

Farmers' Rights, Market Access, and Social Justice: An Analysis of India's Plant Variety Protection Regime

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Abstract: In this paper, the complexity of the interaction between the intellectual property rights of novel varieties of plants and the interests of the wider society is critically examined with special attention to the rights of farmers in the global agricultural environment and its compatibility with Sustainable Development Goals. It explores the *sui generis* system of India, which is provided under the Protection of Plant Variety and Farmers Rights Act, 2001, as a reaction to the requirements of the TRIPS Agreement effective plant protection through *sui generis* protection systems. This is a system not identical to the UPOV model favored by most developed countries, trying to strike an equilibrium between the interests of the breeders and the need to protect farm-grown biodiversity and to award breeders with the traditional rights and benefit of saving, using, trading and selling farm-grown seeds. The paper will also examine the special characteristics of this legislation, registered types of crops, registration type, and affiliation of applicants to identify the effects of this legislation on the agricultural ecosystem. To be more precise, it will determine whether the Act has been successful in stimulating innovation and equitable access to more advanced varieties, or its core contribution is its ability to acknowledge the past farmer contributions to the preservation of biodiversity without any meaningful pecuniary gains. The paper will also examine the opportunities and obstacles of this special legislative system in creating innovation and social regulatory framework in the Indian multi-faceted agricultural system. In this review paper therefore, an in-depth review of the working and applications of the plant variety protection regime in India is presented in the light of its peculiar relation to the intellectual property discourse, evident globally. It looks at how the agricultural ecosystem has actually been bolstered by the Act by reviewing registration patterns, crop type, and the affiliation of the applicants in determining its effect on innovation and appreciation of traditional farming methods.

Keywords: - Plant Variety Protection, Farmers' Rights, *Sui Generis* System, TRIPS Agreement, India, Agricultural Innovation, Social Justice.

INTRODUCTION

In 2001, the enactment of the Protection of Plant Varieties and Farmers' Rights Act by India for the first time implemented a *sui generis* intellectual property protection system on the protection of the rights of plant varieties as required under the TRIPS Agreement. The act was a direct follow up to the commitments of the state of India in the Trade-Related Aspects of Intellectual Property Rights of the year 1994 Agreement, and it had to incorporate plant varieties into intellectual property concepts. In contrast to the traditional patent regimes, the Indian system was intended to provide balance between the commercial benefits of breeding plants and traditional rights and contributions of farmers, as they were part and parcel in the conservation and breeding of germplasm (Padmaja et al., 2020). This was a unique style that revolved largely on the UPOV model which primarily emphasizes on the rights of the breeders but it had in principle the right to Farmers to promote social justice and preserve agrobiodiversity. The Act includes a wide definition of farmers, who are not only cultivators but also conservators and improvers of wild species and ancient varieties. In 2005, the Protection of Plant Varieties and Farmers' Rights Authority was founded, and in 2007, it started accepting applications on PVP certificates, and, thus, this legislation framework

became operational (Singh and Agrawal, 2019). Nevertheless, alongside these underpinning attempts, there has been much left wanting in the practical application and success of this *sui generis* system, especially regarding the practical impact of maintaining farmers and maintaining agrobiodiversity. Another primary principle of the Indian way is the belief in an effective *sui generis* regime, as dictated by Article 27.3 of the TRIPS Agreement, a policy not shared by the UPOV model largely used by developed countries. Such a deviation is an attempt to bring together rights of breeders, farmers and communities, especially through recognition of the farmer as breeders and introduction of benefit sharing within the use of genetic material within the communities. The distinctive features of the Act are reflected in the official recognition of the varieties of farmers and the creation of a National Gene Fund in order to develop an inclusive intellectual property regime that requires recognition of the traditional knowledge and continuous exploitation of agricultural groups. Nevertheless, even with such a forward-thinking structure, there are still major challenges to the actual application of the PPVFR Act, especially making sure that the tribes, who are major guardians of the rich traditional knowledge, can successfully go through the registration of the priceless varieties.

THEORETICAL FRAMEWORK: FARMERS' RIGHTS AND SOCIAL JUSTICE IN AGRICULTURAL INNOVATION

According to this framework, fair access to and management of genetic resources, in addition to fair remuneration of traditional knowledge, are essential to sustainable agricultural production and food security. This view emphasizes the role of intellectual property rights as crucial contributors to (or obstacles to) social justice, especially with agrarian economies where livelihoods rely on the genetic resources (Ajates et al., 2025). Thus, the application of social justice concepts to the PPVFR Act would require studying the problematic nature of the Act provisions, including benefit sharing and farmer exemptions, in regards to the practical advantages of the Act to the marginalized communities of farmers in terms of market accessibility and empowerment. The most important element of such an analysis is the examination of the efficiency of the Act in both assisting the farmers against possible exploitation, and stimulating innovations in the formal seed market (Velly, 2013). Moreover, it entails an evaluation of the issue of whether the instruments contained in the Act are sufficient to deal with the asymmetries of power between big companies and individual farmers, and thus to achieve truly fair relations in the processes of agricultural innovation. This also involves testing how far farmers can exercise their right to save, sow, exchange, and market farm-produced seeds of varieties under protection which has been bitterly opposed in other places around the world but is enshrined in Indian law. As a matter of fact, is the only country in the world to explicitly include such a provision, appreciating farmers as legitimate breeders in addition to public and private, and granting them intellectual property protection of the cultivated varieties. This special legislative position is an indication of an ownership notion of rights of farmers, unlike the stewardship model common in most other jurisdictions, and another strong indication of India as a whole obligation to a holistic framework of the rights of farmers and breeders of plants. This delicate equilibrium is further reinforced by clauses that absolve farmers who accidentally infringe and requirement by the seed companies to advise farmers about the expected production level with compensation in the event of nonperformance. The root of this pledging of farmers rights such as their right to sell the seeds of modified varieties is a major digression of the international standards and reflects the unique attitude of India to the intellectual property of agriculture. Also, the PPVFR Act outlines that farmers should not be liable in cases of accidental violations of the rights of the breeders in order to protect the farmers who might be ignorant of the intellectual property law. This particular provision provides an essential level of safeguarding to the small and marginal farmers who might be short of resources or awareness to find their way through complicated legal structures.

KEY PROVISIONS OF THE PROTECTION OF PLANT VARIETIES AND FARMERS' RIGHTS ACT, 2001 (PPV&FRA)

At the heart of the Act are measures that are fair to both the

plant breeder and the farmer, such as giving the farmers the opportunity to save, use, sow, re-sow, exchange, share, or sell their farm produce, including as seed of a variety which is under protection, but it is not to be sold in the branded seed market. This significant waiver will allow the farmers to preserve their traditional methods of seed saving and at the same time does not directly compete with the commercial seed market and therefore does not affect historical contribution to the seed systems. This enables one to maintain a subtle difference so that farmers are allowed to sell the seeds in the unbranded and generic varieties of the seed, but they cannot sell it under a brand name that may potentially compete with the registered varieties. Besides, farmers are in a unique category under the Act, with qualifications extending not only to those who produce crops, but also those who conserve and enhance wild species or traditional varieties, further expanding the scope of intellectual property protection to include invaluable contributions to genetic diversity (Notes, 2022). Also, the Act seeks to safeguard farmers against infringement claims in case they are capable of showing no prior knowledge of the intellectual property right during infringement, including factors like literacy and the existence of licenses in local languages (Ghimire et al., 2021). This subtle strategy recognizes the socio-economic facts of Indian agriculture, and offers protection that is not common by traditional intellectual property regimes like the UPOV Convention. In contrast to the UPOV Convention that limits the rights of farmers to save and share seeds, the PPVFR Act explicitly is enshrined in law, although with certain restrictions on commercial branding. This *sui generis* regime, in that way, is an informed policy decision to merge the rights of breeders, farmers, and communities, which is radically different to a patent-based argument of protecting the communal interest of plant varieties. This is a special law in the entire world as it has amalgamated intellectual property protection of breeders with a specific protection of the traditional practices and contribution of farmers towards germplasm. In fact, the *sui generis* legislation is quite remarkable in the sense that it acknowledged the contributions of traditional communities in naming biological resources as well as integrating the rights of farmers in the framework, something that is a drastic departure in the UPOV Convention. UpAV Convention, especially its 1991 revision, severely limits the right of farmers to save and trade seeds, to which the rights virtually belong to plant breeders as an example that India explicitly does not follow to preserve its agricultural heritage and livelihoods of farmers. This intentional outliers makes the *sui generis* system of India a possible role model among other developing countries intending to strike a balance between breeder incentives and agrarian traditions and food security.

MARKET ACCESS IMPLICATIONS OF PPV&FRA

Implication of the market access on the Act is complex especially in terms of formal seed market and conventional farmer seed system. Namely, the PPV&FRA is supposed to develop a strong formal seed sector and at the same time defend the traditional schemes of seed saving, exchange, and sale among farmers (Brazil, India, and Intellectual

Property in Agriculture, 2022). Such a twofold purpose means that a sensitive regulatory balance is a prerequisite to avoid a situation where businesses concerns predominate at the expense of informal seed industry that is considered as a crucial biodiversity and food security source in several areas. As an example, the benefit sharing and protection of traditional knowledge contained in the Act seeks to encourage the formal sector to consult and pay communities involved in the germplasm input, thus aligning and not replacing them (Paturel, 2013). Nevertheless, there are significant challenges on the practical application of these benefit-sharing mechanisms such as proper valuation of traditional knowledge and efficient share of benefits among various community stakeholders (Lushington, 2012). Moreover, any possible changes in legislation, including the changes that could help align the PPVFR Act with the UPOV model, could potentially threaten the current protection accorded to farmers, and this may indicate a possible change towards more formidable breeder rights and reduced freedom of farmers regarding seed use and exchange. These changes might cause a major change in the market aspect by making the informal seed industry less viable and making the commercial seed production more important, thus changing the agricultural innovation and availability of seeds overall. This would further have the effect of further consolidating the seed industry which may have an impact on the price of seeds and the variety of different types of seeds available. The current policy debate on these possible legislative developments demonstrates a threshold of conflict between intellectual property balancing and maintenance of conventional agricultural practices (Chiffolleau, 2013). Furthermore, in addition to the growing influence of the private sector on plant breeding, and the corresponding policies of appropriation and market consolidation, there is already the rising cost of seeds and reduced lifespan of varietal, especially in the context of the developing countries (Singh, 2007). This implies that the nature of intellectual property regimes in relation to resiliency of seed systems and the smallholder farmers in the ability to ensure seed security must be critically evaluated (Pal, 2016). As a matter of fact, the discussions about source adapting the PPVFR Act to the UPOV Convention, especially when it comes to extending the time span of protections of registered varieties, make the agricultural scientists and leader farmers concerned with the fact that the original foundations of the Act might be undermined (Blakeney et al., 2020). These policy changes would impact on small scale farmers disproportionately by restricting them access to affordable seeds and exercising their traditional rights to propagate and exchange plant material, so that it compromises agricultural diversity and food security (Goss, 1996). It is also added to the tension by the fact that international trade agreements push the countries to strengthen their intellectual property regimes and further jeopardize the national legislation aimed at protecting the rights of farmers (Schram & Townsend, 2020). Historical background indicates that the farmers have regularly been complaining about the possibility of the intellectual property rights to fundamentally transform agricultural operations and their mutually dependent bond with the seed distributors, in spite of their relative silence in more

profound discussion about the ownership of genetic resources (Goss, 1996).

CONCLUSION

The controversial relation between the rights of farmers, intellectual property and market entry in India in the framework of PPV&FRA proves that the issue of innovation incentives versus social equity in agriculture remains problematic in the world. Although the *sui generis* model proposed in India is admirable in its integrative nature, it still has to come up with issues of international harmonization efforts on the one hand, and domestic issues of implementation, especially about the practical implementation of the benefit-sharing and protection of traditional knowledge, on the other hand. The usefulness of such a framework is, however, limited by serious issues of measurement and evaluation, especially on the actual effect of the plant variety protection systems on crops cultivation on agricultural practices, and also on the adoption of the varieties that farmers use in their production. Such lack of detailed information about the presence and role of the varieties planted by farmers poses a challenge in accurately identifying their role in the agricultural sector, in both present realities and the strategic planning of the future. The registration time requirements on the registration of existing varieties further worsen this lack of information hampering the ability to document and protect the traditional biodiversity in a comprehensive manner. The filling of these gaps in data and timeline in registration are therefore important measures in leading to a better evaluation and sound defense of the imminent agrobiodiversity that India possesses hence rendering the policy a step further in the protection of vulnerable agricultural communities. Additionally, the absence of institutional support and recognition of the farmers compared to the commercial plant breeders frequently results in the underestimation of their contributions even though they contribute much intellectual input. That is why more emphasis should be on empirical studies to be able to measure socio-economic effects of the PPV&FRA and implement the necessary changes to the policies to be able to empower smallholder farmers and preserve the agrobiodiversity. The current controversies revolving around the loss of agrobiodiversity, climatic global warming, hunger, poverty, and water shortage further reiterate the relevance of safeguarding and optimal exploitation of farmer varieties, which are naturally resource-saving. This implies that a re-assessment and perhaps a redefinition of the PPV&FR regulations and laws may be vital in ensuring protection of genetically divergent crops and also matching with global efforts such as the FAO Globally Important Agricultural Heritage Systems (Singh and Agrawal, 2019). Although the PPV&FR Act offers a valuable legal framework, its effectiveness in practice is still undermined by the lack of focus on promoting innovations of farmers and fair redistribution of benefits. As an example, instead of supporting and encouraging farmer-led innovations in a proper way, research and policy focus a lot on biopiracy and benefit-sharing issues. Such a lapse requires a reconsideration of current processes to integrate knowledge and practices among farmers more thoroughly into formal innovation

systems so that policy frameworks can be proactive and pro-formely recognize and reply to their involvement in the process of conserving agrobiodiversity.

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