

An Analysis of the Relation Between Plant Variety Protection and Human Rights

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Abstract—The intricate link between the growth of technology and the defence of basic human dignity is shown in the relationship between Plant Variety Protection (PVP) and Human Rights. This essay examines how human rights concepts like the right to food, the right to profit from scientific advancements, and the rights of indigenous peoples interact with intellectual property rights, specifically as they relate to the Protection of Plant Varieties and Farmers' Rights Act, 2001 (PPV&FR Act). The PPV&FR Act protects farmers' customary rights to conserve, use, trade, and sell seeds while also providing legal recognition and incentives to plant breeders. It links innovation with equality and justice by incorporating mechanisms for compensation, benefit sharing, and community incentives. The research emphasises that protecting plant varieties must improve food security, support agrobiodiversity, and honour farmers' and indigenous peoples' contributions to genetic resources. To ensure that PVP laws are implemented in a way that complies with human rights, it also examines international frameworks such as the UPOV Convention (1991), ICESCR, UDHR, UNDRIP, and ILO Convention No. 169. The research concludes that human rights and intellectual property are intertwined, and any legal or regulatory framework for plant varieties must strike a balance between innovation, inclusiveness, sustainability, and the defence of fundamental human rights, such as the right to sufficient food and livelihood.

Index Terms—Plant Variety Protection, Human Rights, PPV&FR Act 2001, Right to Food, Food Security, Farmers' Rights, Benefit Sharing, Indigenous Peoples, UPOV Convention, Agro-biodiversity, Scientific Progress, Intellectual Property Rights

I. INTRODUCTION

Human rights and intellectual property rights are the two domains of law that have evolved independently. Intellectual property rights consist of statutorily recognised rights, providing incentives for the

participation of the private sector in various fields and seek to contribute to technological development. On the other hand, human rights are the basic rights, which are recognised by the state, and are inherent rights linked to human dignity. The globalisation of intellectual property rights triggered the debate on the relationship between human rights and intellectual property rights, because many developing countries, particularly the least developed countries, are not in a position to implement the TRIPS standards in their jurisdiction without further compromising their development at the cost of human rights.

II. OBJECTIVES OF THE STUDY

This study aims to discuss the human rights perspective of intellectual property rights with special reference to the Protection of Plant Varieties and Farmers' Rights Act, 2001. The overall aim is to examine how the PPV&FR Act, the right to food and the farmers' rights are interrelated.

PPV&FR ACT¹:

The PPV&FR Act, 2001, was enacted to grant intellectual property rights to plant breeders, researchers and farmers who have developed any new or extant plant varieties. The Intellectual Property

¹ The Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act) is an Act of the Parliament of India that was enacted to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders, and to encourage the development and cultivation of new varieties of plants. This act received the assent of the President of India on the 30 October 2001.

Right granted under the PPV & FR Act, 2001, is a dual right². The rights granted under this Act are heritable and assignable, and only registration of a plant variety confers the right. Essentially Derived Varieties (EDV)³ can also be registered under this Act, and they may be new or extant. Farmers are entitled to save, use, sow, re-sow, exchange or sell their farm produce, including seed of a registered variety, in an unbranded manner. Farmers' varieties are eligible for registration, and farmers are totally exempt from payment of any fee in any proceedings under this Act. The period of protection for field crops is 15 years, and for trees and vines is 18 years, and for notified varieties it is 15 years from the date of notification under section 5 of the Seeds Act, 1966.⁴ The annual fee has to be paid every year for maintaining the registration, and the renewal fee has to be paid for the extended period of registration. Farmers can claim compensation if the registered variety fails to provide the expected performance under given conditions. The rights granted under this Act are the exclusive right to produce, sell, market, distribute, import and export the variety. Civil and criminal remedies are provided for the enforcement of breeders' rights and provisions relating to benefit sharing and compulsory licence in case a registered variety is not made available to the public at a reasonable price. Compensation is also provided for village or rural communities if any registered variety has been developed using any variety in whose evolution such village or local community has contributed significantly. The procedural details and

² one is for the variety and the other is for the denomination assigned to it by the breeder.

³ Article 14.5 of the UPOV which restricts the marketing of a newly developed variety if it is genetically similar to a protected source variety.

⁴ Section 5: power to notify kinds or varieties of seeds

If the central government, after consultation with the committee, is of opinion that it is necessary or expedient to regulate the quality of seed of any kind or variety to be sold for purposes of agriculture, it may, by notification in the official gazette, declare such kind or variety for the purposes of this act and different kinds of varieties may be notified for different states or for different areas thereof.

modes of implementing this Act are provided in the PPV&FR Rules, 2003.

RIGHT TO ADEQUATE FOOD: The right to food⁵ is inclusive. It is not simply a right to a minimum ration of calories, proteins and other specific nutrients. It is a right to all nutritional elements that a person needs to live a healthy and active life, and to the means to access them, and food must be available, accessible and adequate.⁶ The right to food is a human right recognised by international human rights law. The Universal Declaration of Human Rights recognizes, in the context of an adequate standard of living, that: "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food." (Article. 25). The International Covenant on Economic, Social and Cultural Rights, which is part of the International Bill of Human Rights, recognizes the right to adequate food as an essential part of the right to an adequate standard of living (Article. 11 (1)). It also explicitly recognises "the fundamental right of everyone to be free from hunger" (Article 11 (2))

The right to adequate food. Before it became enshrined in the ICESCR, the right to adequate food was already included in the United Nations' Universal Declaration of Human Rights of 1948. In the ICESCR, it is framed as follows (in Article 11):

Article 11

1. The States Parties to the present Covenant recognise the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions. The

⁵ Committee on Economic, Social and Cultural Rights: The right to adequate food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement; for further information, see OHCHR Fact Sheet No. 16 (Rev.1): The committee on Economic, Social and Cultural Rights.

⁶ Many of these and other important characteristics of the right to food are clarified in general comment No.12 (1999) on the right to adequate food, adopted by the committee on Economic, Social and Cultural Rights.

States Parties will take appropriate steps to ensure the realisation of this right, recognising, to this effect, the essential importance of international co-operation based on free consent. 2. The States Parties to the present Covenant, recognising the fundamental right of everyone to be free from hunger, shall take, individually and through international co-operation, the measures, including specific programmes, which are needed:

- a. To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilisation of natural resources;
- b. Taking into account the problems of both food-importing and food-exporting countries, to ensure an equitable distribution of world food supplies in relation to need.

Hence, the right to food is presented in Article 11.1 as part of an adequate standard of living, including adequate food, and in Article 11.2 as a fundamental right to be free from hunger. Here, it is directly referred to agricultural production and food systems.

REMUNERATION:⁷

Article 23 of the UDHR⁸ provides for the right to get remuneration for the work done by the person, similarly The Protection of Plant Varieties and Farmers' Rights Authority also confers Plant Genome Savior "Farmer Reward" and "Farmer Recognition" to the farmers engaged in the conservation of genetic resources of landraces and wild relatives of economic plants and their improvement through selection and preservation and the material so selected and preserved has been used as donors of gene in varieties registerable under the PPV&FR Act, 2001

⁷ Section 39(i)(iii) section 45(2)(c)- farmers recognition and reward for contributing to conservation.

⁸ ARTICLE 23 (3) of Universal Declaration of Human Rights states that "Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.

(53 of 2001).⁹ Up to 10 rewards and 20 recognitions (consisting of a citation, memento and cash prize) are conferred in a year.

Genetic resources of economic plants and their wild relatives, particularly in areas identified as agrobiodiversity hotspots, are awarded annually from the Gene Fund.¹⁰ The name of the award is Plant Genome Saviour Community Award, and the amount is INR 10,00,000 for each community. A maximum of five awards is conferred in a year.

BENEFIT SHARING:¹¹

Another human right of significant importance is the right to enjoy the benefits of scientific progress and its applications. Article 27 of the UDHR provides for the sharing of scientific advancement and its benefits. This is a cultural right that is enshrined in Article

⁹ "General_Notification_6_01" (PDF). The Gazette of India (Extraordinary) Part II--Section 3--Sub-section(i). 31 July 2012. Retrieved 6 March 2019

¹⁰ Section 45 of PPVRFRA, (1) the central government shall constitute a fund to be called the National Gene Fund and there shall be credited thereto-

- (a) The benefit sharing received in the prescribed manner from the breeder of a variety or an essentially derived variety registered under this act, or propagating material of such variety or essentially derived variety, as the case may be
- (b) The annual fees payable to the authority by way of royalty under subsection (1) of section 35
- (c) The compensation deposited in the gene fund under subsection (4) of section 41
- (d) The contribution from any national and international organization and other sources

¹¹ Section 26(5) of PPVRFRA, while disposing of the claim under sub-section (4), the authority shall explicitly indicate in its order the amount of the benefit sharing, if any, for which the claimant shall be entitled and shall take into consideration the following matters, namely:-

- (a) The extent and nature of use of genetic material of the claimant in the development of the variety relating to which the benefit sharing has been claimed;
- (b) The commercial utility and demand in the market of the variety relating to which the benefit sharing has been claimed.

15.1(b) of the ICESCR, and is thus a legally binding right for the state parties of the ICESCR:

Article 15

1. The state parties to the present covenant recognise the right of everyone:
 - a. To take part in cultural life
 - b. To enjoy the benefits of scientific progress and its applications
 - c. To benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

Similarly, all Indian legal entities that provide PGR¹² to breeders for developing new varieties, including farmers, shall receive a fair share of the benefits from the commercial gains of the registered varieties. Out of all the national plant variety protection laws enacted since 2001, the PPVFR Act is the first that integrates the provision for access and benefit sharing (ABS) along with PBRs¹³. Legal accession of the genetic resource used in breeding is not addressed in the Act; this falls instead under the Biological Diversity Act, 2002. However, the PPVFR Act¹⁴ requires a breeder to make a sworn declaration on the geographical origin of the genetic resources used in the pedigree of the new variety, and how they were accessed. The Act also provides two avenues for benefit sharing. The first scheme allows individuals or organisations to submit claims concerning the contribution they have made to the development of a protected variety. The final decision is taken by the Authority established under the Act, which determines the amount, taking into account the importance of the contribution in the overall development of the variety and its commercial potential. The second benefit-sharing avenue allows an individual or organisation to file a claim on behalf of a village or local community. The claim relates to

¹² Plant Growth regulator is a natural or synthetic chemical that is sprayed or otherwise applied to a seed or plant in order to alter its characteristics. They are sometimes referred to as plant hormones.

¹³ Plant Breeders Rights are rights granted to the breeder exclusive control over the propagating material and harvested material of a new variety for a number of years.

¹⁴ Section 26 of PPVFR Act.

the contribution that the village or community has made to the evolution of a variety.

THE UNITED NATIONS DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES (UNDRIP) AND ILO CONVENTION NO.169¹⁵

Article 20 of UNDRIP, saying that 'Indigenous peoples have the right to maintain and develop their political, economic and social systems or institutions, to be secure in the enjoyment of their own means of subsistence and development, and to engage freely in all their traditional and other economic and social systems or institutions, to be secure in the enjoyment of their own means of subsistence and development, and to engage freely in all their traditional and other economic activities.' This could be interpreted in such a way that traditional breeding and systems as economic and social systems or institutions, cannot be restricted without the FPIC of the indigenous people concerned.

Article 31 refers to the right indigenous people have to 'maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

III. FOOD SECURITY

Plant variety protection is intrinsically linked to food security. In fact, it can only be justified if it enhances food security. Food security can be understood at different levels, from the household to the international level.¹⁶ It is commonly held that at

¹⁵ Adopted by the United Nations General Assembly during their 61st session at United Nations Headquarters, New York, in September 2007 (United Nations, 2008a).

¹⁶ According to Paragraph 1 of the Plan of Action of the World Food Summit, Rome, 13-17 Nov. 1996, food security exists 'when all people, at all times, have physical and economic access to sufficient, safe

present there are sufficient food supplies at the international level,¹⁷ and in the Indian context at the national level as well.¹⁸ However, studies indicate that with population increases and diminishing land availability, international and national food security will be a major concern in the coming years.¹⁹ To achieve food security at the national level, states require sufficient resources to either produce or import enough food to feed the whole population and an efficient distribution system to ensure everyone has access. Ensuring food security at the household level implies that people must either have sufficient income to purchase food or the capacity to feed themselves directly by cultivating their own food. Food security is directly linked to agro-biodiversity, which is essential to promote resilience in farming. Reduction in diversity (through practices such as monoculture) increases vulnerability to natural forces, to pest/weed attack and other plant diseases.²⁰ Therefore, agro-biodiversity is of primary importance for small-holder and/or subsistence farmers as it ensures both income-generation and household food security. Agro-biodiversity also provides ecosystem services on farms, such as pollination, fertility and nutrient enhancement, and insect and disease management and water retention and thus makes for more productive farming, decreasing the number of

and nutritious food to meet their dietary needs and food preferences for an active and healthy life’.

¹⁷ See, e.g., Carl F. Jordan, Genetic Engineering, the Farm Crisis and World Hunger 52 BIOSCIENCE 523, 526 (2002) and Jose Falck-Zepeda et al., BIOTECHNOLOGY AND SUSTAINABLE LIVELIHOODS— FINDINGS AND RECOMMENDATIONS OF AN INTERNATIONAL CONSULTATION (ISNAR, Briefing Paper No. 54, September 2002).

¹⁸ See, e.g., INDIAN ECONOMIC SURVEY 2001-2002 (2002)

¹⁹ See, e.g., FAO, THE STATE OF FOOD INSECURITY IN THE WORLD 2002 (2002).

²⁰ See for instance, M.S. Swaminathan, Ethics and Equity in the Use and Collection of Plant Genetic Resources: Some Issues and Approaches in International Plant Genetic Resources Institute, ETHICS AND EQUITY IN CONSERVATION AND USE OF GENETIC RESOURCES FOR SUSTAINABLE FOOD SECURITY 7 (, 1997).

external inputs required.²¹ Additionally, agro-biodiversity provides the raw material (or the genetic pool) for all crop-related biotechnology research and development. Diversity also has nutritional and social importance, where different varieties may contain different nutrients and health benefits or may be of differing cultural worth.

IV. THE 1991 ACT OF THE UPOV CONVENTION AND PLANT VARIETIES:

The issue has been raised as to whether and how human rights may be relevant to the regulations that concern plant genetic resources and related IPR. Several human rights relate to the issues of food, knowledge and intellectual property, and that relate in some ways to plant genetic resources and seed.

RELEVANCY OF HUMAN RIGHTS:

The human rights that are most relevant with regard to this study are considered to be:

- (1) the right to adequate food
- (2) the right to enjoy the benefits of scientific progress and its applications
- (3) the rights of indigenous peoples.

Furthermore, the human rights principles underpin all processes relating to human rights and are therefore also relevant. Other human rights may also be touched, but the relation to the issue of seed and PVP may be more indirect. Changes in agricultural policies are likely to have impacts on farmers’ incomes, and can also result in redistributive or negative effects on the incomes of different groups of farmers, as well as other actors (e.g. traders and consumers). Such redistributive effects of agricultural policies have potentially far-reaching consequences, particularly for people with low incomes. Such groups of people are thus more vulnerable than others to a range of basic human rights, including their rights to adequate housing, health or education. However, similar effects on incomes can also result from many other policy measures. This is why we limit our assessment to those human rights that are more directly related to seed and intellectual property

²¹ Lori Ann Thrupp, Linking Agricultural biodiversity and Food Security: the Valuable Role of Agrobiodiversity for Sustainable Agriculture 76 INTERNATIONAL AFFAIRS 265, 268 (2000).

in plant varieties, or the process of implementing PVP law. Although there are no differences in women's and men's rights with regard to plant genetic resources and PVP, it is important to acknowledge that gender equality is a very important aspect in the discussion on how human rights relate to these issues, as women and men can be affected by policies in different ways. Structural agrarian change and related policies can constrain and disempower women in agriculture, though less explicitly compared with some other forms of discrimination that can be observed at local levels ²²

UPOV BASED PVP LAW AND HUMAN RIGHTS:
The right to adequate food and the right to enjoy the benefits of science and its applications, both enshrined in ICESCR, as well as UNDRIP, as a general assembly declaration and ILO Convention NO. 169 are all relevant in this regard.

Farmers' access to seed of new plant varieties is an issue that concerns the right to food as well as the right to benefit from scientific progress and its applications. Improved access to seeds of new, improved varieties could make a positive contribution towards their realisation, provided that varieties are made available that are beneficial to farmers and particularly to disadvantaged and marginalised groups. It has been outlined earlier that plant varieties are not user-neutral technologies. They bring about different risks and benefits for different groups of farmers. Progress for vulnerable groups can thus not simply be assumed, but needs to be assessed constantly, and particularly if changes in related policies are envisioned.

V. SUMMARY

1. Farmers' access to seed of new plant variety is an issue that concerns the right to food as well as the right to benefit from scientific progress and its applications.
2. The human rights enshrined in ICESCR do not prescribe any particular policies that have to be followed. However, the adoption of upon-based pop LAWS WOULD NEED to be weighed against other options available concerning their

contribution to the progressive realisation of the right to food and the right to enjoy the benefits of scientific progress and its applications.

3. The human rights enshrined in ICESCR do not prescribe any particular policies that have to be followed. However, the adoption of UPOV-based PVP laws would need to be weighed against other options available with regard to their contribution to the progressive realisation of the right to food and the right to enjoy the benefits of scientific progress and its applications.
4. Whether a UPOV-based PVP law supports or hinders progress towards these rights cannot be answered in general; it depends on the situation in each country and a range of other measures a country could take to address and balance potential risks and to comply with human rights standards.
5. States have to ensure human-rights-compliant processes of implementing PVP laws, also where competencies are transferred to intergovernmental organisations.
6. Any changes in agricultural policies can result in redistributive effects on the incomes of farmers, other actors along supply chains, and consumers. Such changes in income can positively or negatively affect other human rights as well.
7. Women and men have the same rights relating to food, seed and genetic resources. However, both groups may be differently affected by changes in policies; this must be taken into account if the effects of such policies are assessed.
8. States have to consult and actively seek consent with indigenous and tribal peoples; this is a non-legally enforceable commitment for all United Nations Member States and compulsory for the signatories to ILO Convention No. 169.
9. States have to ensure that everyone has access to scientific progress and its applications, e.g. new varieties of plants.
10. PVP laws need to be implemented in such a way that access to new varieties of plants is ensured in practice for all farmers without discrimination.
11. States have to ensure that scientific breeding progress is directed to those groups that are insufficiently addressed by existing breeding programmes.

²² (see, for example, Mullaney, 2012).

12. Complementary breeding initiatives are required based on public funding targeted towards the needs of resource-poor farmers and vulnerable groups.
13. Implementation processes for PVP laws should comply with human rights standards and principles

- [7] www.wipo.int
- [8] www.ielrc.org
- [9] www.vikaspedia.in
- [10] www.thehindu.com

VI. CONCLUSION

It can be concluded that intellectual property and human rights are interlinked, and the protection of plant varieties implies the right to food and food security, which is essentially a basic human right. There is of no doubt that any changes in agricultural policies can result in redistributive effects on the incomes of farmers, other actors along supply chains, and consumers and such changes in income can positively or negatively affect other human rights as well.

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