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# TRIPS AND PLANT VARIETY PROTECTION IN INDIA: COMPLICATING THE GLOBALISATION DEBATE

*Rashmi Venkatesan\**

**Abstract** *The debate around globalisation and the WTO is very often polarised; while its supporters hail its potential to bring development world over, for its critics the organisation is a symbol of western economic domination. This essay looks at the enactment of the Protection of Plant Variety and Farmers' Rights Act, 2001 in India in the wake of its membership to the WTO, to analyse and complicate the 'winners' and 'losers' narrative of trade liberalisation. By exploiting the concessions extracted under the TRIPS, the Act seeks to balance competing interests – that of a steadily growing seed industry against the rights of poor farmers. An analysis of the Act and its implementation shows interesting trends. It has not led to seed monopolies or a total 'take over' of seed technology from farmers by MNCs as predicted. In fact, the impacts on industry and farmers seem to be distinct. At the same time, it is unlikely that IPRs in agriculture will effectively secure the interests of small farmers and the environment in the long run. Overall, the paper suggests, the results are mixed, not lending themselves to any stylized claims. It argues that while trade under the WTO continues to be in favour of developed countries and corporations, with enough civil society mobilisation and political will, possibilities of creatively incorporating resistance within compliance exist. The case of seed IPRs in India is a sobering reminder to steer clear of over-simplifying the complex relationship of developing countries to international trade. To quote a line from Harper Lee's classic *To Kill A Mockingbird*, "... delete the adjectives and I'd have the facts."*

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I. PART I: India's agricultural and IPR policies in the run up to TRIPS . . . . .	47	IV. PART IV: Interpreting Compliance . . . . .	57
II. PART II: TRIPS – Between Flexibility and Rigidity . . . . .	51	V. Assessing impact and emerging trends . . . . .	58
III. PART III. The Act: Between Compliance and Resistance . . . . .	52	VI. Conclusion . . . . .	63

## INTRODUCTION

The establishment of the WTO steered the world away from protectionist economic policies towards free trade. Its mandate was to provide a level playing field to establish 'global rules of trade between nations' through negotiations in order to 'ensure that trade flows as smoothly, predictably and freely as possible'.<sup>1</sup> Intellectual property being one such rule was sought to be harmonised among various member states through the Agreement on Trade Related Intellectual Property Rights (hereinafter 'TRIPS' or 'Agreement')<sup>2</sup>. With nearly 160 members of vastly varying political and economic power, 'negotiations' were often not among equals and the playing field was anything but level. Unsurprisingly, then, the TRIPS was a fiercely contested and controversial Agreement. Its provision on plant variety protection (hereinafter 'PVP') gained particular significance due to its impact on agriculture; a critical sector for developing countries. While some saw it as a necessary step to promote free trade and innovation, others viewed it as an affront to national sovereignty and creating the possibility of the monopolisation of agriculture by a handful of foreign multinationals.<sup>3</sup>

Article 27.3 of the TRIPS Agreement requires member states to "provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof". The provision for a *sui generis* (translated as 'of its own kind') system incorporates a certain degree of flexibility within the coercive mandate of introducing PVP. In other words, member states are obligated to introduce a system of PVP in their domestic sphere but in doing so they have a choice – they can either do it through a

<sup>1</sup> World Trade Organization, *What is the World Trade Organization?* [https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/fact1\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact1_e.htm) (last visited Mar. 29, 2017).

<sup>2</sup> Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994) [hereinafter TRIPS Agreement].

<sup>3</sup> Vandana Shiva & Tom Crompton, *Monopoly and Monoculture: Trends in the Indian Seed Industry*, 33(39) Economic and Political Weekly A137, A151 (1998); VANDANA SHIVA & KUNWAR JALEES, *SEEDS OF SUICIDE: THE ECOLOGICAL AND HUMAN COSTS OF SEED MONOPOLIES AND GLOBALISATION OF AGRICULTURE* (4th ed., 2006).

system of patents or through any other indigenous system or through a combination thereof, as long as such system is an 'effective' system. India used this flexibility within the Agreement and enacted the Protection of Plant Varieties and Farmers' Rights Act, 2001 (hereinafter 'PPVFRA' or 'the Act').

The flexibility and obligation of the PVP provision, the process of enacting the PPVFRA in response to it, the role of the state and civil society is securing its interests within the WTO regime and the challenges of implementing laws on the ground bear valuable lessons for our understanding of the process and impact of globalisation. Free trade is generally framed within a 'winners' and 'losers' narrative; where developing countries are framed as helpless victims. While this is not wholly untrue, it is important not to oversimplify. The aim of this article is to complicate this narrative. The PVP obligation under the TRIPS and the process of its domestic compliance tell a story of resistance, creative use of legal flexibility, contradictory state action and complex ground realities that neutralise the promise made by laws on paper.

The article is structured as follows: Part I sets out the background regarding IPR and agricultural policies in India prior to TRIPS to understand the pressures and interests which were at play when India made her tryst with WTO's free trade regime. Part II analyses Article 27.3 of the Agreement that establishes the PVP requirement. Part III looks at the process of compliance with this obligation, the enactment of the PPVFRA, 2001 and its provisions in brief. Part IV analyses whether the Act and subsequent actions of the Indian state are in conformity with its international obligations. Part V uses the data that is emerging regarding the working of the Act to analyse whether and to what extent many of the promises and fears surrounding the Act have materialised.

## **PART I: INDIA'S AGRICULTURAL AND IPR POLICIES IN THE RUN UP TO TRIPS**

To appreciate India's position vis-à-vis PVP, it is important to briefly lay out the domestic policies, pressures and interests that were at play during the liberalisation years; its agriculture policy in relation to technology, the seed industry, farmers' movements and civil society mobilisation.

Before TRIPS, India did not allow IPRs on seeds and genetic materials. The Ayyangar Committee that was instituted to formulate an appropriate IPR law for post-independent India recommended that seeds and other

propagating material be exempt from the patent regime.<sup>4</sup> Like in the case of other sectors of the economy, the import and export of seeds by private companies was strictly regulated. Companies with 40% or more foreign ownership were not allowed to enter the seed sector.<sup>5</sup>

However, this should not be construed as India being technology averse in agriculture. Quite to the contrary, Indian agriculture is plagued with problems of low productivity and high levels of poverty. While it employs more than half of the country's population, it contributes to less than one third of its GDP.<sup>6</sup> Small and marginal land holding is the norm; 66 percent of all farming households have equal to or less than one hectare of land.<sup>7</sup> With the limited success of land reforms in the country, higher productivity with smaller land holdings was sought to be made possible only through technological improvements.<sup>8</sup>

The New Agricultural Policy that came in the wake of the drought of 1965-67 put India on the path of agricultural development through technological upgradation. The technical package based on high yielding varieties of seeds dependent on heavy doses of water, chemical fertilizers and pesticides, was seen as the only viable option for increasing productivity in a short period of time, given the average land holding in the country.<sup>9</sup> Considering the importance of agriculture and the characteristic distrust of the private sector prevalent at the time, the public sector remained as the dominant player in agricultural research and development post-independence and played a central role in heralding the green revolution. The policies of the green revolution are mainly accused for putting India on a chemical treadmill and bringing about unequal growth in agriculture; among crops, farmers and regions. It was mainly focused on particular cash crops like wheat, rice, etc. and in a few regions that were already well endowed

<sup>4</sup> Justice N. Rajagopala Ayyangar, REPORT ON THE REVISION OF THE PATENTS LAW, 39 (Sept. 1959) [hereinafter Ayyangar Committee Report].

<sup>5</sup> Jagjit Kaur Plahe, *TRIPS Downhill: India's Plant Variety Protection System and Implications for Small Farmers*, 41(1) JOURNAL OF CONTEMPORARY ASIA 75, 77 (2011).

<sup>6</sup> Philippe Cullet, *Revision of the TRIPS Agreement concerning the Protection of Plant Varieties – Lessons from India concerning the Development of a Sui Generis System*, 2(4) THE JOURNAL OF WORLD INTELLECTUAL PROPERTY 617, 630 (1999).

<sup>7</sup> Saksham Chaturvedi, Chanchal Agrawal, *Analysis of Farmers' Rights in the Light of the Protection of Plant Varieties and Farmers' Rights Act of India*, 33(11) EUROPEAN INTELLECTUAL PROPERTY REVIEW 708, 711 (2011).

<sup>8</sup> Mohan Rao, *Agricultural Development under State Planning in The State, Development Planning and Liberalisation in India* 128-132 (Terence J. Byres, 2<sup>nd</sup> ed. 1999); Gail Omvedt, *Four Anna Socialism: Relation of Industry and Agriculture in India*, 25(48-49) Economic and Political Weekly 2643, 2645 (1990).

<sup>9</sup> Rao, *supra* note 8, at 128-132; SABINE DEMANGUE, *INTELLECTUAL PROPERTY PROTECTION FOR CROP GENETIC RESOURCES: A SUITABLE SYSTEM FOR INDIA* 203-232 (2005).

with irrigation and other infrastructure.<sup>10</sup> It benefitted the rich farmers with larger holding as they were better positioned to acquire the more expensive inputs like water, pesticides, etc. and to compete in the market. Although the green revolution made India food sufficient, it led to loss of biological diversity, sharp inequalities among farmers, and over-dependence on chemical supplements. In spite of the benefits of the green revolution, large-scale agricultural distress continued to haunt the economy.<sup>11</sup>

Since the late 1980s India began a policy shift away from the public sector towards a stronger private sector presence. It allowed foreign investment in the seed industry, eased the ban on imports, and facilitated technology transfer.<sup>12</sup> With growing strength of the private sector the need for legal protection of plant varieties developed by breeders also grew. The Seed Association of India (SAI), formed in 1985, first voiced the initial demands for plant breeders' rights (PBRs).<sup>13</sup> Subsequently, the New Seed Policy of 1988, also acknowledged the need for considering plant breeders rights in India.<sup>14</sup> The first bill on PBRs was drafted in 1993-94, under pressure from SAI. The domestic seed industry being well connected to its foreign counterpart (as licensees, subsidiaries, partners etc.) saw foreign investment in the sector as beneficial rather than threatening.<sup>15</sup>

Although demand for PBRs was being made by the industry, the state sustained its conservative policy regarding IPRs in agriculture, only to crack under American pressure. Finding that Indian IPR policies were not conducive to American business, the US applied pressure on the Indian state to change its IPR regime by suspending all Indian-origin chemical and pharmaceuticals products from duty-free status under the Generalised System of Preferences (GSP). The Indian government finally accepted a text during the mid-term review of the Uruguay Round in 1989, paving the way for TRIPS.<sup>16</sup>

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<sup>10</sup> Demangue, *supra* note 9, at 230-232.

<sup>11</sup> Rao, *supra* note 8; Omvedt, *supra* note 8.

<sup>12</sup> Plahe, *supra* note 5, at 77.

<sup>13</sup> PHILIPPE CULLET, INTELLECTUAL PROPERTY AND SUSTAINABLE DEVELOPMENT 192-193 (2005); Tone Winge et al., *Combining farmers' rights and plant variety protection in Indian Law in Realising Farmers's Rights to Crop Genetic Resources* 57 (Regine Andersen & Tone Winge ed. 2013); Sudhir Kochhar, *How Effective is Sui Generis Plant Variety Protection in India: Some Initial Feedback*, 15 JOURNAL OF INTELLECTUAL PROPERTY RIGHTS 273-284 (2010). Demangue, *supra* note 9, at 234-235.

<sup>14</sup> Government of India, Ministry of Agriculture, *New Policy on Seed Development* (Sept. 16, 1988) [http://seednet.gov.in/PDFFILES/NEW\\_POLICY\\_NPSD.pdf](http://seednet.gov.in/PDFFILES/NEW_POLICY_NPSD.pdf) (last visited Mar. 29, 2017).

<sup>15</sup> PETER NEWELL, BIOTECH FIRMS, BIOTECH POLITICS: NEGOTIATING GMOs IN INDIA (2003); Plahe, *supra* note 5, at 77.

<sup>16</sup> Plahe, *supra* note 5, at 77.

While the industry and a section of the scientists and intellectuals highlighted the benefits that agricultural R&D, better quality and high yielding seeds would bring as a result of instituting PBRs, others pointed out legitimate concerns of loss of farmer livelihoods and agro-biodiversity, monopolisation of genetic material by foreign multinationals, food security and food sovereignty, environmental risks of genetically modified organisms, and increasing cost of seeds and other agricultural inputs.

Farmers' organisations, a powerful political lobby, also did not speak with one voice. The Karnataka Rajya Raitha Sangha, an important farmers' union in South India saw the TRIPs as an imposition of western hegemony on third world farmers and saw the entry of foreign multinationals as a threat to their livelihood. However, another significant farmers' group led by the Shetkari Sangathana supported the move.<sup>17</sup> They welcomed the technological advancement in agriculture that IPRs promised and saw farmers' access to technology and global markets as essential for increasing competitiveness and improving livelihoods.<sup>18</sup>

Therefore, at the time of the TRIPS negotiation, India was reeling under pressure to open its markets to the world and at the same time protect its vulnerable populations. Agriculture being an economically and politically critical sector, the state had to balance the needs of the growing private industry which promised economic gains through higher investment in R & D and better technology, against those of millions of individual poor farmers who could not compete with foreign MNCs unassisted. Other developing countries, notably Brazil, also found themselves in the same predicament. The TRIPS and the PVP obligation under it, finally came to incorporate the differences between members by allowing for some flexibility that developing countries could exploit to make possible their compliance with the larger free trade goal of stronger IPRs.

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<sup>17</sup> Jackie Assayag, *Seeds of Wrath: Agriculture, Biotechnology and Globalization in Globalizing India: Perspectives from Below* 71-78 (Jackie Assayag & Chris Fuller ed., 2005), Omvedt, *supra* note 8, at 77; Vandana Shiva, *Future of Our Seeds, Future of Our Farmers: Agricultural Biodiversity, Intellectual Property Rights and Farmers' Rights*, Research Foundation for Science, Technology and Natural Resource Policy (1996).

<sup>18</sup> Omvedt, *supra* note 8; Ronald J. Herring, *Miracle Seeds, Suicide Seeds, and the Poor in Social Movements in India: Poverty, Power and Politics* (Raka Ray & Mary F. Katzenstein ed. 2005).

## PART II: TRIPS – BETWEEN FLEXIBILITY AND RIGIDITY

The reason why the TRIPS was so contentious was not a denial of the necessity of IPRs *per se* but the recognition by India and other developing countries that intellectual property affects developed and developing countries in different ways; it heavily favours the former at the cost of the latter.<sup>19</sup> Despite developing countries raising objections to the competence of the WTO to negotiate substantive IPR provisions, they were nonetheless discussed and incorporated within the Agreement.<sup>20</sup> The TRIPS was an attempt to get developing countries to replicate IP laws of their developed counterparts<sup>21</sup> and the consensus arrived at by the developed countries was ultimately pushed on to the developing countries.<sup>22</sup>

The misgivings surrounding PVP was also because historically, seeds have been freely available and exchanged amongst farmers furthering the conservation, innovation and propagation of useful seeds and plant varieties. The introduction of seed IPRs came with growing commercialization of agriculture and rapid advances in biological sciences and technology. This gave a fillip to private biotech multinational companies, mainly from the global north, who emerged as important actors in innovating and marketing newer varieties of seeds. Intellectual property protection is considered indispensable to the growth of the industry and the advance of agricultural innovation.<sup>23</sup> In USA and Europe, where agriculture contributes minimally to GDP, employs a small percentage of the population,<sup>24</sup> is highly commercial and mechanised, and where the technology industry is strong, a system of intellectual property protection through patents or PBRs or both existed prior to the TRIPS.<sup>25</sup> Developing countries, in contrast, have resisted IPRs in food and agriculture fearing its negative impact on farmers' livelihoods, food security, domestic research and innovation, economic development

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<sup>19</sup> Ayyangar Committee Report, *supra* note 4, at 11-20.

<sup>20</sup> Jayashree Watal, INTELLECTUAL PROPERTY RIGHTS IN THE WTO AND DEVELOPING COUNTRIES 11-47 (2001); Jagjit Kaur Plahe, *The Implications of India's Amended Patent Regime: stripping away food security and farmers' rights?*, 30(6) THIRD WORLD QUARTERLY 1197, 1200 (2009); Carolyn Deere, THE IMPLEMENTATION GAME: THE TRIPS AGREEMENT AND THE GLOBAL POLITICS OF INTELLECTUAL PROPERTY REFORM IN DEVELOPING COUNTRIES 8 (2011); Cullet, *supra* note 13, at 52.

<sup>21</sup> Watal, *supra* note 20, at 225.

<sup>22</sup> Watal, *supra* note 20, at 11-47; Cullet, *supra* note 13, at 53.

<sup>23</sup> Demangue, *supra* note 9, at 183-230.

<sup>24</sup> Isabelle Tsakok & Bruce Gardner, *Agriculture in Economic Development: Primary engine of Growth or Chicken and Egg?*, 89(5) AMERICAN JOURNAL OF AGRICULTURAL ECONOMICS 1145-1151 (2007); David Grigg, *Agriculture in the World Economy: An Historical Evolution of Decline*, 77(3) GEOGRAPHY 210-222 (1992).

<sup>25</sup> Philippe Cullet, *Plant Variety Protection*, International Environmental Law Research Centre (2003-4) <http://www.ielrc.org/content/f0304.htm> (last visited Mar. 18, 2017).



and political sovereignty.<sup>26</sup> This IP ‘unfriendliness’ of developing countries was construed as a barrier to trade and therefore despite fierce opposition, Article 27.3(b) of the Agreement imposed PVP obligation on members mandating them to

“provide for the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof”.

The ‘concession’ within this provision was the result of a combination of intense lobbying by developing countries against a patent regime in seeds and also differing standards of IP protection between the US and EU for seeds. Where the former supports a strong patent and PBR protection, the latter opted for only a PBR system under the International Union for the Protection of New Varieties of Plants (UPOV).<sup>27</sup> The PBR system is akin to but an alternative to patent protection developed by Western European countries in the 1950s under pressure from the plant breeding industry. The initial 1961 UPOV came into effect in 1968 and the many amendments since then have progressively strengthened plant breeders’ rights. The latest 1991 UPOV version has come to closely resemble the patent regime. The *sui generis* clause, rather than being an expression of democratic values of the WTO, was perhaps a necessary flexibility to incorporate in order for countries to agree to the larger obligations of the Agreement. It is therefore left to speculation if this flexibility in TRIPS would have prevailed if US and Europe, two of the most economically powerful entities, did not have differing standards. Nonetheless, it was this *sui generis* clause that enabled India to enact PPVFRA.<sup>28</sup> The Act sought to provide adequate protection to plant breeders while protecting the interests of the farmers.

### PART III. THE ACT: BETWEEN COMPLIANCE AND RESISTANCE

The genius of the Act is its use of the TRIPS’ flexibility. It did not merely choose between patents and UPOV but rather forged a third creative

<sup>26</sup> Shiva & Jalees, *supra* note 3; Ayyangar Committee Report, *supra* note 4, at 39.

<sup>27</sup> International Convention for the Protection of New Varieties of Plants (Brussels) Dec. 2, 1961, 815 U.N.T.S. 29.

<sup>28</sup> Although not operational, other provision Articles 7 and 8 of the Agreement, detailing the ‘objectives’ and ‘principles’ of TRIPS, are also argued to make TRIPS amenable to national interests, therefore giving it a certain flexibility. Article 7 states that protection and enforcement of IPRs should lead to technological innovation “in a manner conducive to social and economic welfare, and to a balance of rights and obligations.” Similarly, Article 8 provides that members, in making laws, should “...promote the public interest in sectors of vital importance to their socio-economic and technological development...”

alternative in meeting its TRIPS obligation. However, it is important to note that the PPVFRA was a result of pressure from below. The first draft of the Bill prepared in 1993 was based largely on the UPOV with few provisions for farmers. Seen as being heavily in favour of the industry to the exclusion of other stakeholders, it met strong domestic opposition. The Bill was finally tabled before a Joint Parliamentary Committee in 1999, which collected and considered the views of farmers, NGOs, seed companies and scientists through public hearings. It saw five versions before it came to be accepted by major stakeholders and finally passed by Parliament.<sup>29</sup> The Act was the result of active civil society engagement reflecting a wide range of interests. In particular, its provisions on farmers' rights were a result of relentless pressure from civil society and farmers.<sup>30</sup> Although the Act was passed by the Parliament in 2001, it came into effect only in 2005. Some scholars suspect this delay could be because India was waiting to see the result of its application pending at the UPOV.<sup>31</sup> This is discussed in greater detail later.

### Farmers Rights: Pushing the boundaries.

Internationally, under the UPOV, farmers' rights have been construed only as exceptions to plant breeders' rights. The outstanding feature of the Act is that it not only *protects* the traditional rights of farmers to "save, use, sow, resow, exchange, share or sell...in the same manner as he was entitled before the coming into force of this Act"<sup>32</sup> but also *creates* IPRs in favour of farmers through registration of farmers' varieties.<sup>33</sup> It conceptualizes farmers' varieties as intellectual assets worthy of protection commensurate to those of plant breeders.<sup>34</sup> It allows for registration of farmers' varieties so long as the triple criterion of 'distinctiveness, uniformity and stability' (DUS) is met.<sup>35</sup> Once registered under the Act, farmers' varieties are entitled to the same level of protection as those of a breeder. It gives exclusive rights to farmers to produce, sell, market, distribute, import or export the variety.<sup>36</sup>

<sup>29</sup> Winge, *supra* note 13, at 57-58; and Chaturvedi, *supra* note 7, at 709.

<sup>30</sup> Suman Sahai, *India's Plant Variety Protection and Farmers' Rights Legislation in Global Intellectual Property Rights: Knowledge, Access and Development* 215-216 (Peter Drahos & Ruth Mayne ed. 2002).

<sup>31</sup> Plahe, *supra* note 5, at 80; Prabhash Ranjan, *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, 232 (2009).

<sup>32</sup> Section 39, Protection of Plant Variety and Farmers' Rights Act, 2001 [hereinafter PPVFRA, 2001]. The only exception being that farmers are prohibited from selling branded seeds of a protected variety.

<sup>33</sup> Section 14 read with Section 2(l), PPVFRA, 2001. The Act allows for registration of New Varieties and Extant Varieties. Farmers' varieties fall within the latter category.

<sup>34</sup> Section 28, PPVFRA, 2001.

<sup>35</sup> Section 15, PPVFRA, 2001.

<sup>36</sup> Section 28, PPVFRA, 2001.

A farmer, can also register a variety as a ‘new variety’ if the additional condition of ‘novelty’ apart from the DUS criteria is met.<sup>37</sup> By constructing it as both an individual and collective right, farmers’ rights under the Act, form a hybrid form of intellectual property rights.<sup>38</sup>

The Act also provides other rights and protections to farmers like benefit sharing, protection of traditional knowledge,<sup>39</sup> protection against infringement suits,<sup>40</sup> and protection against spurious seeds.<sup>41</sup> Farmers’ rights, as conceptualised under the Act, are certainly laudable. Importantly, this protection to the farmer has not come at the cost of the interests of the breeder.

### Protect the Farmer, Empower the Breeder.

While the Act creates progressive rights in favour of farmers and places them legally at par with breeders, a closer examination reveals its unsaid bias toward commercial breeders. For instance, both breeders and farmers are to satisfy the same triple test of distinctiveness, uniformity and stability (DUS). For a new variety to be registered, the applicant has to show the additional requirement of novelty. Farmers’ varieties normally derived from wild races, which are known to have a lesser degree of uniformity and stability. By keeping a common yardstick for breeders and farmers, it has a built-in bias against farmers.<sup>42</sup> Even among farmers, rich farmers engaged in breeding commercially important crops are more likely to take advantage of the protections offered by the Act.<sup>43</sup> The overwhelming number of small and marginal farmers fighting a crippling agrarian crisis have minimal incentive or capacity to seek protection under the Act. As will be seen in the following section of this paper, even in cases of registration, farmers’ varieties rarely compete with breeders’ varieties directly and at the same time the protection offered under the Act is important to protect breeders against competitors.

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<sup>37</sup> *Id.*

<sup>38</sup> Ragavan, 2012, p. 298.

<sup>39</sup> Section 26 read with section 41, PPVFRA, 2001.

<sup>40</sup> Section 39(2), PPVFRA, 2001.

<sup>41</sup> *Id.*

<sup>42</sup> Rene Salazar et al., *Protecting Farmers’ New Varieties: New Approaches to Rights on Collective Innovations in Plant Genetic Resources*, 35(9) WORLD DEVELOPMENT 1515, 1518 (2007); Rayappa R. Hanchinal, *Providing Intellectual Property Protection to Farmers’ Varieties in India under the Protection of Plant Varieties & Farmers’ Rights Act, 2001*, 20 JOURNAL OF INTELLECTUAL PROPERTY RIGHTS 7, 11 (2015) [hereinafter Hanchinal (2015)]; Rayappa R. Hanchinal et al., *Impact of Awareness Programmes and Capacity Building in Farmers’ Plant Variety Registration under the PPV&FR Act, 19* JOURNAL OF INTELLECTUAL PROPERTY RIGHTS 347, 352 (2014) [hereinafter Hanchinal (2014)]; Ranjan, *supra* note 31, at 226; Chaturvedi, *supra* note 7, at 710.

<sup>43</sup> Cullet, *supra* note 13, at 276-277.

### The State as the arbiter.

While the Act balances the interests of farmers against commercial breeders, the state continues to play a critical role. The Protection of Plant Variety and Farmers' Rights Authority (hereinafter 'Authority'), the nodal agency to oversee the working of the Act is vested with wide discretionary powers.<sup>44</sup> Notably, the Authority is responsible for the registration of plant varieties, adjudicating disputes brought under the Act, deciding on matters of benefit sharing, compensation etc. The compulsory licensing flexibility in TRIPS encapsulated under Section 47 of the Act, vests the state with the power to grant licences for production, distribution, and sale of seeds and propagating material if public requirements of the same are not satisfied at a reasonable price.<sup>45</sup>

Other constructions of the Act give the state the power to fulfil its broader international and national obligations. The registration of extant varieties helps the state to conserve biodiversity by retaining such varieties in the public domain and preventing it from exclusive private exploitation. Section 28 of the Act further provides that the government, as the owner of the extant variety has the right to determine its production, distribution, sale, marketability, importation or exportation.<sup>46</sup> Similarly, the Act provides sufficient space for research activities.<sup>47</sup>

### Beyond the Act: The Postscript.

Restricting the discourse on farmers' rights in India to PPVFRA alone might lead to a premature conclusion of state heroism in securing farmers interests. Subsequent actions of the state suggest otherwise and cast suspicion on its true political intentions. Shortly after the enactment of the Act, in 2002, India reinitiated its previous application to join the UPOV.<sup>48</sup> This was a curious move considering that India, at the WTO and through the enactment of the PPVFRA, had ploughed a third alternative to patents and UPOV.<sup>49</sup> The Act makes several important deviations from the UPOV like protecting farmers' right to resell and resow seeds, recognition of community rights of farmers, the registration of extant variety and farmers' variety, provisions

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<sup>44</sup> Chapter II, PPVFRA, 2001.

<sup>45</sup> Section 47, PPVFRA, 2001.

<sup>46</sup> SRIVIDHYA RAGAVAN, PATENT AND TRADE DISPARITIES IN DEVELOPING COUNTRIES, 295-297 (2012).

<sup>47</sup> Section 30, PPVFRA, 2001.

<sup>48</sup> For a detailed discussion on the history of India's relationship to the UPOV, see Ranjan, *supra* note 31, at 230-231.

<sup>49</sup> Plahe, *supra* note 5, at 90.

on essentially derived variety, the requirements for registration of varieties, benefit sharing, protection from spurious seeds and innocent infringement, broad research and public interest exceptions to breeders' rights, and compulsory licensing.<sup>50</sup> The UPOV provides for much stronger IP protection to plant breeders compared to the PPVFRA and does not contain the rights and protections conferred on farmers and their varieties by the latter. Therefore, India's application to the UPOV is contrary to the provisions of PPVFRA. Many regard this move to join the UPOV as detrimental, for it would entail amending the Act to be in line with UPOV.<sup>51</sup> The application at the UPOV is pending due to these inconsistencies.

Similarly, the Seed Bill tabled in 2004 that seeks to replace the Indian Seeds Act, 1966 seeks to reverse many of the PPVFRA protections. The most controversial provision of the Bill is the requirement of mandatory registration of all varieties. Section 13.1 of the Bill reads

*"no seed of any kind or variety shall, for the purpose of sowing or planting by any person, be sold unless such seed is registered . . . by the Registration Sub- Committee in such manner as may be prescribed."*

The Bill does not contain protections such as benefit sharing, full disclosure of origin obligation, compensation to farmers in the event of seed failure, and gives extensive powers to seed inspectors of search and seizure. The actions of the state suggest that the Bill is a backdoor way to dilute some of the key provisions of the PPVFRA and serve the interests of the industry.<sup>52</sup> Presently, the rights and protections of the PPVFRA are resting on a fragile status quo. Peschard makes a compelling argument that if one analyses the conduct of the state in securing farmers' rights, through various Bills and policies that have followed the PPVFRA, it is clear that the state is insincere in promoting farmers' interests over commercial ones. Far from being the champion of farmers, it acts as a 'cunning state' in playing contradictory and ambivalent roles in domestic and international forums vis-à-vis farmers' rights.<sup>53</sup>

<sup>50</sup> For a detailed comparison between provisions of the UPOV and PPVFRA, 2011 see Srividhya Ragavan & Jamie M. O'Shields, *Has India Addressed its Farmers' Woes? A Story of Plant Protection Issues* 20(97) GEORGETOWN INTERNATIONAL ENVIRONMENTAL LAW REVIEW 97, 113-124 (2007); Plahe, *supra* note 5, at 81-85.

<sup>51</sup> Plahe, *supra* note 5, at 90-92; Ranjan, *supra* note 31, at 230; Karine Peschard, *Farmers' rights and food sovereignty: critical insights from India*, 41(6) THE JOURNAL OF PEASANT STUDIES 1085, 1094-1095 (2014).

<sup>52</sup> Plahe, *supra* note 5, at 92; Ranjan, *supra* note 31, at 235-238.

<sup>53</sup> Peschard, *supra* note 51.

## PART IV: INTERPRETING COMPLIANCE

The compliance with Article 27.3(b) hinges on whether the *sui generis* system provided for PVP is effective or not. Although the Article does not mention UPOV as the only alternative to patents, according to the generally agreed interpretation, adhering to its provisions would certainly qualify as an effective system of protection. The UPOV, WTO and WIPO lobbied strongly for the adoption of the Convention as the best way to comply with TRIPS.<sup>54</sup> Therefore many countries chose to accede to the UPOV or incorporate its provisions in their domestic legislations as a way to fulfill their TRIPS obligation.<sup>55</sup> In fact more than half of UPOV's members joined the Convention following TRIPS.<sup>56</sup> If drafters of the Agreement intended only UPOV or like to be included within the meaning of 'sui generis system' why was it not explicitly stated? Scholars argue that its non-inclusion in the Agreement was probably because "UPOV 1991 had not yet entered into force; a reference to UPOV 1978 was considered inadequate and a reference to UPOV 1991 was considered premature."<sup>57</sup> Therefore, if one adheres to this interpretation, the PPVFRA is likely to suffer from lack of TRIPS compliance.

On the other hand, Cullet argues that the purpose of the Article is to provide member states with an alternative to patents and not a system akin to it. Otherwise, the 'sui generis' flexibility is largely rendered redundant.<sup>58</sup> As UPOV, especially the 1991 version of the convention resembles patent protection much too closely, 'effective sui generis system' cannot be said to be interpreted narrowly to mean a choice between patents and UPOV-like protection.<sup>59</sup> The term 'effective' having been left undefined within the TRIPs there is no reason why it should be interpreted to mean that the degree of protection offered to plant breeders should be as high as UPOV.<sup>60</sup>

Similarly, Ragavan argues that the principles of the Vienna Convention on the Law of Treaties should apply in interpreting 'effective'. This means that 'effective' in this context has to be interpreted in the light of Articles 7 and 8 of the TRIPS agreement that lays down the Agreements' 'Objectives' and 'Principles'. According to her, Articles 7, 8 and 27 read together indicate that an 'effective' PVP system has to incorporate and balance the national interest and socio-economic concerns of a country. In the light of this

<sup>54</sup> Deere, *supra* note 20, at 186; Plahe, *supra* note 5, at 79.

<sup>55</sup> Cullet, *supra* note 13, at 247; Rajan, 2009, p. 222.

<sup>56</sup> Ranjan, *supra* note 31, at 222.

<sup>57</sup> Watal, *supra* note 20, at 140.

<sup>58</sup> Cullet, *supra* note 6, at 653.

<sup>59</sup> Cullet, *supra* note 13, at 627.

<sup>60</sup> Ranjan, *supra* note 31, at 223.

interpretation of 'effective', she argues that UPOV is not 'effective' system because of its over-emphasis on breeders' rights without giving due consideration to farmers' rights. On the other hand, the PPVFRA is an 'effective' alternative to UPOV as it balances the rights of breeders with concerns of biodiversity, farmer and community rights, and sustainable use of genetic resources.<sup>61</sup> For developing countries, where agriculture is a critical sector with large-scale socio-economic impact, the UPOV is not 'effective'.<sup>62</sup>

The compliance question therefore continues to harbor ambiguity. If one takes the first view that effective should be construed to mean a UPOV or UPOV-like system as it was the only viable alternative to patents that existed at the time of negotiation of the Agreement, then the status of the Act vis-à-vis UPOV and consequently TRIPS remains uncertain. Although the Act does make some significant deviations from the Convention, India's application to the UPOV has not been rejected yet – it is still pending. Cullet speculates that this is because while rejecting the application would be disastrous for India and UPOV, accepting the application will be seen by some as watering down the PBR regime. It is possible that as a half-way approach India might be allowed to join the 1978 UPOV even though membership for it is now closed.<sup>63</sup>

If the alternate interpretation – that UPOV cannot be considered as the only 'effective' PVP protection system especially since the developing countries (including India) rejected its inclusion and therefore the flexibility has to be read in light of Articles 7 and 8 of TRIPS – is to be accepted, then how does one interpret India applying for UPOV membership? Does it not amount to blowing hot and cold at the same time, where on the one hand, it rejects UPOV as being unsuitable for its domestic conditions under the TRIPS but on the other, seeks membership to the convention? What will be the impact of the decision taken at UPOV regarding its membership on TRIPS obligations? In the absence of any action to the contrary, the presumption for the time being, should be in favour of compliance.

## V. ASSESSING IMPACT AND EMERGING TRENDS

The data on registrations on varieties that is emerging shows an interesting pattern that belies many of the predictions made earlier. The Protection of Plant Variety and Farmers' Rights Authority, which was set up only in 2005

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<sup>61</sup> Ragavan, *supra* note 46, at 307-308.

<sup>62</sup> *Id.* at 283-292; Ragavan, *supra* note 50, at 100-101.

<sup>63</sup> Cullet, *supra* note 13, at 273-274.

started inviting applications for registration of specific set of crop species only in 2007.<sup>64</sup> Over 140 of crop species are presently notified for Extant and Farmers' varieties and 114 are open for New Varieties.<sup>65</sup> So far, a total of 13445 applications have been received by the Authority, out of which 8208 applications are from farmers. They form the largest number of applicants, followed by the private sector with 3446, and finally the public sector with 1789 applications.<sup>66</sup>

### The private-public divide in registration of varieties.

The number of applications for registration has shown an overall increase but its distribution across different sectors, categories, and crops is highly uneven.<sup>67</sup> The private sector applications are mainly concentrated under New Varieties<sup>68</sup> and in crops where hybrids are important, as they have high seed replacement ratio.<sup>69</sup> Even among the hybrids, the majority of the applications have been for cotton, followed by maize and rice. The private sector is also active in vegetables like brinjal and tomato that have commercial value, pulses mainly pearl millet and sorghum and oil seeds such as sunflower.<sup>70</sup>

The private sector has come out stronger with the enactment of the PPVFRA.<sup>71</sup> The number of companies that have filed applications under the Act has steadily increased since 2007, although they constitute only around 10% of the total Indian seed industry.<sup>72</sup> Within the industry, small and medium companies seem to have survived alongside large companies, allaying fears of unhealthy monopolisation of the seed industry with the advent

<sup>64</sup> Manoj Srivastava et al., *Intellectual Property Rights on Plant Varieties in India: A Sector-Wise Analysis*, 20 JOURNAL OF INTELLECTUAL PROPERTY RIGHTS 81, 82 (2015).

<sup>65</sup> Government of India, Protection of Plant Varieties and Farmers' Rights Authority, *Plant Variety Registry Related Information* <http://plantaauthority.gov.in/PVR.htm> (last visited Apr. 8, 2017).

<sup>66</sup> Government of India, Protection of Plant Varieties and Farmers' Rights Authority, <http://plantaauthority.gov.in/> (last visited Apr. 8, 2017).

<sup>67</sup> Hanchinal (2015), *supra* note 42.

<sup>68</sup> Srivastava, *supra* note 64, at 84.

<sup>69</sup> Mrinalini Kochupillai, *The Indian PPV&FR Act, 2001: Historical and Implementation Perspectives*, 16 JOURNAL OF INTELLECTUAL PROPERTY RIGHTS 88, 95 (2011); P. Venkatesh & Suresh Pal, *Impact of Plant Variety Protection on Indian Seed Industry*, 27(1) AGRICULTURAL ECONOMICS RESEARCH REVIEW 91, 93 (2014).

<sup>70</sup> Government of India, Protection of Plant Varieties and Farmers' Rights Authority <http://plantaauthority.gov.in/> (last visited 8<sup>th</sup> April, 2017).

<sup>71</sup> Murugkar et al., *Competition and Monopoly in the Indian Cotton Seed Market*, 42(37) ECONOMIC AND POLITICAL WEEKLY 3781-3789 (2007); Demangue, *supra* note 9, at 235, 303.

<sup>72</sup> Venkatesh, *supra* note 69, at 93.



of the Act.<sup>73</sup> However, where large companies tended to seek registration for nearly 66% of their products, small companies did so for only 15% of their products. Therefore, small companies continue to face a disadvantage in comparison to their larger counterparts to access the benefits of the Act due to financial and personnel costs. Their continued survival will depend on how easy the registration process is made in the future and whether they regard the benefits of registration to outweigh the costs.<sup>74</sup>

In contrast to the private sector, the public sector has predominantly been active in filing extant varieties.<sup>75</sup> In terms of crop wise distribution, after cotton the second highest applications were filed for pulses, a neglected category by the private sector.<sup>76</sup> Most of the varieties applied for by the public sector, both in the category of new and extant varieties are in crops that are of a 'typical variety', where seeds can be saved and resown by farmers.<sup>77</sup> It also concentrates more on low-value, high-volume crops.<sup>78</sup> The continuing role of public sector in agro biodiversity and agricultural development cannot be underestimated.

Overall, there has been an increase in varietal development of major crops such as maize, mustard, vegetables etc. Venkatesh & Pal demonstrate that the quality seed production has accelerated since 2005 but interestingly, the share of the private sector dropped from 47.5% in 2003-04 to 38.9% in 2009-10 and that of the public sector has increased from 52.5% to 61.1% for that period. The number of public-private partnerships also saw an increase, from 5 till 2005 to 30 in 2011.<sup>79</sup>

Venkatesh et. al. report that stakeholders in both the public and private sector feel that the Act has incentivised innovation but they also report that the free exchange of germplasm that was prevalent before has been curtailed.<sup>80</sup> Even if the positive link between IP protection and innovation is true, the private sector will predictably, only invest in crops where it is commercially profitable. As Kochupillai points out, R&D by the private sector continues to be only in hybrid crops.<sup>81</sup> The *kind* of innovation by the

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<sup>73</sup> Shiva & Crompton, *supra* note 3; Shiva & Jalees, *supra* note 3.

<sup>74</sup> Venkatesh, *supra* note 69, at 93-94; P. Venkatesh et al., *How do the stakeholders perceive plant variety protection in Indian seed sector?*, 110(12) CURRENT SCIENCE 2239, 2241-2242 (2016).

<sup>75</sup> *Id.*

<sup>76</sup> Venkatesh, *supra* note 69, at 95.

<sup>77</sup> Srivastava, *supra* note 64, at 84.

<sup>78</sup> Venkatesh, *supra* note 69, at 95.

<sup>79</sup> Venkatesh, *supra* note 69, at 98-99.

<sup>80</sup> Venkatesh, *supra* note 74, at 2240-2242.

<sup>81</sup> Kochupillai, 2011, pp. 95, 98.

private sectors is also limited – it is mainly geared towards higher yields and not other factors like taste, nutrition, pest resistance etc.<sup>82</sup> Additionally, although better innovation might mean availability of better quality seeds, it is also to be noted that these seeds will get dearer. Venkatesh & Ors. find that protected varieties come at a 11 – 15% price premium over their unprotected counterparts.<sup>83</sup> Given the debt burden that farmers already bear, the increasing cost of farm inputs might precipitate agrarian distress, especially for small and marginal farmers.

### Farmers' Varieties: Patterns and Lessons.

Although farmers' varieties comprise the majority of applications received under the Act, nearly 80% of those are only for one crop – rice, and in that, from one region – Orissa.<sup>84</sup> Apart from rice being commercially important, authors have attributed this increase due to Orissa's history of paddy farming, and the government's efforts to facilitate and promote the registration process.<sup>85</sup> If one leaves out rice, the registration within other crop categories varieties is perhaps only a fraction of the number of varieties that actually exist. Registration of farmers' varieties requires surmounting colossal knowledge and infrastructural gaps. Hanchinal notes that without sufficient government support, effective awareness and other programs involving different stakeholders, it is difficult to induce farmers to engage with the registration process.<sup>86</sup> Among the farmers surveyed by Venkatesh et. al. nearly 90% of the farmers were not aware of the Act, although they might be aware of certain practices like protection against seed failure.<sup>87</sup>

The two primary incentives or motivations for registration is to *first*, prevent misappropriation of resources by others and *second*, facilitate commercial exploitation of registered varieties. Both these incentives might play a limited role in inducing farmers to go through the process of registration. In varieties of plant species like rice where it is commercially important for both breeders and farmers, the incentive to prevent misappropriation might be strong. In all other cases, where breeders and farmers are not in

<sup>82</sup> Srivastava, *supra* note 64, at 83; Demangue, *supra* note 9, at 249-250.

<sup>83</sup> P. Venkatesh & Suresh Pal, *Determinants and Valuation of Plant Variety Protection in India*, 18 JOURNAL OF INTELLECTUAL PROPERTY RIGHTS 448, 453-454 (2013); P. Venkatesh, et al., *India's Experience of Plant Variety Protection: Trends, Determinants and Impact*, AAEE & WAEA Joint Annual Meeting (Jul. 26-28, 2015) San Francisco, California, 11-12 (2015).

<sup>84</sup> Srivastava, *supra* note 64, at 83; Hanchinal (2015), *supra* note 42, at 17.

<sup>85</sup> Hanchinal (2015), *supra* note 42, at 8, 17; Venkatesh, *supra* note 69, at 95.

<sup>86</sup> Hanchinal (2014), *supra* note 42, at 349-352.

<sup>87</sup> Venkatesh, *supra* note 69, at 2242-2243.

direct competition, the need to prevent misappropriation through registration might be limited. Similarly, if a variety is not developed for commercial exploitation but for qualities like taste, texture etc., which could be true in a significant number of farmers' varieties, the incentive to register is again limited.<sup>88</sup>

For similar reasons, the Act is also unlikely to act as a significant impetus for farmers to innovate. The present construction of farmers' rights in the image of property rights designed for commercial breeders is therefore, likely to have limited relevance to the farmer, especially the small and marginal farmer. Some authors also argue that the ownership approach followed within the Indian law might be inappropriate and it should consider the stewardship approach followed by Brazil.<sup>89</sup> As Plahe rightly points out, the Act is molded within a neoliberal paradigm and its enactment being hailed as progressive has successfully silenced the opposition against incorporating private property rights in genetic resources.<sup>90</sup> Richer farmers and the private sector with the incentive and capacity to compete and remain commercially viable will benefit tremendously more from the protections provided by the Act, over other farmers.

In the final analysis, the new IPR regime in the form of the PPVFRA has not destroyed farmers' varieties – at least not yet. At the same time apprehensions of the industry regarding granting of IPR protection to farmers' varieties at par with breeders has not negatively impacted the private sector either. Due to the protections awarded to farmers within this Act, their position against breeders is stronger than would have otherwise been if the Act had simply replicated the UPOV provisions. This may greatly change if either India accedes to the UPOV or passes the Seed Bill in its present form. However, it is also important to note that the benefits to farmers under this new PVP regime might be very uneven. The overall effect of the Act is towards greater privatisation and commercialisation of agriculture, creation of private property rights in the erstwhile freely available genetic resources, intensification of mono-cropping and other effects of the green revolution,<sup>91</sup> all of which will have long-term impact on farmers, biodiversity, sustainability and agricultural development.<sup>92</sup>

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<sup>88</sup> Cullet, *supra* note 6, at 650.

<sup>89</sup> Karine Peschard, *Seed wars and farmers' rights: comparative perspectives from Brazil and India*, 44(1) THE JOURNAL OF PEASANT STUDIES 144-168 (2017).

<sup>90</sup> Plahe, *supra* note 9, at 86, 89.

<sup>91</sup> Plahe, *supra* note 9, at 88-89.

<sup>92</sup> Chaturvedi, *supra* note 7, at 713; Plahe, *supra* note 9, at 85-89.

## VI. CONCLUSION

The story of the TRIPS and the PPVFRA in India is an interesting study in the complexity of the process and the impact of globalisation. The free trade regime administered by the WTO is not democratic but incorporates meager flexibilities. Although the scope and nature of flexibility is greatly dependent on the particular agreements, with enough civil society participation the PPVFRA shows that countries can creatively comply with their international obligations while resisting a complete capture of the policy-making domain. It also shows that threats to hard-fought rights are ever present and come from both the global community and the state, a reminder that civil society has to relentlessly strive towards making the powers accountable to the promises they make.

Like the process, the impact of PVP is also complex. It has not been the boon its supporters predicted it would be nor has it completely neutralised the agency of state and civil society. It has, to a large extent, accentuated the status quo – the rich farmers and breeders continue to gain and thrive while the small and marginal farmers continue to exist at the brink of survival. Although farmers enjoy certain legal protections under the Act, in the final tally, the breeders come out on top. The overall effect on agriculture has certainly been towards its greater commercialisation and privatisation.