

Intellectual Property and Environment: Impacts of the TRIPS Agreement on Environmental Law Making in India

by *Philippe Cullet**

Environmental law in India has steadily grown over the past several decades (Thakur 1997). Generally, Indian environmental law can be described as the product of both national and international influences. India, like a number of other developing countries has been significantly influenced by the development of international environmental law (Anderson 1998). A significant difference with most other developing countries is, however, the existence of a strong local environmental movement (Gadgil and Guha 1993).

While Indian environmental law has always had strong links with international law in the field of the environment, the adoption of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS 1994) has brought about momentous changes in environmental law and policy making at the national level. TRIPS does not directly entail changes in domestic environmental laws but it imposes significant changes in the existing intellectual property rights regime. From an environmental perspective, some of the salient points are the requirement for partial patentability of life forms and for a form of protection of plant varieties (TRIPS 1994, Article 27.3).

The implementation of TRIPS obligations by India has been a long and arduous process which is yet to be completed. Two main pieces of environment-related legislation have been introduced as a direct consequence of TRIPS obligations. These are a new act to provide a form of plant variety protection (Plant Variety Act 2001) and a set of amendments to the 1970 Patents Act (Patents Amendment Bill 1999). Further, the Biodiversity Bill is also influenced to a large extent by developments in the international intellectual property rights regime (Biodiversity Bill 2000).

This article analyses some of the salient aspects of the relation between the international intellectual property rights regime and the evolving domestic law and policy framework. The first section gives an overview of the relevant international law framework. The second section examines India's existing and proposed legal framework. Finally, the last section analy-

ses some elements that come out of the Indian experience in this field.

Environment and intellectual property: Relevant international legal framework

Dozens of environmental and intellectual property right treaties are directly or indirectly relevant in the development of national legal frameworks for the management of the environment. This article focuses on TRIPS and the Convention on Biological Diversity (CBD 1992), two of the direct sources of inspiration for recent legislative changes in India.

THE TRIPS AGREEMENT

TRIPS is not directly concerned with environmental management. However, the intellectual property rights standards that it sets have wide-ranging impacts for biodiversity management. First, TRIPS extends in principle patentability to all fields of technology (TRIPS 1994, Article 27.1). The agreement further specifies that micro-organisms must be patentable as well as non-biological and microbiological processes for the production of plants and animals. TRIPS also requires the introduction of specific intellectual property right protection over plant varieties (TRIPS 1994, Article 27.3.b).

TRIPS does not impose the patentability of all life forms since it allows states to exclude plants and animals and to provide an alternative protection mechanism for plant varieties. Further, states can exclude patentability where this is necessary to protect human, animal or plant life or health, or to avoid serious prejudice to the environment.

In effect, some of the most important changes that TRIPS imposes are in the field of agriculture where the introduction of privately held genetically modified seeds protected by intellectual property rights is likely to have sweeping impacts in all developing countries where agriculture remains an important contributor to the GDP and where a majority of the population finds employment in the primary sector.

Responses to TRIPS on the part of developing countries must be understood in the light of the institutional setting which characterises the agreement. The link with WTO ensures that TRIPS benefits from stringent enforcement procedures culminating in the

* University of London, UK. Contact: pcullet@soas.ac.uk.

availability of the WTO dispute settlement mechanism for adjudicating disputes. This constitutes today one of the most formidable enforcement tools at the disposal of an international organisation given that few states can afford to disregard the consequences of non-compliance with a WTO panel report.

THE BIODIVERSITY CONVENTION

The CBD provides a general framework for the management and conservation of biological resources. It is primarily an environmental treaty but it is also concerned with the economic valuation of biological resources. It further recognises the importance of intellectual property rights in biodiversity management and specifically calls on member states to 'ensure that such rights are supportive of and do not run counter to its objectives' (CBD 1992, Article 16.5). This probably constitutes the most explicit statement in international treaties concerning the relationship between environmental management and intellectual property rights.

The CBD is not an overarching treaty to which all other environmental treaties are subordinated. However, it provides a general legal framework for the sustainable management of all biological resources which is supplemented by pre- and post-1992 more specific instruments. Even though the CBD is not the equivalent of an 'environmental protection act' at the national level, it remains one of the most fundamental texts of current international environmental law. The response that states give to the CBD in terms of implementation must be understood in this context.

Proposed legal frameworks in India

As noted, among the series of legislative amendments required for TRIPS compliance, three are most relevant in the context of environmental management. The Patents Amendment Bill, the Plant Variety Act and the Biodiversity Bill all three are direct consequences of treaties signed by India.

THE BIODIVERSITY BILL

The proposed biodiversity legislation has been drafted following India's ratification of the CBD in 1994. However, if the bill's direct parentage is the CBD, it is also significantly informed by other considerations. In fact, the central aim of the biodiversity bill is to regulate access to biological resources in India. This is linked to several factors. First, while existing environmental laws deal with various aspects of the management of biological resources, property rights have not been a major focus of environmental

laws. Second, there have been several intellectual property rights related controversies in the past decade concerning the appropriation of public domain knowledge through private intellectual property rights outside of India (e.g. US Patent 5,401,504). Third, TRIPS has brought patents on life forms within the purview of intellectual property rights. This new legal incentive coupled with the new opportunities provided by genetic engineering have ensured that the past few years have seen much more interest in the appropriation of biological resources and related knowledge from developing countries.

As a result of the different elements which inform the genesis of the bill, the text reflects the fact that the implementation of the CBD is undertaken in a context where TRIPS proposes the extension of patentability to several areas which were previously not included in intellectual property rights treaties. The bill thus tries to balance two different sets of principles. On the one hand, it focuses on India's sovereignty over its biological resources and uses this principle to restrict access for foreigners and to put control over access in the country in the hands of the government. On the other hand, in a bid to avoid a confrontation with WTO obligations in this field, the bill emphasises the role of intellectual property rights in regulating access and control over biological resources and related knowledge.

On the whole, the most striking element of the biodiversity bill is that in shaping India's response to the CBD and TRIPS, its guide to the relationship between sovereign rights and intellectual property rights does not seem to be Article 16 of the CBD which directs that intellectual property rights should be subordinated to the goals Convention but rather the fear of dispute settlement proceedings in the WTO.

THE PROTECTION OF PLANT VARIETIES AND FARMERS' RIGHTS ACT

The Plant Variety Act constitutes India's attempt at complying with its obligations under Article 27.3.b TRIPS concerning the protection of plant varieties. In this case, TRIPS has caused the adoption of a completely new piece of legislation since India, like many other developing countries had always rejected the private appropriation of plant varieties in a bid to foster research based on the sharing of existing knowledge. While the Plant Variety Act is directly linked to TRIPS and is therefore a piece of intellectual property right legislation, it is in practice as much an environmental act given the important impacts it will have for the management of biological resources in general and agriculture more specifically. It must therefore be analysed from both perspectives.

Plant variety protection within the TRIPS context is particularly interesting from the point of view of implementation in developing countries. This is due to the fact that plant variety protection is one of the few areas where TRIPS compulsorily requires some form of intellectual property right protection but does not impose patentability. Developing countries like India thus get a chance to devise a national implementation regime which suits their needs and conditions. The so-called *sui generis* option is what India decided to opt for. A number of factors have ensured that the *sui generis* regime chosen is itself heavily influenced by international norms. First, while India like most other developing countries had never introduced any form of intellectual property rights over plant varieties, a law had to be quickly drafted given the relatively short time frame for implementing this commitment. Second, a number of the developed countries that had already introduced plant variety protection were members of a treaty dealing specifically with plant variety protection. The International Convention for the Protection of New Varieties of Plants (UPOV 1961) thus provided a ready-made alternative to patents which was not going to be challenged for its incompatibility with TRIPS. Third, there was significant lobbying in favour of the adoption of UPOV as a *sui generis* regime by developing countries.

In the event, the act clearly reflects the various influences that informed its development. The first version of the bill introduced in Parliament in late 1999 was directly derived from the UPOV regime with some of the main clauses being copied word for word from UPOV. After significant redrafting over a period of 18 months, the bill was given a different tenor. While the first version of the bill focused like UPOV only on the rights of commercial plant breeders, the second version of the bill includes a chapter on farmers' rights and provides, for instance, that farmers are entitled, like commercial breeders, to apply to have a variety registered.

The drafting history of the act is significant. First, while the government's first draft only made a passing mention of farmers' rights (Plant Variety Bill 1999), significant lobbying ensured that the interests of a majority of the workforce in the country have been taken into account in the final version. Second, while farmers' rights have been fully incorporated in the bill, it is unlikely that they will be fully implemented. This is due to the fact that the criteria for registration are the same for breeders and farmers. Since the criteria for registration are those taken from UPOV, this implies that commercial breeders are likely to benefit from the provisions of the act but

not farmers whose varieties do not normally meet the same technical criteria (Cullet 2001).

THE PATENTS AMENDMENT BILL

This third legislative amendment is much less directly related to the environment. However, it is relevant insofar as the introduction of patents on life forms will have impacts on environmental management. One of the most noticeable features of the Patents amendment bill is that it clearly seeks to avoid confrontation with TRIPS. On the one hand, the 1970 Patents Act had put exceptions to patentability to foster the fulfilment of basic needs such as food and health. These exceptions have not only proved appropriate from the point of view of basic needs but in the case of health have also provided the legal basis for the development of a strong generic pharmaceutical industry. On the other hand, TRIPS imposes patentability in all fields of technology and requires product and process patents. TRIPS requirements are thus quite different from the indigenous patents regime.

The rather incompatible national and international regimes would lead one to expect India to seek the most restrictive interpretation of TRIPS obligations to avoid unnecessary changes in its own satisfactory national patents regime. In the event, the bill strives to be as TRIPS compliant as possible. More surprisingly, it does not necessarily seek to use all the opportunities existing within the TRIPS context to limit the scope of patentability or the reach of patents. This is due in part to the fact that India has become extremely wary of the WTO dispute settlement mechanism after being one of the first countries to be targeted for its faulty implementation of one provision it should have implemented in 1995 (TRIPS US complaint 1997).

Impacts of TRIPS on environmental policy and law in India

The three recent legislative instruments examined show that the influence of international law has been predominant in each case. However, a major difference can be seen between the biodiversity bill and the other two. The CBD offers member states wide margins of appreciation in the way they want to implement its obligations. India has chosen to focus on the specific question of the regulation of access to biological resources and this falls within its prerogatives. TRIPS does not offer this kind of latitude and offers much more precise guidance concerning its implementation at the national level. In fact, TRIPS is even more significant. Even though the biodiversity bill is

a direct response to the CBD, it is also in large part a response to the international intellectual property rights regime.

Several points can be mentioned in this context. First, the introduction of product and process patents in new areas linked to environmental management are putting pressure on environmental law to provide appropriate responses to the private appropriation of knowledge related to biological resources even though these issues developed completely independently from environmental laws. Second, the biodiversity bill was drafted more or less independently from the patents and plant variety bills. Different ministries deal with different aspects of the problem and each is keen on not ceding ground to the others. The result is that there are significant overlaps and inconsistencies among the three instruments (Cullet 2001). Third, there is an unstated understanding that intellectual property related norms prevail over environmental norms. This is not related to substance but rather to the fact that there is very little enforcement of international environmental treaties whose obligations are often rather open-ended while intellectual property right norms are enforced through the binding dispute settlement mechanism of the WTO.

TRIPS is only one among many international treaties that India has ratified. All treaties must be implemented concurrently (Vienna Convention 1969), but in practice, a hierarchy is established at the level of implementation. Diverging from the international law framework provided in international environmental treaties is a matter of little consequence while the same is not true for WTO related instruments. This hierarchical approach to the implementation of international law is further carried over at the national level. The biodiversity bill illustrates this quite clearly in its treatment of access to resources. From an international perspective, it seeks to assert India's control over its biological resources to avoid in particular private appropriation in foreign jurisdictions. At the national level, the bill provides a framework which centralises power in the government. This contributes to the failure to recognise the property rights of local holders of biological resources and related knowledge.

There are also indirect ways in which TRIPS is influencing law-making. The rapid expansion of the scope of patentability at the international level has led to new possibilities to appropriate knowledge which used to be universally recognised as part of a common heritage belonging to everyone. The case of the turmeric and other US and European patents tremendously raised awareness in India concerning

some of the consequences of the international intellectual property rights regime (e.g. US Patent 5,401,504). This directly explains why the biodiversity bill puts so much emphasis on India's right to control access to its biological resources. In itself, this reassertion of sovereign rights is not necessary. First, the delimitation of sovereign rights is something which can only be done through international treaties. A single country would not be able to impose its own view of sovereignty to other countries. Second, states' rights over their natural resources is not contested at the international level. The biodiversity bill clause is thus not of much significance in the broader context of international law. However, it must be understood as a direct response to the changes brought about by the international intellectual property rights regime. In other words, it is an acknowledgement that the reassertion of sovereign rights over natural resources is one of the few tools that states have at their disposal individually to try and stem the erosion of their sovereignty which the increasing scope of patentability fosters.

Lessons for the future

The influence of TRIPS over recent legislative activity is a fact. It is in part the simple prolongation of India's ratification of an international treaty necessitating legislative changes for full compliance. It assumes more significance because its impacts go far beyond the strict field of intellectual property. This is visible in two main ways highlighted above. First, some of the changes imposed by TRIPS directly impact on environmental management. Second, environmental laws are also directly or indirectly influenced by the ratification of TRIPS. The noteworthy aspect is that this is mostly a one-way route. Environmental law, domestic or international, hardly has any impacts on the development of the intellectual property rights regime despite a number of close links in practice.

It is interesting to put India's reaction to TRIPS in a broader context. First, there was significant resistance to the inclusion of intellectual property in the WTO context during the Uruguay Round negotiations. The government finally changed its mind and though the first set of changes required by TRIPS were rejected in Parliament to start with, there has been a progressive softening of the opposition at a political level. Second, the current government headed by the Bharatiya Janata Party (BJP) has been consistently pro-WTO since coming to power. However, this u-turn is not total. While the BJP is in favour of WTO, it still seeks to promote locally based indigenous development. The tension between these two unrelated ob-

jectives is partly responsible for the responses offered to the global intellectual property rights regime. In effect, the proposed legislative frameworks attempt not to upset the global legal order while preserving the nation's interest. Given that these twin objectives are very difficult to realise, the secondary reaction is to try and concentrate more powers in the hands of the government at the national level while opening up new avenues for private sector development on other fronts.

One of the characteristics of TRIPS has been to be negotiated and ratified without widespread consultations within the country. This missing democratic debate has already had significant implications in terms of domestic law-making. Parliament first started by rejecting the first proposed amendment to the Patents Act only half a year after the government had signed TRIPS and committed the country to its implementation. More recently, the significant revision of the plant variety bill undertaken by the parliamentary committee indicates again a significant discrepancy between the perceived interests of the country in the government and in parliament. If environmental law is to be more responsive to local needs and interests, much more substantial debate has to occur, whether in the context of a strict binding agreement like TRIPS or in other contexts.

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