 24 *Delhi Law Review* 41, available at www.ielrc.org/content/a0304.pdf (accessed 29 December 2013)

The PVPFR Act permits registration of essentially derived varieties (EDVs) also.¹⁰ The criteria for registration of EDVs are same as for new varieties. The registration gives the breeder the exclusive right to produce, sell, market, distribute, import or export the variety.

Validity of registration is 9 years for trees and vines (renewable up to 18 years) and 6 years for other crops (renewable up to 15 years). Duties are also attached to these rights. For example, the breeder or any other person entitled to produce, market and sell the seeds of a registered variety has the duty to make such seeds or propagating materials available to farmers 'in a timely manner' to 'satisfy their requirements' and 'at a reasonable market price'.¹¹

It is to be noted that India chose the PBRs system to protect new plant varieties by borrowing heavily from the UPOV Convention particularly the DUS criteria, although there was no legal obligation to do so.¹² Thus, India did not exploit completely the opportunity to design a plant variety protection system reflecting the country's interest, even though India's system differs from UPOV in a number of respects.

Registration of extant varieties

Extant varieties can be registered under India's PVPFR Act. All technical criteria applicable to new

plant varieties (DUS) are applicable to the registration of extant and farmers' varieties also. The condition of novelty is not required for the registration of extant and farmers' varieties. Extant varieties constitute the overwhelming majority (around 85 percent) of varieties registered with the PVPFR Authority.¹³

Protection of farmers' rights, privileges and interests

The drafting of the PVPFR Act was begun as a law exclusively for the protection of breeders' rights. Provisions relating to farmers' rights were included subsequently as a result of series of consultations by a Parliamentary Standing Committee.¹⁴

The Act defines 'breeder' broadly, explicitly including farmers in this definition. Resultantly, farmers also can register their new varieties and they are placed at par with breeders.

However, given the fact that the DUS requirements are to be fulfilled and considering the socio-economic-educational background of the vast majority of farmers in India, the technical requirements and the registration fee seem to be too much for farmers to fulfil and afford (see Table). Consequently, only commercial plant breeders and public research institutions are likely, in practice, to be able to register new varieties.¹⁵

10. An essentially derived variety is a variety which is predominantly derived from an initial variety and at the same time, clearly distinguishable from that initial variety

11. Protection of Plant Varieties and Farmers' Rights Rules, 2003 (as amended in 2012), Rule 36A, available at www.plantauthority.gov.in (accessed 29 December 2013)

12. India is not a member of UPOV. It did initiate the process to become a member of UPOV in 1998 and 2002. This drew strong opposition, including a public interest litigation that was filed before the High Court of Delhi. As per information available in the UPOV website, India's name still appears in the list of States that have initiated accession procedure. For a brief discussion on India's attempt to join UPOV, see Prabhash Ranjan (2009) 'Recent Developments in India's Plant Variety Protection, Seed Regulation and Linkages with UPOV's Proposed Membership', 12(3) *The Journal of World Intellectual Property* 219

13. Protection of Plant Varieties and Farmers' Rights Authority, List of Registered Varieties Certificate Issued, 2013, available at www.plantauthority.gov.in/pdf/regextantvar.pdf (accessed 29 December 2013)

14. For a brief account of factors that influenced the drafting of PVPFR Act including the inclusion of farmers' rights provisions, see Philippe Cullet (2005) *Intellectual Property Protection and Sustainable Development*; Biswajit Dhar and Sachin Chaturvedi (1998), 'Introducing Plant Breeders' Rights In India: A Critical Evaluation of the Proposed Legislation', 1 (2) *Journal of World Intellectual Property* 245; and Shaila Seshia (2002) 'Plant Variety Protection and Farmers' Rights: Law Making and Cultivation of Varietal Control', 37 (27) *Economic and Political Weekly* 2741

15. N.S. Gopalakrishnan (2001) 'Protection of Farmers' Rights in India: Need for Legislative Changes', *Cochin University Law Review* 105-116; Cullet (n 14)

TABLE: Fee for registration of varieties¹⁶

Sl. No.	Type of Variety	Fee for registration (in INR)
1	Extant Variety notified under section 5 of the Seeds Act, 1966	1 000
2	New Variety/Essentially Derived Variety	Individual - 5 000 Educational - 7 000 Commercial - 10 000
3	Extant Variety about which there is common knowledge	Individual - 2 000 Educational - 3 000 Commercial - 5 000

A number of provisions in the PVPFR Act directly or indirectly recognize specific rights of, or grant entitlements to, farmers and farming community. Firstly, the PVPFR Act provides farmers the right to register farmers' varieties. Moreover, farmers are not required to follow the same procedure and formalities as applicable in the case of registration of new varieties. Section 18 of the Act provides exemptions to farmers as the application for registration of farmers' varieties does not require documents such as affidavit to the effect that the variety does not contain any gene or gene sequence involving terminator technology and complete passport data of the parental lines from which the variety has been derived.

Secondly, farmers have the right to 'save, use, sow, resow, exchange, share or sell' farm produce including seed of a protected variety in the same manner as they were entitled to prior to the PVP Act. However, the right to sell seeds does not include the right to sell branded seed of a protected variety.

Thirdly, farmers are entitled to recognition and reward in cases where the genetic material they preserved and improved is used in developing new varieties. The PVPFR Authority has introduced two awards (Plant Genome Savior Community Award; and Plant Genome Savior Farmer Reward and Recognition) to recognize and reward the efforts of farmers and farming communities in conservation of genetic resources and the material so selected and preserved has been used as donors of gene in varieties registerable under the PVPFR Act.¹⁷

Fourthly, farmers have the right to claim compensation from the breeder, if the variety they purchased fails to perform as per the disclosure made by the breeder.

Fifthly, farmers are immune from infringement legal action, if such infringement was innocent. This is a deviation from UPOV as neither UPOV 1978 nor UPOV 1991 recognize farmers' rights.

16. See Protection of Plant Varieties and Farmers' Rights Authority, Brochure PPVFRA\4, December 2011, available at www.plantauthority.gov.in/pdf/G_Brochure_English.pdf (accessed 29 December 2013)

17. *Protection of Plant Varieties and Farmers' Rights (Recognition and Reward from the Gene Fund) Rules* (2012) available at www.plantauthority.gov.in/pdf/PGSF_Guideline.pdf (accessed 29 December 2013). See also PVPFR Authority, *Annual Report 2011-12*, 26-27, available at www.plantauthority.gov.in/pdf/E_Annual_report_11-12.pdf (accessed 29 December 2013) As per information provided on the website of the PVPFR Authority www.plantauthority.gov.in/pdf/PGSAF_5.pdf, on 22 May 2013, four farming communities and ten farmers were given awards (accessed 29 December 2013)

In this regard, the PVPFR Act is more in accordance with the 2001 International Treaty on Plant Genetic Resources for Food and Agriculture (to which India is a party), which explicitly recognizes farmers' rights.

Restriction on registration

PVPFR Act reserves some power with the government to restrict the scope of registration. Registration is possible only for those genera or species notified by the government. Further, registration can be denied if 'prevention of commercial exploitation of such variety is necessary to protect public order or public morality or human, animal and plant life and health or to avoid serious prejudice to the environment.'

Disclosure of information and benefit sharing

Another noticeable feature of the PVPFR Act is its disclosure requirement. This puts the breeder under an obligation to disclose the information regarding the use of any genetic material conserved by any tribal or rural families that the breeder used in developing the new variety. Failure to disclose such information will result in the rejection of the registration application. The mandatory disclosure provision is closely linked to the benefit sharing mechanism envisaged under the PVPFR Act as implementation of benefit sharing would be extremely difficult in the absence of information disclosure.

The PVPFR Act provides that the commercial breeder has to share the benefits arising out of the registration of the variety with farmers or traditional rural communities who have contributed towards

developing the variety. The sharing of benefits has been designed to be in monetary form. The amount to be paid in the course of benefit sharing will be determined by considering the extent and nature of the use of genetic material of the claimant in the development of a new variety and the commercial utility and market demand for a new variety. Such money, along with other payments received by the PVPFR Authority is to be deposited in the National Gene fund and this will be used to implement benefit sharing mechanism including measures for conservation of plant genetic resources.

Compulsory license

Compulsory licensing is another important and distinguishing feature of the PVPFR Act. The PVPFR Authority is empowered to issue compulsory license after three years of registration, if the breeder fails to satisfy the reasonable requirements of the public for the seed or other propagating material or that the seed or propagating material has not been made available to the public at a reasonable price.

Conclusion

India has taken a brave step in following the *sui generis* route to comply with TRIPS obligation to provide intellectual property protection for plant varieties. The flexibilities available under Article 27.3(b) have been used and a mechanism has been envisaged for the realization of farmers' rights. Anything contrary would have been against India's legal obligation under the International Treaty on Plant Genetic Resources and Farmers' Rights, 2001 which entered into force in 2004.

The Quaker United Nations Office

The Quaker UN Office, located in Geneva and New York, represents Friends World Committee for Consultation (Quakers), an international non-governmental organization with General Consultative Status at the UN, and observer status to WIPO. QUNO works to promote the peace and justice concerns of Friends (Quakers) from around the world at the UN and other global institutions. QUNO has worked on intellectual property issues since the late 1990s, in particular focusing on access to medicines, food and biological diversity, and WIPO's Development Agenda. For QUNO publications in these areas, please visit www.quno.org

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