CHAPTER-8

CONCLUSION & SUGGESTION

WTO, backed by the dispute settlement procedure and enforcement apparatus, has emerged as most authoritative global regulatory regime on international trade and intellectual property regulation. Unlike previous and some contemporary international organizations, WTO imposes positive obligations on member countries to implement the provisions of the WTO Agreement in their municipal laws. For this purpose WTO Agreement has created necessary mechanism, in form of adjudicatory mechanisms (DSU, DSB) and punishment power (i.e. power to impose sanction and retaliatory measures), in case a member country does not fulfill its obligations under WTO Agreement. This paramount shift in the nature and functioning of WTO has made it a regulatory regime in international law.864

Further the move initiated by the industrialized countries in 1986, led by the United States, to incorporate the regulation of intellectual property into the International trade negotiations of the World Trade Organization, resulted in the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), one of the 28 agreements produced by the Uruguay round of multilateral trade Negotiations of the WTO. This re/location of intellectual property within this new WTO framework

brought it to the centre of social, economic and political factors in not only the international legal constitutive and decision making process but to national/municipal also. In other words the consequences of this global WTO/TRIPS regime are emerging in municipal law of member countries. In this way the WTO/TRIPS provision are affecting the member country law and policy. Example can be given of some of the cases/disputes brought before the DSB/DSU by one member country against other member country’s legislative measures not being in conformity to WTO/TRIPS obligation. Further the decision given by the WTO DSB regarding these disputes and their implementation by member country by amending their national laws, clearly proves the role of WTO/TRIPS as global regulatory regime. This WTO/TRIPS regulatory regime has affected the Indian Law and Policy too. India was also a party to some of the Disputes, brought before the DSU/DSB. For example, India – Patents (U.S.) and India – Patents (EC) are two of the cases brought against India by U.S.A. and European Union respectively. In these cases it was submitted that India has failed to implement its obligations under Article 70.8(a) and Article 70.9 of the TRIPS Agreement to establish a system for the grant of exclusive marketing rights. In these cases India was found to be in violations of its obligation under WTO/TRIPS Agreement by Appellate Body of DSB. Further in pursuance to these disputes India made amendment in its Patent Act to grant exclusive marketing rights. Although earlier to this amendment India did in fact implemented this special obligation through legislative action, when it promulgated in December 1994 the Patents (amendment) ordinance, setting out details for the grant of exclusive marketing rights. Despite this India was found in violation of Art. 70.9 of the TRIPS. These two disputes reveal

---

865 This ordinance became effective on 1 January and lapsed on 26 March 1995.
India’s belief about its WTO rights and obligations and emergence of WTO as global regulatory regime. This WTO/TRIPS global regulatory regime has affected the Indian law and policy in relation to IPRs and Agriculture too. Because GATT/WTO-TRIPS Agreement, though ostensibly focus on trade – centered issues, in truth, TRIPS encapsulated and ratified virtually all aspects of intellectual property, extending private ownership and proprietary claims to hitherto excluded fields both of the commons and of diverse human endeavours such as agriculture, biodiversity etc. In the GATT/WTO arena, intellectual property is incorporated automatically into “the internal logic of international economic governance”. A critical aspect of that internal logic is driven by the classical ideology of trading regimes in international law as self – contained frameworks with little or no obligation to socio – political and other public interest claims and considerations. Although, the fundamental principle of intellectual property philosophy is the need to strike a balance between private and public claims to knowledge and innovation, but the commitment to one extreme of the competing tensions distorts the essence of intellectual property. Further because of its root in the trade arena, current intellectual economic governance, that is, in the trade arena, current intellectual property policy emphasizes one end of the spectrum of the competing claims, namely, private claims to knowledge as against public claims and their underlying policy considerations. Thus the dominant pull of intellectual property policy in the current trade arena is the so – called “commodity logic,” which is “based on maximizing

---

profits to producers of IPRs.”

This vision of Intellectual property rights stands in conflict with a core objective of intellectual property in terms of fostering innovation on one hand. Also, on the other hand it undermines an alternative vision of intellectual property, one that supports the role of intellectual property in promoting public claims to knowledge and other issues bordering on social justice or public interest. Thus the WTO-TRIPS Agreement creates conflict with social policy consideration of member country. Inspite of this, TRIPS contains far more open ended interpretive space in its text. For instance, it’s graded transitional provisions, and the provisions on compulsory license, *sui generis* form of protection, and *ordre public* exemptions may disempower the sustained attack premised on disregard of social policy considerations at the other end of the intellectual property policy spectrum. In other words the above provisions of TRIPS Agreement regarding compulsory licensing, *sui generis* form of protection and *ordre public* exemption can be used by member country to promote their social policy consideration and protect their national interest specially in case of developing and least developing country.

The most serious problem today before the developing countries is regarding the use of intellectual property to address social policy imperatives in the exercise of their economic sovereignty guaranteed under the pre-TRIPS era. No doubt, today the TRIPS Agreement has created an intellectual property regime with binding, *albeit* minimum, substantive content. Under TRIPS, no longer are state’s obligations to protect intellectual property optional, no longer is there ambivalence regarding the substantive content of the international intellectual property

---

regime, or the extent of states commitment to them. Accession to the
TRIPS agreement is automatic and compulsory for all members of the
WTO. Unlike the immediately preceding arrangement, TRIPS
incorporates WTO’S “hard-edged” binding dispute settlement and
enforcement system. The WTO/TRIPS permits retaliatory trade
sanctions against erring states. Further the farthest reaching consequence
is the expansion of the scope of intellectual property to a number of areas,
notably genetic resources and plant varieties. In the previous regime,
deerence to cultural and moral considerations accounted for the
exclusions of these areas from private ownership. Thus the creation of
a binding, albeit minimum, substantive and enforceable international
intellectual property regime, as well as the extension of intellectual
property, especially patent protection, to genetic resources and plant
variety are key highlights of the TRIPS regime.

More than any of the changes introduced by the TRIPS Agreement, Gene
patents or patentability of life forms, including plant varieties under
Article 27.3(b), represent the sparkplug that have fired the opposition and
resistance from member countries who do not provide IPR protection for
plant varieties. The reason for this is simple. These subjects are
considered as common heritage of mankind or community property

869 See generally, Adrian Otten and hannu Wager, “Compliance with TRIPS: The Emerging World
870 In their detailed enunciation, these changes represent a “a marked strengthening of substantive
intellectual property standards” in a direction opposed to the social interest sensitivities of
developing countries and their economic sovereignty guaranteed under the pre-TRIPS
framework. Consequently, the entrance of the TRIPS Agreement into the global intellectual
property equation has yielded a culture of disaffection against the Agreement by developing
countries akin to the one that prevailed against the WIPO framework by their developed
counterparts. See generally, Paul salmon, “Cooperation between the World Intellectual Property
organization (WIPO) and the World Trade Organization (WTO)” 17 St. J. Legal Comment
433(2003).
having no private ownership. Historically, under traditional intellectual property law, pant and other life forms were outside the sphere of inventiveness and by extension, private ownership. Whilst developing countries treated PGRs as public goods and part of the common heritage of mankind, seed breeding corporations in industrialized countries exploited PGRs (in *ex situ* seed banks of the International Agricultural Research Centres and other public seed repositories) obtained from centres of biodiversity. They did this by obtaining plant breeders rights (PBRs) - and intellectual property and private ownership regime over PGRs – and related intellectual property protection and in this way effectively prevented the natural suppliers of PGRs from benefiting.

Extending private ownership claims (essentially by plant breeders) to PGRs, particularly through the instrumentality of the quasi- intellectual property regime of PBRs, was championed by industrialized countries, especially the United States. Changes in that country’s statutory and case law as early as the 1930s through the 1980s gradually brought PGRs within the ambit of intellectual property protection jurisprudence. Despite initial reluctance, European resistance to the expansion of intellectual property rights to PGRs and other life forms could not endure. In 1961, by virtue of the treaty establishing UPOV, PBRs were collectively endorsed by a group of mainly industrialized countries and its scope of application extended from the national sphere to international membership of the treaty. Following progressive reviews and strengthening of UPOV, the regime of PBRs is now consolidated within UPOV. Although many developed countries have been coerced into UPOV, the treaty and its PBRs regime provide a veritable framework for mostly industrialized countries with a head start in plant breeding and
agro-biotechnology in general to appropriate PGRs in *ex situ* seed banks and generally to make dependence their developing country counterparts who are major suppliers of global PGRs, including those in the common pool.

UPOV introduced a special form of protection called *sui generis* form of protection for plant varieties. UPOV advocates for *sui generis* system for plant varieties by granting breeder’s rights to the breeder of a variety. UPOV is revised in 1972, 1978 and lastly in 1991. At present provision of UPOV are applicable to all plants genera and species. It protects (i) firstly, the lowest botanical taxon of a plant i.e. species which is the lowest known rank in the plant kingdom, (ii) secondly, the slightest distinctive characteristics of a variety in that species. However, in latter case, such distinct characteristics must be clearly distinguishable from existing varieties, (iii) lastly, a variety which is new, stable and uniform in its characteristics. Thus, a variety must qualify ‘NDUS Test.’

It is believed that UPOV, 1991 version has actually strengthened the rights of plant breeders and brought them at par with patentee. UPOV, a *sui generis* system was adopted to avoid stringent rules of patents over plants and plant varieties. However, by extending scope of protection to all plant *genera* and *species*, by enlarging breeder’s rights to all seed production of a protected variety, or to harvested materials of the protected variety, or to products prepared from harvested materials and even over EDV, and by raising the term of PVP to 25 years in cases of vines and trees and 20 years for all other plants, has actually weakened the objectives of *sui generis* system. Now breeder’s rights have become akin to weakened patents and the conceptual distinction between the patent and *sui generis* system is blurred.
Moreover, provisions of UPOV completely missed out the importance of acknowledging the concept of benefit sharing, prior consent of the community, etc. in cases where the new developed variety uses biological resources (preserved by the indigenous peoples for centuries. It has largely concentrated only on the rights of the breeder’s creating an imbalance among rights of the breeder’s and the community rights. Thus UPOV does not take care of social policy consideration.

Beyond UPOV, the TRIPS Agreement specifically sanctions the notion of intellectual property protection over plant varieties. Article 27 stipulates in part that members shall provide for the protection of plant varieties either by patents or by an effective *sui generis* system or any combination thereof provided they are new, non-obvious and have industrial application. However, the member countries can exempt plants from patent regime. But in that case they have to protect plant varieties either by patents or by ‘effective’ *sui generis* system or by combination of both. What would be ‘effective’ *sui generis* system is not provided under TRIPS. The member countries can take advantage of this concession and can create a *sui generis* system that will suit their respective needs and requirements in ‘the best’ manner. This provision has at least two relevant implications. First, it marks a more expansive and stronger regime of intellectual property protection for PGRs, including patent or other unspecified options which constitute an “effective *sui generis*” system. TRIPS scope transcends UPOV and embraces the larger WTO member nations. Also, its provisions are subject to the WTO enforcement and dispute settlement powers. Second, despite suggestions to the contrary, TRIPS’ provisions for intellectual property protection over PGRs are not necessarily equivalent to PBRs under UPOV. However it marks a formal
and most authoritative regime of protection for PGRs in international intellectual property jurisprudence beyond the scope contemplated under UPOV. Thus, TRIPS effectively strengthens, if not escalates, the continued use of intellectual property rights to undermine developing countries’ stake in PGRs—a concern that predates TRIPS. The latter’s provision on PGRs provides impetus to pre-existing pressure for equity in the allocation of benefits of plant genetic resources.

Historically, developing countries have continued to challenge the unjust consequences of applying intellectual property, especially PBRs in the PGRs arena, at the FAO Commission on Plant Genetic Resources for food and Agriculture (FAO/CPGRFA). This effort resulted in a non-binding International Undertaking on Plant Genetic resources for food and Agriculture (IUPGRFA) in 1983 which affirmed the common heritage principal and required that for research, plant breeding and other useful purposes, parties should have access to all PGRs, whether naturally occurring, cultivated, or in seed banks. Clearly, the vision of common heritage was in conflict with the underlying approach of appropriation of PGRs under the UPOV regime. The apparent conflict between IUPGRFA and UPOV was resolved in favour of UPOV through an interpretive clarification in 1989, not of UPOV itself, but of IUPGRFA, to the effect that PBRs under UPOV were adjudged compatible with the common heritage principle. This reconciliation created an imbalance in the (UPOV) Regime, permitting unrestricted access only to unimproved PGRs without requiring compensation to states, communities or institutions that maintained those resources” from which protected and improved varieties were derived. This equity gap was further compounded by Article 27 of the TRIPS Agreement, gave rise to
demands for the recognition of farmer’s rights in PGRs. Unlike most claims to intellectual property, farmer’s rights are presented as rights not to be restricted, but to be encouraged and open to exploitation so long as those who benefit from them commit to their sustainability and do not shut out the farmers who generate them. Users of such rights do not need the consent of farmer’s to exploit the skills in question. Finally, in so many ways, farmer’s rights are forms of traditional knowledge in form, content and, to some extent, context. For example, they arise incrementally, derive essentially from traditional ecological/biodiversity knowledge and are informal in nature. Indeed, farmer’s rights are encapsulated in the CBD’s reference to “knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity.”

The TRIPS Agreement contains no provision on farmer’s rights or any correlating privileges. Rather, it provides for a regime that empowers breeders privatization of PGRs. Protection of PGRs via PBRs was already entrenched in the intellectual property jurisprudence of many developed countries before the advent of TRIPS. To add insult to injury, TRIPS prescribes the option for effective *sui generis* protection or both for PGRs and by that stroke rolls back the progress, if any, that was made by the IUPGRFA revision of 1989. As if that did not suffice, the revisions of 1991 to UPOV plugged the existing protections of what the Convention characterized as “farmer’s privilege” – a concept analogous to farmer’s rights – as one of the exceptions to PBRs. Before the 1991 revisions farmer’s privilege trumped breeder’s rights. By virtue of farmer’s

---

871. CBD, Art. 8(j).
privilege, breeder’s rights did not extend to genes or principal genetic materials to which farmer have had access. Farmer’s were allowed to indulge in the age-long practices of using or replanting farm-saved seeds, even if they were of protected varieties under PBRs. The latest trend is reflected in the national laws of member states of UPOV, which as previously noted, has had its rank swollen in recent times by a significant number of developing countries. TRIPS extension of intellectual property protection, including potentially the PBRs model to PGRs, is insensitive to prevailing agricultural philosophy and traditional farming practices in indigenous communities in developing and developed countries alike. However by leaving the “plant varieties” undefined, TRIPS’ open-ended language of the Article 27.3 creates a flexible standard of protection sympathetic to developing nation’s socio-economic priorities, provided the effectiveness requirement is satisfied. The term “effective” which is the only standard outlined in TRIPS for protecting plants, is left undefined. Article 31 of the Vienna Convention, which gives the interpretive rules for undefined terms in international agreements, requires treaties to be read in light of their objectives and purposes. Such an objective-based reading of an agreement is supported by the terms of the subsequent clarification made to TRIPS, generally known as the Doha declaration. The declaration states, “the TRIPS Council shall be guided by the objectives and principles set out in articles 7 and 8 of the TRIPS Agreement and shall take fully into account the development dimension...”. Similarly, the declaration on public health asserts that, “in applying the customary rules of interpretation of public international law each provision of the TRIPS Agreement shall be

---

read in light of the object and purpose of the Agreement as expressed, in particular, in its objectives and principles.” The provisions of TRIPS including the effectiveness obligation in Article 27, should be read in light of the agreement objectives.

The objectives of TRIPS in Article 7 details, that enforcement of IP mechanism should “contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge. Article 7 requires technology to be promoted “in a manner conducive to social and economic welfare and to balance of rights and obligations. Thus, the objective of TRIPS is to balance members’ IP protection obligation and their right to promote social and economic welfare. The principles under which the objectives of article 7 work are discussed in article 8. Entitled principles, Article 8 recognizes each member’s right to adopt public health and public interest measures, provided they are consistent with the provisions of TRIPS. An objective – based interpretation of TRIPS necessitates the Article 7 requirement that IP mechanisms balance member’s rights and obligations should be read alongside the Article 8 principles, which vest members with the right to prioritize their national public interests. In light of articles 7 and 8 of TRIPS, the effectiveness of a plant protection regime established under article 27 must be judged by its ability to accommodate local and national welfare and economic goals. Such a reading of the effectiveness requirement fits more comfortably with the other subsection of Article 27, which provides that members may choose to protect biological or microbiological materials. Member flexibility to establish an effective system increases when using a national yardstick. Therein, perhaps, lays
the benefit of article 27.3’s use of the expression “an effective *sui generis*” system as opposed to the effective system. Thus for developing nations, using a national yardstick, an effective system would provide adequate rewards to stimulate successful research and development of plant varieties without compromising national welfare goals. With such a national focus, a developing country can structure a regime “expressly reserving the right of a farmer who legitimately purchased protected seeds to save enough from her harvest to replant her fields the following season.”

Thus the effectiveness of the system’s lies in providing breeder’s rights without sidelining farmers or compromising national priorities. Unlike the TRIPS patent regime, whose ability to cater to individual national goals remains questionable, the inbuilt flexibility in the *sui generis* alternative in Article 27.3 allows each country to structure unique plant protection regime. In doing so, all nations have to appreciate that both over – protection and under protection detrimentally affect trade, and would therefore fail the sufficiency test. This is because over protection of breeder’s rights would affect developing nation and could lead to food security issues if farmer’s are sidelined. At the same time, inadequate protection of breeder’s rights can also erode the incentive to innovate.

Viewed from this angle, out of the menu of offerings found under Article 27.3 of TRIPS, a *sui generis* regime creates the ability to associate national welfare requirement with plant protection – an association otherwise lacking in the formal patent mechanism. It is because of this benefit that several developing nations including India, have chosen to satisfy their TRIPS obligation via *sui generis* systems.
CBD and ITPGR are the two international treaties which deal with the conservation and the protection of biological resources. CBD is a general instrument with regard to biological resources. It acknowledges the concept of prior consent of concerned community before using their biological resources even for creating new plant variety. It also calls for benefit sharing with the indigenous people or community who had preserved the biological resources for decades. However, ITPGR encourages the conservation of plant genetic resources through national and international collections of seeds and plants.

European countries have two level of protection one at national level and other at community level. They have adopted different community laws like EPC and CPVR to harmonize the law on the respective subjects among the member states. However, it looks that they have not succeeded in achieving the aim. In EPC, except for the grant of rights and the subject matter of patentability, the applicant right holder has to resort national laws for the enforcement of their rights. For instance, national laws will apply in case of infringement of a patent granted under EPC. Similar, is the case with CPVR. National courts have jurisdiction over the matters related to infringement, which will resort to national laws (basically procedural). Thus, the aim of EPC to establish uniform law for the European states failed to specify procedural laws including the enforcement of the granted rights. EPC has provided uniform substantive law but not the uniform procedural law.

Moreover, the regional laws have doubled the trouble. Though the nationals of a member state are free to choose either national laws for protecting their plant variety or go for regional laws. If they opt for national laws then they have to file independent applications for the
protection of one plant variety in all European states. But where they opt for regional protection, then though they will be saved from filing multi-applications for the protection but then they have to resort national laws for every infringement of their rights. Thus, it seems European states have complicated their laws.

USA is protecting plants and its variety under three heads: first under the plant patent (35 U.S.C s. 161); second by general or utility patents (35 U.S.C. S. 101) and lastly by *sui generis* form of protection i.e. by providing the PVP. On one hand, the plant patents are only available for asexually reproduced varieties and on the other hand, PVP only extends to sexually reproduce or tuber produced varieties. However, the utility patent is available to all forms of plant varieties. The Supreme Court of US has held in *Chakrabarty Case* that anything under the sun can be patented and falls within the scope of Section 101 of the Code. Hence, utility patent can be granted for anything and everything including plants. Also in *J.E.M. Ag Supply, Inc. Case*, the US Supreme Court clearly held that utility patent can also be granted to sexually reproduced plant variety. Thus, the owner of the variety or the inventor of a plant variety or plant has the option to either go for patents or for *sui generis* system. But it is not very clear that whether both form of protection is available to one single variety or not. Meaning thereby can one variety be subject to both form of protection i.e. utility patents as well as PVP. However, in *Enola Case* the concerned variety was subject to both form of protection i.e. the owner in the present case the Proctor holds both a US patent and a US PVP certificate on the Enola yellow bean. Also, USA being a signatory to UPOV, 1991 is violating its provisions. UPOV states that each contracting party must grant and protect breeder’s rights. This means a
plant variety has to be protected by PVP system. However, there is an exception to this rule, according to which a contracting state can protect asexually reproduced varieties under its national laws. Thus, USA can allow plant patents over asexually reproduced varieties. Ideally USA cannot allow patent protection over plants including sexually reproduced variety, but then it is actually providing patents over sexually reproduced varieties. Further, USA is also a member to WTO and therefore, a member to TRIPS. TRIPS under Article 27 allows grant of patents over all subject matters including plants provided they are new, involve an inventive step and have industrial application. This means that USA by granting patents over plants is covered by the provision of TRIPS. Now it is not very clear that which law should a country must be abided, in case where it is a signatory to both UPOV and TRIPS (like USA).

After analyzing plant variety and the laws on the subject, it seems that plant varieties can be best protected under *sui generis* system because: (i) firstly, discoveries of plant varieties of natural origin which are specifically excluded from the subject matter of patents can be protected under it; (ii) secondly, any plant variety which is new, distinctive, uniform & stable can be protected under PVP system. However, a plant variety needs not to be novel in the same sense as required by patents. It can be protected if on the date of filing application for the protection, the said variety is not commercially exploited by the breeder or with his consent within the territory for which the protection is applied for; (iii) *Sui generis* system (PVP system) recognizes a concession to farmers so that they use the protected variety for their own filed and even can save seeds for further cultivation. However, no such concession is provided under patent regime. Farmers need to pay royalty for every use. This
concession is very important for developing and LDC’s as they have generally agriculture base economies; (iv) Developing countries like India and LDC’s have taken the advantage of Article 27 (3) (b) of TRIPS and have introduced the concepts such as prior consent, and benefit sharing in their national laws on the subject. These important factors are even missed under UPOV which is regarded as the mother of PVP system; (v) fifthly, PVP system does not provide exclusive right only to breeder. It also recognizes PVP vested with states (in cases of wild species not protected can be used only with prior consent of that state). This feature is prominent only to PVP system and not to patents; and (vi) lastly very importantly, PVP system protects only a particular plant variety and not the plant. Thus, it allows other breeder’s access to the basic genetic material required for further breeding. This helps in producing new and better varieties of crops for the future generations. Patents on the other hand, protects the process as well as the final product i.e. the whole plant (in the present case), blocking the whole genetic make-up of a particular plant for further use. Therefore sui generis system is better for plant variety protection.

**8.1 Indian Scenario**

The global regulatory regime in the form of WTO/TRIPS has clearly affected the Indian Law and policy in relation to IPRs and Agriculture too. The enactment of the Protection of Plant Varieties and Farmers Rights Act, 2001 of India is a good example of the consequence of the global regulatory regime. The PPVFR, 2001 of India, under para 6 of the introduction given in the beginning clearly enumerates this point as under
AND WHEREAS, India, having ratified the agreement on trade related Aspects of intellectual property Rights should, inter alia, make provision for giving effect to sub paragraph (b) of article 27 in Part II of the said Agreement relating to protection of plant varieties.

Be it enacted by parliament in the Fifty-second year of the Republic of India as follows.

This above paragraph given in the introduction to the PPVFR, 2001 specifically mentions that this Act is passed in pursuance to TRIPS Agreement. India has enacted all the necessary legislation to comply with the requirements of the TRIPs Agreement. For protection of plant varieties, The Protection of Plant varieties and Farmer’s Rights Act (PPVFR) and the authority to oversee its implementation are in place. Since, India was under TRIPS obligation to protect at least plant varieties either by patent or by ‘effective’ sui generis system or by combination of both, India opted for a sui generis system for plant varieties. India smartly utilized the concession provided under TRIPS and enacted unique legislation called PPVFR in 2001. PPVFR was enacted keeping provisions of TRIPS, CBD and UPOV in mind. PPVFR is a classic legislation which aims to provide protection for plant varieties, rights to the farmers and breeders and to encourage development of new varieties of plants. The Act has many unique features. It strikes a balance between the rights of farmers and breeders by rewarding the farmers and local communities from the pool of National Gene Fund for their conservation and development efforts and at the same time, ensuring rewards for innovation by granting plant breeders’ rights. Public interests will be taken care of through provisions of compulsory licensing, non registration of varieties which affect public order and morality and are injurious to
human, animal, plant life and health. It has covered four types of varieties (new variety, extant variety, EDV and farmer’s variety) under the definition of ‘variety’ and breeder’s rights are kept subject to farmer’s rights, researcher’s rights and compulsory licensing. To ensure that modern breeding techniques, which use advanced technologies like biotechnology, are not misused, the Act prohibits registration of any variety which contains genetic use restriction technology (GURT). It is hoped that this legislation will stimulate research and development in Agriculture both in public and private sector by providing protection for plant varieties. However, the legislation has scope for further improvements and fine tuning.

The Act envisages inviting claims for benefit sharing from any person/group of persons or non-governmental organization (NGOs) after issuing the certificate of registration. This well-intended provision on benefit sharing should be spelt out clearly and precisely. Depending on the extent of genetic material used, the breeders has to share the benefit with the public, should be specified in the beginning itself. This will help to remove the uncertainty in the minds of private seed companies so that they can precisely earmark their R&D portfolio for the development of new plant varieties.

Further the Act specifies that the breeder shall disclose to the farmers the expected performance under given conditions of any propagating material of a registered variety. But if the variety or the propagating material does not perform as expected, the farmers would have to approach the Authority, after listening to both parties, shall decide about the amount of compensation. It is very complex issue and, as such, blatantly unfair to the farmers. The farmer, under such circumstances, should be given a
certain proportion of expected output value per unit of land as compensation. Otherwise, the farmers cannot withstand the legal power of seed companies. This provision needs to be simplified. The PPVFR opens a separate route for registration of essentially derived varieties (EDVs). The authority, not the registrar of plant varieties, will consider granting the certificate of registration for EDVs. We feel strongly that, EDVs should also pass for registration through the same channel as other new varieties of plants. Basically, EDVs are transgenic crops which are similar to the initial variety except the act of derivation. Instead of providing them separate channel for these varieties, we should allow for registration of EDVs through the same route. The need is to take effective measures for environmental impact assessment of EDVs before they go to the farmers’ fields. Lastly, this legislation has scope for farmers being dragged into courts by the plant breeders. Here, it would be pertinent to note that many lawsuits against farmers regarding unauthorized use of genetically modified crops are pending before the courts in USA and Europe.

All laws whether national or international, were primarily enacted to protect the interests of breeders, who have contributed in the progress of society. Their contributions are rewarded by granting certain rights over the protected variety for a particular duration. Thus, breeder’s authorization is required for every use of such protected variety. User of protected variety has to pay royalty for every use to the breeder. And the breeder can sue the infringer for violating his rights. However, breeder’s rights are subject to farmer’s rights and researcher’s privilege. Moreover, breeder’s rights can be compulsory licensed if the breeder is unable to
provide the concerned variety at reasonable price. But then the breeder has to be reasonably compensated for his loss.

India also enacted Biodiversity Act in 2002 in order to include provisions of CBD. The Biodiversity Act regulates access to genetic resources and associated knowledge. The Act’s main premise is to check bio-piracy. It also has elaborated provisions on benefit sharing and prior approval or consent from the National Biodiversity Authority (NBA). Thus, it acknowledges prior consent and sharing of benefits in case the subject matter of protection includes biological resources. However there is no provision for the involvement of communities in decision making, which is supposed to be taken care of in framing the operational rules for the Act. The Act is very much influenced by the Bonn Guidelines. Thus in enacting the PPVFR, India, like other developing nations, took advantage of the Article 27.3 flexibilities by embracing a sui generis regime. First, it highlighted the complexity of farming in the developing world, which requires balancing the interests of the variety of Actors involved in agricultural trade. Second, the PPVFR presented an alternative model to UPOV for poorer nations. Presumably, the PPVFR was passed because India hoped to benefit by introducing PBRs. Further with a view to compliment the PPVFRA, The ministry of Agriculture introduced a Seed Bill in 2004 to encourage seed trade to promote the seed industry, boost exports, and protect seed quality. While TRIPS does

---

874 The Biodiversity Act, 2002, s. 2 (c) defines ‘biological resources’ to mean “plants, animals, and micro-organisms or parts, their genetic material and by-products except human genetic material.”
875 Ibid. S. 3 states that "no person referred to in sub-section (2) shall without previous approval of the NBA, obtain any biological resource occurring in India or knowledge associated thereto for research or for commercial utilization for bio-survey and bio-utilization." Also, s. 6 states that "no person shall apply for any IPRs, by whatever name called, in or outside India for any invention based on any research or information on a biological resources obtained from India without obtaining the previous approval of the NBA before making such application."
876 Ibid. Ss. 19 (1) & 20.
877 These actors are: (1) Breeders (2) indigenous farmers, and (3) indigenous farming communities.
not require government to regulate seed trade, the passing of the PPVFA perhaps necessitated a review of the existing framework governing seed trade. But on the other hand it is said by some critiques that the Seed Bill is introduced by the government with an eye on UPOV Membership. Because many of the features of PPVFR go beyond both, UPOV 1978 and 1991. That is the reason that UPOV is still considering the application made by India for UPOV membership and not granted the membership to India.878 This is a retrogressive step adopted by India, which it was not required to do under any of the international obligation including TRIPS. If the seed bill is passed in the present form, it will create a legal regime that will be consistent with UPOV model of the plant variety protection. It will indirectly bring back the previous draft bill of the plant variety legislation that contained narrow farmer’s rights and was modeled on the basis of the UPOV 1978 convention and will pave the way for India’s UPOV membership because the legal regime, in India, at the macro level, will be UPOV consistent. The seed bill, if passed in its present form, will mean that a commercial plant breeder can get the varieties registered under the seeds law and not bother about the PPVFR Act, because there is no requirement in the seeds bill regarding the NDUS criteria, no requirement to disclose passport data or share benefits and also no grounds of challenging the registration or issuing a CL. This will virtually grant monopoly rights to the plant breeder without any rights or benefits accruing to the farming community. Further, even if India does not become a member of UPOV, the passing of the seed bill will ensure, de facto, that India has a plant variety protection regime that

878 The first application was made in 1998, i.e. before the PPVFR Act was passed in the parliament. Later, this application was re-energized in 2002 by submitting the PPVFR Act to UPOV, which gave rise to some important issues as how will the rights of plant breeders, in the manner in which they are protected in UPOV, be protected in India which has a PPVFR Type legislation.
is tailored as per the UPOV model. In other words, India, after becoming a member of UPOV, may retain the farmer rights provisions in the PPVFR Act, but its actual implementation will become difficult due to the new seed law.

8.2 Suggestion

It is therefore suggested that the countries must resort only to one form of protection i.e. *sui generis* system for plant and its variety. Because, otherwise the purpose of enacting and introducing a special form of protection will be of no use. Countries have diluted the *sui generis* system. They have granted patents over plant and its varieties either under an express law or by enacting new directives or rules or regulations and also by setting precedents.

Till the world unanimously decided to protect and acknowledge biological resources, it is suggested that the developing countries (India too) and LDC’s must enact their national laws respecting and protecting biological resources. Thereby, leaving the breeder to comply with the respective national laws (if wants protection within a territory). And lastly, the countries (especially developing countries and LDC’s which are very rich in biological resources) must take steps to compile and publish their traditional knowledge in order to avoid bio-piracy.

The issue related to enforceability of the PPVFR Act is a one of the major challenges that India will face, given its size and diversity, in properly enforcing the legislation. Therefore attempt should be made to make the poor and illiterate farmers realize their rights.

Strong PBR regime will curtail the farmer’s rights by increasing the price of high quality of seeds. In India most of the farmer’s are of small holdings, therefore agriculture provides the income to them sufficient
only for survival. They can’t gain from it like business as in developed countries. Before WTO’s emergence the Indian government used to provide subsidies to the farmer’s, therefore cost of the investment was low, but now under the pressure of the WTO’s obligation India has to reduce subsidies in Agriculture gradually. Therefore it is suggested that Government/public funded research institution should be strengthen in research and development, particularly in relation to seed industry parallel to private seed corporations so that private/multinational seed companies will not be able to exploit the farmers by increasing the price of the seeds. Apart from this the small farmers should be given the subsidies in purchasing the branded seeds so that they can’t be exploited. The NGOs and government bodies should be authorized to apply for benefit sharing on farmer’s behalf. Because in some cases farmers may not be vigilant in applying for benefit sharing considering social, economic, and educational conditions of the local communities. In that case communities will be left uncompensated for breeder appropriations. Moreover, the dearth of regional offices among the local communities could pose procedural complications for farmers, requiring them to apply to remote offices. Therefore it is also suggested that more regional offices should be opened so that the interest of local communities should be protected.

In the seed bill provision should be made for disclosure of the status of the protected seeds, when the seeds bill interacts with the PPVFA. Apart from this in seeds bill, provision should be made for pre – grant opposition to register seeds.

The reference to an “effective sui generis system” in Article 27 of the TRIPS Agreement provides a window for national governments to creatively evolve suitable forms of knowledge protection, including
indigenous knowledge. Therefore a provision should be made in the PPVFR regarding undertaking to be given by the breeder that the variety does not involve the use of traditional knowledge. This provision should be made mandatory. If a breeder fails to give undertaking, then his variety should not be registered. Further if a breeder uses the traditional knowledge to develop a variety, then in that case he must give the consent letter of the community. This provision will prevent bio-piracy.

A gene Trust Fund or the Plant Variety Protection Fund should be established or created for conservation and development of plant varieties by local communities. This fund should be established as an independent and separate fund for the benefit of bona fide organizations or institutions managing and operating an accredited gene bank. An amount not exceeding 20 per cent of the fees and charges levied under the Act is to be used for the purposes of the Gene Trust Fund or Plant Variety Protection Fund. This fund, apart from administrative expenses, is to be expended for assisting and subsidizing any activities of communities in connection with the conservation, research and development of plant varieties.

No doubt the current global regulatory regime (in form of WTO/TRIPS in trade and IPRs) has standardized and harmonized the legal norms in relation to IPRs and Agriculture through article 27.3, and leaves little space for domestic policy making by India or other nations. Even then, the little space left for flexibility on the part of India and other nation-states is often not exercised to its fullest potential due to the strong

---

879 However in India, under the PPVFR authority fund is constituted in the name of Plant Varieties authority Account. This fund shall be credited with all the grants and loans made to the authority by the central government and all fees received by the Authority and Registrar. This Fund shall be applied for the salaries and other remuneration of the chairperson, officers and other employees of the authority and other expenses of the authority in connection with the discharge of its functions and purposes to the PPVFRA.
influence of developed countries and UPOV. This can be seen in Indian government’s attempt for UPOV membership. Since Indian plant variety protection and farmers rights Act fulfils the obligation imposed by the WTO/TRIPS Agreement under article 27.3, and TRIPS does not requires the UPOV membership or UPOV type protection, then also the India is very keen for UPOV membership, and for that it want to dilute the some of the provisions of PPVFR which are not in spirit of UPOV, Through the Seed Bill. Therefore it is suggested that the provision of PPVFR should not be diluted through the Seed BILL. Instead Seed Bill should be subjected to the provision of PPVFR, and in case of inconsistency between Seed Bill and PPVFR, the provisions of PPVFR shall override. TRIPS provide enough flexibility to protect the national interest and welfare of community, which can be utilized by India to protect the farmer’s rights.

*****