

THE TRIPS AGREEMENT: Implications for Developing Countries

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The frame- work of TRIPS, within which the demand for Intellectual Property Rights (IPRs) on biological materials has arisen, is the emergence of biotechnology as a key economic sector. Armed with patents, this technology is controlled by the multinational corporate sectors which are in a position to facilitate or deny the use of this technology to others. For developing societies like India, this has critical significance for vital sectors like food and health.

The tussle for institutional control over genetic resources is for a simple reason. The developed world has the technological tools needed to convert genes to products. It does not have the raw materials, which are concentrated in the tropical, developing countries. In order to overcome this limitation, a harmonized IPR regime for genetic resources has been introduced into the WTO, with its threats of trade sanctions against countries that do not comply.

For India there are three major areas of concern pertaining to IPRs on biological / genetic resources as contained in WTO/ TRIPS.

1. Geographical Indication.

The protection based on Geographical Indication is to be found in Section 3 of TRIPS. Article 22 as also 23 and 24 deal with the protection of goods that are geographically indicated. So far the protection is offered only to wines and spirits. The efforts of India and developing countries to have the protection extended to other (agricultural) produce like Basmati rice and Darjeeling tea have been opposed by the developed countries. So far they have managed to keep such agricultural products of interest to us, out of TRIPs protection.

The economic importance of 'Geographical Appellation'.

An American company Rice Tech has received a patent on Basmati rice. This is an infringement of India's (and Pakistan's) geographically indicated rights. A special product like Basmati rice not only has a huge market in the UK, Europe, USA and West Asia, it also commands premium prices there. The current export of Basmati rice from India is to the tune of Rs. 1800 crores (Rs.1.8 billion). Pakistan exports somewhat more than that. The revenue from all the Basmati rice sold in the world market goes either to India or to Pakistan. That is the strong economic incentive to have a geographically protected name and not allow others to use it. As Rice Tech has attempted to do with Basmati.

There are other sought after products like Darjeeling tea, Alphonso mango and Shahi litchi. Apart from these agricultural products, there are herbal drugs and nutraceuticals which are attracting increasing attention. And patents. India has now enacted legislation on Geographical Appellations that will claim protection for certain products that are clearly associated with the region.

2. Patents on Micro Organisms

There was never any choice offered on this. The GATT negotiation ended with all member states accepting that they would provide patent protection for micro-organisms.

Patents on microorganisms like bacteria, algae, fungus and virus will have far reaching consequences for developing societies. Self-reliant, sustainable agriculture will be adversely affected if our ability to develop *biofertilisers* and *biopesticides*, both based on microorganisms, will be hindered by foreign patents.

Bacterial strains like those which act on soil phosphates can make a tremendous difference to our agriculture. These bacteria break down inert soil phosphates to a form that plants can use as nutrients. Such bacterial use could potentially slash our phosphate fertilizer imports dramatically. We need to keep our avenues of research open.

Similarly strains of nitrogen fixing bacteria could significantly improve nitrogen uptake of plants and improve the protein content of our foods. This can be of immense significance in enhancing the quality of nutrition for poorer sections of society. The role of microorganisms in other areas like pharmaceuticals, bio-mining, energy etc. is well known. Self reliance in these sectors will also be affected by patents.

India could have tried to get out of the patent on microorganisms by invoking the clauses of ordre public and offence to prevailing norms of morality. Unfortunately it did not. Patents on microorganisms have been introduced in the draft Patent Amendment Act which is awaiting approval by Parliament.

Gene Campaign has made some recommendations to the Indian government to reduce the negative impact of microorganism patents. Primarily, the strategy is to keep the definition of microorganisms conservative and not agree to the inclusion of unconventional categories like genes and cells in the Indian legislation. The details are as follows.

1. Microorganisms for the purpose of this (Indian) Act include:

Bacteria
Virus
Viroid
Protozoa
Algae
Lichen
Actinomyces
Fungii except edible fungii

2. Microorganisms do not include:

Variant forms
DNA
Plasmids
prions
hybridomas
Cells
Cell lines

3. Naturally occurring microorganisms are not patentable.

4. Patentable microorganisms are those which have been produced by adequate human intervention and fulfil the criterion of novelty, non-obviousness and industrial utility. Mere discovery and isolation will not be considered sufficient human intervention.

5. Patents will not be granted on materials obtained from national and international collections and depositories.

6. When material is taken from a country, Article 15 of the Convention on Biological Diversity will have to be respected. No patents will be granted without *prior informed consent and material transfer agreements*.

7. When a patent is granted, the patent holder will be obliged to *share the economic benefits* with the communities of the country from where the material was obtained.

8. In view of the critical nature of the subject matter, the patented micro organism will remain free for scientific research and experimentation.

9. Patents will not be granted on a broad basis (overarching patents with a very wide scope).

Patents will be granted for the organism only with respect to that particular function / property that constitutes the invention. The organism will remain free for others to create other inventions.

10. A Compulsory licensing provision will be made available to safeguard Food, Health, Defence & Environmental security.

3. Sui Generis System for Plant Varieties

The WTO / TRIPs require every member country to provide either a patent or an effective sui generis system to protect newly developed plant varieties. India and most developing countries have chosen the sui generis system.

India's sui generis legislation

The Plant Variety Protection and Farmers Rights Bill (PVP Bill) was drafted to fulfil the TRIPs/WTO demand for a *sui generis* form of protection for plant varieties. It was presented to Parliament in December 1999. The Bill was subsequently referred to a joint Parliamentary Committee to hold public consultations in order to improve the bill since it was not found satisfactory. The Committee has been hearing the views of experts and it has now prepared a revised Bill.

The revised Bill has attempted to rectify many of the objections to the definition and scope of Farmers Rights in earlier draft Bills. The Farmers Rights have been dealt with in great detail in the final draft. The revised Bill goes so far as to say that the farmer will not be liable to pay any fee to the Authority or the Tribunal set up under the PVP Bill or to the High Court in the event of being involved in any proceedings.

The most significant aspect of the Indian PVP Bill is that it allows the farmer to retain the right to sell seed, as is the practice today. This goes beyond the generally articulated demand of allowing the farmer to save seed from his or her crop for the next harvest.

The Bill says in Section 40 "Notwithstanding anything contained in this Act, a farmer(iii) shall be deemed to be entitled to save, use, sow, exchange, share or *sell his farm produce including seed of a variety protected under this Act in the same manner as he was entitled before the coming into force of this Act* ".

The Bill respects and rewards the innovation of the Breeder on the one hand, and on the other, does not allow such conditions to be created that would make farmers dependent on seed companies for seed supply. The Breeder is the only one entitled to derive commercial benefit from the registered name of the new variety. The Farmers Rights are restricted so as not to infringe the rights of the Breeder by qualifying "Provided that the farmer shall not be entitled to sell branded seed of a variety protected under this Act".

Such a situation would reward the effort made by the Breeder to create a new variety by allowing him/her the right to charge royalty and add profit in the first sale. It would however not allow farmers to be enslaved by perpetuating royalty collections on every sale of subsequent generations of seed. The farmers on their part would have to pay a reasonable amount in royalty for an improved seed provided by the breeder. But they would not be delivered into the hands of the breeder by having to forego their right to function as the producers and sellers of generic seed as they do today. Groups like Gene Campaign who has been leading the campaign to have a strong farmers right in the legislation, have been suggesting precisely this kind of balance between Breeders and Farmers Rights if we did indeed have to enact a sui generis legislation.

The farmer having the right to sell seed is an essential component of our food security. The tussle over farmers' rights which has been going on for the last few years reflects the tussle between the seed industry lobby and the pro-farmer lobby. Since the multinational companies are interested in capturing as much of the seed market as possible, they have been lobbying for a curtailed Farmers Rights, of the kind that has existed in all the versions of the Draft Bill prepared so far. It is a move in the right direction that the revised Draft Bill has come out firmly on the side of the farming community.

The rights of the farmer in the revised legislation are protected in other ways too. Since the new legislation will introduce proprietary seed for the first time in India, farmers will be unfamiliar with the notion of 'other' ownership of seed. In a public sector breeding program like ours, the institutions release new varieties over which farmers have complete rights. With seeds protected by Breeders Rights, there may be unwitting infringements. Here the new draft provides an important clause protecting the farmer against penalty if he was not aware of the existence of a breeder's right. This is a real life situation and this protection is important.

Apart from changes in the farmers Rights, the PVP Authority has been improved, although it still needs working. There is now representation of farmers, adivasi, women's organisations, seed industry and state governments in addition to the usual bureaucrats.

There is an extensive Tribunal with far reaching powers to regulate the practice of Farmers and Breeders Rights and substantial penalties (Rs. 50,000 to Rs. ten lakhs) and jail terms for offences and deceptions in declaring denominations. These are all steps in the right

direction. In addition, there should be a liability clause. The Bill should include provisions for farmers to demand compensation for poor seed.

The Importance of strong farmers rights

1. India must act firmly and resolutely in the TRIPS matter since a very large section of people and their economy would be affected by IPR provisions. Our IPR system will have to ensure food security and livelihoods and contain adequate safeguards for the farmers and for the research community. An important consideration in any system we implement will be clearly defined strategies for conserving the genetic resources which are the core of the current dispute.

India plants over 60 lakh (6 million) tons of seeds every year in its fields. The National Seeds Corporation and the various State Seed Corporations together produce less than 15 % of this requirement. Over 85 % of the seeds amounting to roughly 52 lakh tons, that are planted in Indian fields every year are supplied by the farming community. In other words, India's largest seed producer is the Indian farmer.

This right and freedom to function as the biggest, yet decentralised seed supplier of locally well-adapted seeds has helped India to make the transition from a grain deficient to grain surplus nation.

If the farmers' right to sell seed is taken away, the shortfall in the market of 50 to 52 lakh tons of seed will be filled in by seed companies, specially MNCs. India will lose control of its agriculture and its food security.

The implications of the farmer losing the right to sell seed are grave

Loss of income for the farmer

Loss of control over seed production

Loss of self-reliance in agriculture

Dependence of the farming community on multinational seed companies for seed

An ever-present threat that MNCs can withhold release of seed to apply pressure

At the national level this could mean a compromise with national security since food security is in the forefront of national security. A nation that does not produce its own seed and its own food can not be a secure nation.

TRIPS REVIEW AND UPOV AS SUI GENERIS SYSTEM

In the ongoing TRIPS review process, a number of influential bodies, including the WTO itself, are pushing for a narrowing of the *sui generis* option to one legislative model provided by the Union for the Protection of Plant Varieties or UPOV. This is unfair and uncalled for. UPOV is not mentioned in the TRIPS Agreement when other relevant IPR treaties are. Independent legal and economic experts have reiterated that UPOV can not be enforced as the only 'effective' *sui generis* system for TRIPS. And that there is ample scope for flexibility and national discretion in interpreting the *sui generis* option. Developing countries must ensure that there is no strengthening of the TRIPS Agreement now.

Why Gene Campaign opposes UPOV

The UPOV model is not in India's interest for several reasons.

- i. There are no Farmers Rights in the UPOV system, only Breeders Rights.
- ii. UPOV conditions are for industrial, not agricultural economies where only 2 to 5% of the population practices agriculture and there are no small and marginal farmers.
- iii. UPOV laws are for countries where subsidy to agriculture is very high and farmers get paid for leaving their fields fallow.
- iv. In Europe agriculture is a purely commercial activity. For the majority of farmers in Asia however, it is a livelihood.
- v. In UPOV countries agricultural research is conducted by seed companies with private capital, so they maximise profits by market monopolies. In India and other developing nations, agricultural research is done in public institutions with the taxpayers money and it belongs to the people.
- vi. The UPOV system is very expensive. The cost of a Breeders Right certificate could range from a few thousand to a few hundred thousand rupees. This will exclude small companies, farmers co-operatives and farmer-breeders from participating.
- vii. If developing countries join UPOV, they shall be forced to accept the patenting of Plant Varieties which is not in their interest. After the 1991 amendment, both patents and Breeders Rights are used in UPOV.

CoFaB AS DEVELOPING COUNTRY ALTERNATIVE TO UPOV

Gene Campaign and Centre for Environment and Development (CEAD) have drafted an alternative treaty to UPOV to provide a forum for developing countries to implement their Farmers and Breeders Rights. This treaty called the **Convention of Farmers and Breeders, CoFaB** for short, has an agenda appropriate for developing countries. It reflects their strengths and their vulnerabilities. It seeks to secure their interests in agriculture and fulfil the food and nutritional security goals of their people.

CoFaB seeks to fulfil the following goals:

- * Maintain genetic diversity in the field
- * Provide for breeders of new varieties to have protection for their varieties in the market, without prejudice to public interest.
- * Acknowledge the enormous contribution of farmers to the identification, maintenance and refinement of germplasm
- * Acknowledge the role of farmers as creators of land races and traditional varieties which form the foundation of agriculture and modern plant breeding,
- * Emphasise that the countries of the tropics are germplasm owning countries and the primary source of agricultural varieties
- * Develop a system wherein farmers and breeders have recognition and rights accruing from their respective contribution to the creation of new varieties .

The salient features of COFAB are as follows

1. *Farmers rights*: Each contracting state will recognise the rights of farmers by arranging for the collection of a Farmers Rights fee from the breeders of new varieties. The Farmers Rights fee will be levied for the privilege of using land races or traditional varieties either directly or through the use of other varieties that have used land races and traditional varieties, in their breeding program.

Farmers Rights will be granted to farming communities and where applicable, to individual farmers. Revenue collected from Farmers Rights fees will flow into a National Gene Fund (NGF) the use of which will be decided by a multi-stakeholder body set up for the purpose. .

The Rights granted to the farming community under Farmers Rights entitles them to charge a fee from breeders every time a land race or traditional variety is used for the purpose of breeding or improving a new variety.

Rights granted to the farmer and farming community under Farmers Rights are granted for an unlimited period.

2. *Breeders rights*: Each member state will recognise the right of the breeder of a new variety by the grant of a special title called the Plant Breeders Right.

The Plant Breeders Right granted to the breeder of a new plant variety is that prior authorisation shall be required for the production, for purposes of commercial and branded marketing of the reproductive or vegetative propagating material, as such, of the new variety, and for the offering for sale or marketing of such material. Vegetative propagating material shall be deemed to include whole plants.

The breeder's right shall extend to ornamental plants or parts of these normally marketed for purposes other than propagation when they are used commercially as propagating material in the production of ornamental plants or cut flowers.

Authorisation by the breeder shall not be required either for the utilisation of the new variety as an initial source of variation for the purpose of creating other new varieties or for the marketing of such varieties. Such authorisation shall be required, however, when the repeated use of the new variety is necessary for the commercial production of another variety. At the time of application for a Plant Breeders Rights, the breeder of the new variety must declare the name and source of all varieties used in the breeding of the new variety. Where a land race or farmer variety has been used, this must be specially mentioned.

In order to promote a more sustainable kind of agriculture and without any prejudice to the quality and reliability of the new variety, CoFaB enjoins breeders of new varieties to try to base the new variety on a broader rather than a narrower genetic base, in order to maintain greater genetic variability in the field. Further, a variety for which rights are claimed must have been entered in field trials for at least two cropping seasons and evaluated by an independent institutional arrangement. The breeder at the time of getting rights will have to provide the genealogy of the variety along with DNA finger printing and other molecular, morphological and physiological characteristics. The right conferred on the breeder of a new plant variety shall be granted for a limited period, depending on the variety.

In the event of a variety becoming susceptible to pest attack, the normal period of protection may be curtailed to prevent the spread of disease. In order to monitor this, periodic evaluations will be undertaken. The breeder or his successor shall forfeit his right when he is no longer in a position to provide the competent authority with reproductive or propagating material capable of producing the new variety with its morphological and physiological characteristics as defined when the right was granted. The breeder will also forfeit his right if the "Productivity Potential" as claimed in the application is no longer valid.

To give primacy to the goals of food security, it has been provided in CoFaB that the right of the breeder will be forfeited if he is not able to meet the demand of farmers, leading to scarcity of planting material, increased market price and monopolies. If the breeder fails to disclose information about the new variety or does not provide the competent authority with the reproductive or propagating material, his right will be declared null and void.

UNDP and CoFaB. The UNDP Human Development Report (HDR) 1999 has commended Gene Campaign's Convention of Farmers and Breeders (CoFaB) as a "strong and coordinated international proposal." in place of UPOV "it offers developing countries an alternative to following European legislation by focusing legislation on needs to protect farmers' rights to save and reuse seed and to fulfil the food and nutritional security goals of their people."

THE TRIPS - CBD LINKAGE

The Convention on Biological Diversity (CBD) and the WTO/ TRIPs are essentially two treaties in conflict with one another. Developing countries must push to give primacy to CBD in all matters relating to bioresources. Some countries including India have taken the position in the TRIPs Council that CBD and TRIPs provisions must be linked.

The CBD which is a pro-developing country or pro- community treaty supports above all, the protection of biodiversity and the rights of those local communities that have nurtured that biodiversity over generations. It also supports the viewpoint and interests of developing countries. The WTO/ TRIPs on the other hand represent the interest of the corporate sector, the most visible face of which is the "Life Sciences" industry. Rather than the conservation of biodiversity, TRIPs seeks to facilitate corporate control over biodiversity which in the era of biotechnology is one of the most sought after raw materials in the world.

In the Convention on Biological Diversity two provisions are notable from the TRIPs point of view, namely ; (i) acknowledgement that biodiversity resources are the sovereign property of the country of origin, and (ii) acknowledgement of the need to equitably share benefits with indigenous communities for their contribution to conservation and their knowledge of sustainable uses of biodiversity. These provisions run completely contrary to TRIPs and point towards the most significant defect in the prevailing regime of Intellectual Property Rights (IPR).

In the use and transfer of biological material, the CBD makes it mandatory to disclose the source and method of obtaining the foundation material. All biodiversity resources are to be obtained only on the basis of prior informed consent (PIC) of the country of origin and after executing a Material Transfer Agreement (MTA). All this would involve confrontation with the procedures mentioned under the GATT / WTO regime. Also, the CBD's advocacy for

preferential location of research and development activities and the transfer of technology on concessional terms to the countries of origin will come into conflict with the implementation of TRIPs.

TRIPS does not allow for the full exercise of national sovereignty over biodiversity (because it obliges countries to enact intellectual property rights on plant varieties). TRIPS does not allow countries to seek a share of benefits obtained from patented biodiversity (there is no provision requiring patentees to disclose the country of origin of any biological materials, therefore no claims can effectively be made from the countries of origin). TRIPS does not require patentees to fulfil access obligations towards genetic resources (it therefore condones and facilitates biopiracy).

TRIPS overrules (and legally compromises the development of) CBD Art 8(j) because patent claims can be worded to embrace and expand on indigenous knowledge without recognition of or compensation for it. *Turmeric, Neem, and Basmati* as also *Phyllanthus amara* and the diabetes formula based on *Karela, Jamun & Gurmar*, are well known cases of this but there are many others.

PRIMACY OF CBD OVER TRIPS

There is a large body of opinion held by academia, politicians, and civil society groups all over the world, that IPRs should not be regulated under the World Trade Organisation at all. Refining the jurisdiction of TRIPS would be part of a more fundamental reassessment of whether trade policy instruments governing, market access should determine national intellectual property regimes. In recent times, several platforms have demanded granting primacy to CBD over TRIPS. More and more nations should support this move and place this as a demand at the TRIPs review. The official Indian position has asked for a CBD- TRIPS linkage.

Demanding primacy for the CBD is justified and supported by Article 22 of the CBD which says - *The provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity.* It is clear that the implementation of TRIPs is detrimental to the health of biological diversity and therefore its implementation must be made subservient to the conditions of the CBD.

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