POLICY BRIEF 11

PLANT VARIETY PROTECTION: LESSONS FROM A CROSS COUNTRY PERSPECTIVE

With the proposed "Protection of Plant Varieties and Farmers' Rights Bill" being referred to a select parliamentary committee, the stage is set to usher in an intellectual property rights regime in agriculture. A new piece of legislation is invariably accompanied with institutional changes; be it establishment of new ones or restructuring the existing ones. Considering techno-legal nature of the bill, such changes have far reaching in consequences. The technical, legal and institutional lessons that emanate from comparing PVP legislations world over (Table 1) and suggestions for refining the proposed bill are outlined below.

PVP Legislations: A Comparison

A PVP framework comprises of a number of provisions and clauses. Ten technically important ones have been chosen to make a comparative analysis among legislations of 33 nations and UPOV acts (see Box1 for salient features). Novelty, distinctness, uniformity and stability (NDUS) are the fundamental criteria for according protection to plant varieties. A critical instrument for safeguarding 'public interest' is compulsory licensing. This provision enables the state to ensure availability of adequate quantities of propagating material of protected varieties at reasonable prices. These two clauses, therefore, find a place in all the bills. Some countries extend protection to all new varieties while few others have specified the list of genera and species eligible for protection, with a provision for extending the list. In order that protected varieties come into public domain at the earliest, developing economies have opted for shorter duration of protection. Researcher's privilege and farmer's , privilege find explicit mention in the legislations of seventeen and eleven countries respectively. Apart from protecting absolutely novel varieties, twelve countries have provisions for the protection of essentially derived varieties (EDVs), to prevent cosmetic breeding. Only Zimbabwe has the necessary provision for protecting already existing varieties. Member countries of conventions and regional agreements grant rights to breeders from other member countries. Alternatively, reciprocal treatment is on a bilateral basis. Penalties for infringement and other offences are usually restricted to monetary compensations. Only a few legislations propose imprisonment and other criminal proceedings as deterrents.

Table 1: List of countries with year of enactment/latest amendment of PVP law.					
1.	Australia	1994	18.	Morocco	*
2.	Austria	1993	19.	Netherlands	1984
3.	Belarus	1995	20.	New Zealand	1994
4.	Bolivia	1993	21.	Norway	1993
5.	Canada	1990	22.	Poland	1987
6.	Chile	1977	23.	Portugal	1991
7.	China	1999*	24.	Russia	1993
8.	Colombia	1994	25.	Slovenia	1989
9.	Croatia	1997	26.	South Africa	1987
10.	Czech	1989	27.	Spain	1993
11.	Denmark	1994	28.	Sweden	1985
12.	Finland	1992	29.	UK	1983
13.	France	1970	30.	USA	1994
14.	Ireland	1980	31.	Uzbekistan	1996
15.	Italy	1986	32.	Venezuela	1993
16.	Kenya	1972	33.	Zimbabwe	1974
17.	Moldova	1991	34.	Indian Bill	1999

UPOV 1978, 1991 Acts and CoFaB are also compared * Precise year not mentioned in the bill document

Box 1. Highlights of the comparison		
1.	Genera & Species	All (7 countries), Listed (10 countries),
2.	Duration (years)	15 /18 (Developing), 207 25 (Developed)
3.	Conditions for Protection	NDUS (All countries)
4.	Researchers' Privilege	17 Countries (UPOV 1991 as Compulsory Exemption)
5.	Farmers' Privilege	11 Countries (UPOV 1991 as Optional Exemption)
6.	Extant Varieties	Zimbabwe
7.	EDV	12 countries & UPOV 1991
8.	Compulsory Licensing	All Countries (UPOV 1978 & 1999 as Restriction)
9.	Nationality	Generally principle of reciprocity
10.	Penalties	Usually of monetary and civil nature

The title of the legislation is important as it reveals *prima facie,* the underlying emphasis and overall intention. While PVP laws of Poland, UK, Netherlands and Kenya address seed industry in their titles,

animal breeds get an explicit mention in the Czech title. *Inter alia,* promoting research, providing incentives and technology transfer are cited as the purpose for establishing the law on PVP.

Unique Features

The comparison reveals certain interesting and unique features in some PVP laws. These are highlighted in box 2. New Zealand has included Fungi in the definition of Plant. Poland has made provisions to establish a "Seed Industry Fund" with fifteen well-defined objectives; maintenance breeding, training of breeders and conservation of plant genetic resources being some important ones. In addition to plants, Russia and Czechoslovakia provide protection to animal breeds also. Under the PVP law of the UK, discovery of plant variety growing in the wild or occurring as genetic variant, whether artificially induced or not, is also accorded protection. Slovenia bestows farmers' privilege to only small farmers. In an attempt to balance the rights of the inventor and the right to reuse seeds by farmers, the farmers' privilege is limited for a period of two years in Russia and Uzbekistan. Plant patents are common in Italy, Russia, Belarus, Uzbekistan and Moldavia. Apart from the public sector, adequate representation of farmers (USA), the private sector (USA, France and Poland) and various associations (Portugal) have been ensured in the respective PVP authorities. Importation of potentially deleterious seeds is prohibited under the Kenyan Act; apparently to prevent problems arising out of cross-pollination. Some countries have a common framework of PVP. The Andean countries under the CARTAGENA agreement (Venezuela, Colombia and Bolivia along with Spain) present a good example. Poland stands out by adding economic value to NDUS criteria.

Box 2. Unique features of some PVP laws
• New Zealand: Includes Fungi
• Poland: Seed Industry Fund and
• NDUS + Economic Value
• Russia & Czech: Protect Animal Breeds
• UK: Protects discovery
• Uzbekistan: Patents for NDUS, PVP for U&S
• Kenya: Prohibits deleterious seeds
• Andean Countries: Common PVP Framework
• Russia & Uzbek: Farmers' privilege - 2 Yr.
• Slovenia: Farmers' privilege for small farmers

Plant Variety Protection and Farmers' Rights Bill, 1999

The Indian Bill proposes protection for all genera and species notified by the Central Government for a period of 15 and 18 years for herbaceous and woody species respectively subject to the satisfaction of the NDUS criteria. Protection is also extended to EDVs. Researcher's privilege is provided to ensure continuous improvement of varieties. Breeders from any country, honouring the principle of reciprocity, are permitted to apply for protection. Provisions for invoking compulsory licensing and penalising infringers in order to protect public interest are laid down. Certain features unique to the proposed bill are discussed below:

1. India is the only country to cite WTO obligations in the preamble of the Bill 2. Re-use of farm-saved seeds is provided as farmers' rights rather than as an exemption or as a privilege. This is explicitly reflected in the title 3. Community rights are honoured by . the provision of benefit sharing 4 . National Gene Fund and sanction of schemes are proposed as instruments in this regard 5. Transgenics are included in the definition of 'Variety'. 6. Extant varieties are protected, till 15 years after their

notification under seed act 7. The bill, at the very outset, prohibits the protection of varieties deleterious to human & animal health and environment (e.g. varieties embodying terminator technology).

Suggestions for refinement

Even patent regime, which is considered as a stringent form of intellectual property rights, does not accord protection to discoveries. Patents are replaced by PVP in plants to recognise the fact that variety development basically involves improvement of already existing ones and not *de novo* creation. This postulation calls for correcting the definition of breeder from "discovers *or* develops" to "discovers *and* develops". This is essential more so in Indian scenario with a wealth of unexplored plant species. It is desirable to clarify if multilines, synthetics, composites and landraces are protected, since they may not clear strict uniformity and stability tests, despite being cultivated as varieties. Once the variety comes into public domain, the only profiteers will be the seed companies. If the government deems that longer duration of protection is in the public interest, it should have an option of extending the duration of protection under special circumstances. Composition, legal authority and functioning of the Protection of Plant Varieties and Farmers' Rights Authority need a review. The proposed authority is a representation of various ministries. Considering the imposingly techno-legal nature of the deliberations, subject matter specialists and legal experts should be statutory members. Adequate representation for private sector is a must for effective implementation of the proposed regime. Representatives of various associations viz. Seed Producers Association, Farmers Association, Breeders association, and Exporters association etc... constitute fair and appropriate representation from non-government stakeholders. In an era of public sector disinvestment, the authority needs to be made financially self-sustainable institution rather than another government department. We may need to accord the jurisprudence of a high court to the competent authority and create an appellate authority for quick and acceptable settlement of PVP related disputes, rather than bringing already burdened court of law in the picture. This is necessary to avoid delays and confusions. Designation of a repository to maintains propagating material of all protected varieties is necessary, in conformity with technical preparedness (e.g. NBPGR, which is already notified by the MoE&F). National Gene Fund may end up in operational difficulties if the procedural aspects of adroit handling of claims and counterclaims are not laid down. Synergy with other related acts and rules of procedures may not be easy to achieve (e.g. gene fund as in biodiversity bill). Infringement of any nature needs stern dealing such as imprisonment. However, faults in variety denomination be treated as civil offences without resorting to imprisonment. Profits and material can be confiscated and right withdrawn. Certain issues such as catalogue numbers, denomination, need clear wording.

Box 3 : Suggestions for refinement
• Redefine 'breeder1
• Elaborate "Farmers' Rights " preferably as a separate chapter
• Revamp authority by including technical and legal experts and representatives of major stakeholders
• Include a provision of extending the duration of protection for public interest
• Imprisonment is too harsh a penalty for offences other than infringement
• Specify if multilines, composite and landrace constitute a variety
• Honour the jurisprudence of competent authority to settle PVP related disputes.
• Make the PVP authority a financially self-sustainable institution rather than a government dept.
• Designate the repository of propagating material
• Operationalisation of Gene Fund needs a re-look

Whether EDVs need separate application or an application for absolute new variety automatically qualifies for an EDV if the conditions are met, also needs to be clarified.

The structure and organisation of a bill is important. An ideal PVP bill must either offer a broad, transparent framework or provide complete technical, legal, institutional and administrative details. The absence of such an approach may lead to a lopsided perception of the bill. An equal emphasis on various details, therefore, is desirable. In this context, the Indian bill needs revisiting. There is also a case for better organisation of the bill. For instance, opening sections give a message that there is no bar on the nationality and scope of protection. Specific clauses in the subsequent sections, however, restrict nationality on .the basis of reciprocity. There is also a provision for excluding certain varieties from the purview of protection, which the authority may deem necessary.

Summing up

Ushering in a new law with multifarious and profound connotations is not an easy task. Better the formulation, better will be the implementation. For effective implementation, this bill needs to be harmonised with the Seed Act, Environment (Protection) Act, and Trademarks Act and Geographical Appellation and Bio-diversity bills. A comparison of PVP laws from a cross-country perspective is not only relevant but also educative. For instance, the Australian PVP law is excellent from the definitional viewpoint. American legislation is a fine example of clarity and depth. The CARTAGENA agreement is a pointer for the potential for a common PVP framework maybe amongst the SAARC nations. The Kenyan law stands out for the procedural details. In the private sector, there is a growing feeling about the inherent weakness of PVP in relation to plant patents. It is therefore, in our own interest to make this legislation as effective as possible. Attempts to dilute the PVP philosophy must be resisted. Informed policy making internalises the technical environment. Inherent flexibility is the hallmark of good legislations. By and large, the proposed bill is well drafted and deserves commendation. There is however, room for refinement. The comparative exercise suggests some such steps.

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