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# In the Knowledge Bazaar – Protecting India's (Biodiversity) Know-how? A Critical Look at Laws and Policies on Traditional Knowledge and Intellectual Property\*

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## The Bazaar

The term “bazaar” is commonly understood as a place where goods are bought and sold. In India and across South Asia, there has been and still is as much diversity in the form of local marketplaces as perhaps there is with biodiversity itself. Today, bazaar in the vernacular has in these parts come to be the word that captures the negative connotations of “globalisation, liberalisation and privatisation”. The term is used here just as popular discourses and people's movements in the sub-continent use it to refer to the global market place.

The Union Government of the time in India 1991 introduced the economic “reforms” program, unleashing “globalisation, liberalisation and privatisation”. India had stayed as a closed economy for nearly four decades after political independence in 1947. But the “reforms” opened the floodgates to free market forces. In the pejorative sense, the term “bazaar” is used to express popular disdain of the free market system. It is used by some to convey metaphorically the idea of engaging in an activity with someone purely for payment. In doing so, the intent is to highlight the mere contractual or transactional viewpoint which is largely devoid of social and ecological considerations.

The bazaar has created particular challenges for both knowledge and legal systems attempting to “protect” it.<sup>1</sup> Countries such as India, which are rich in biological resources, also have substantial intellectual heritage from the human interface with those resources. This is their part-inherited and part evolving know-how, know-when, know-who, gained from the practical experience of its peoples when applied to current contexts. But knowledge-holders do not regard either this knowledge, or the biological resources on which it is based as a tradable commodity. Yet, the bazaar ascribes it new (economic) value. The challenge for the government is how to translate the body of informal innovations into wealth from the formal sector and yet protect the former as is. It has also meant a fundamental change in the role of state vis-a-vis knowledge management; in being the medium to make it available to the bazaar rather than protecting it from market forces. Up until now, these knowledge cultures had never been placed in a market such as this.

It is this milieu that necessitates discussions on how to protect the biodiversity knowledge of local peoples. Given that there was not one view on whether that knowledge ought to be

commodified or not, “protection” itself implies different things to diverse stakeholders. Official approaches to protection have been undertaken as a necessary subset of a larger pre-determined economic framework.<sup>2</sup> In that frame, the very nature of knowledge has had to confront change from being a shared heritage to becoming a private property that could now be traded in the bazaar. Far from creating global public goods, this global marketplace gives new economic rights that permit exclusive control and grant *de facto* ownership to products and services derived from such knowledge. The relationship with knowledge and its intrinsic value ceases to be as commonplace knowledge-holders historically know it.

This is not the first time that local communities in India have had to navigate the marketplace with “foreign” ideas and “outside” interests. In colonial times, the local bazaars were also the space where the colonisers had to interface with the Indian locals. In fact, pre-independence the first ideas of nationalist freedom in small towns and rural landscapes were manifest in either physically demarcating the space of their markets, or by outright boycott of the non-indigenous British products sold in them.<sup>3</sup>

But this time round, the sovereign Republic of India has itself willingly entered the bazaar and is keen to put out the country's knowledge and products or services derived from it, out on the shelves. Further, the current rules of the bazaar do not allow countries to treat national and international businesses differently.<sup>4</sup>

While, at one level, the key knowledge users – biotechnology industry, pharmaceutical companies and the “life sciences” corporations – want minimal governmental interference, at another level they require from governments and legislatures a favourable law and policy environment to be able both to access the raw material and then to sell that in the bazaar that the latter willy-nilly help to create. The Government of India is itself making the necessary law and policy changes for facilitated access to its biological wealth.

The big question is whether these laws and policies place knowledge, and more so the knowledge-holders, in a better position. As the etymology of the term “bazaar” explains, it is a place of prices. But it also involves processes of power. Globally, the bazaar puts countries with unequal capacities on the negotiating table. Within the country, the local communities that embody so-called

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traditional knowledge (TK), and the knowledge categorised as “traditional” itself, are not on an equal footing with either the powers that be or the scientific innovations and high-technology that they control. There is an inherent imbalance. There is deep bias towards what is considered better, more modern and such is therefore ranked higher for legal protection, which also results in more centralised models of R&D.<sup>5</sup> Small farmer, pastoral communities, traditional healers, tribal groups and forest dwellers are by default in a disadvantageous position vis-a-vis both industry and government. Negotiating the terms of engagement with and within the bazaar is a constant exercise. But fighting the very commercialisation of people’s know-how is a larger struggle against an iniquitous knowledge bazaar.

## Global Rules

The bazaar as an institutionalised mercantile establishment is today a global venue. Being in the bazaar means integrating with the global economy. Globalisation has also meant that local rule-making is shaped by distantly situated players, events and fora. One such inter-governmental forum far from New Delhi and the rest of India, is the World Trade Organisation (WTO) headquartered in Geneva, Switzerland. Its predecessor GATT laid the bricks for the foundation of the bazaar. But despite signing GATT in 1947, India still had neither opened up to the bazaar, nor situated its knowledge capital in it.

It was the WTO’s intellectual property (IP) agreement – the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) signed in 1995 that brought knowledge into the bazaar. TRIPs is considered to be the most comprehensive multilateral agreement on IP.<sup>6</sup> Although TRIPs details seven types of IPR, this article is limited to the TRIPs provisions relating to patents and the protection of new varieties of plants, as far as they are relevant to TK protection in India.<sup>7</sup>

TRIPs requires its member countries to make patents available for any inventions, whether products or processes, in all fields of technology without discrimination.<sup>8</sup> In terms of coverage, this language extends to traditional knowledge as well. However, it can be argued that TK when subject to the normal tests of novelty and inventiveness will at least not pass the test for patent protection. Yet, derivatives from TK can. Further, their industrial applicability and market value makes them much

sought-after. Legal protection for them through IP in effect creates private rights on “new” inventions from “old” information of living forms known to TK-holders.

Moreover, countries of origin of the TK find that they have to give evidence of TK as prior art and also keep an eye on what is claimed as a derivative is not TK. TRIPs does not safeguard TK per se, but instead grants protection on IP created by using it. It gives primacy to its trade potential of TK, not to its continuance aspect. Protection is left for national governments to do. Domestic law and policy then has to provide for the same. Yet, TRIPs itself imposes limits on the nature and extent of that protection. The proponents of IP may argue that there are three permissible exceptions to the basic rule on patentability that provide possibilities of protection.<sup>9</sup>

However, there are real challenges to use them to carve out a genuine case for non-compliance with the global IP rules in this regard. That is precisely the purpose of these global rules – to harmonise both the IP standards and the exceptions that member countries may adopt. Thus, even in the exercise of the *sui generis* option the protection given is IPR-like. While the Government of India might have chosen the latter path, for local communities there are very limited spaces it offers for the continuance of their knowledge-systems without fundamentally altering them.<sup>10</sup> Since most TK-holders in India do not subscribe to the idea of patents on life forms, the public opinion against patents on plants and animals has been instrumental in shaping India’s official stance at least in the pre-WTO phase.<sup>11</sup> However, since 2000 India has been working to push for a “biodiversity amendment” to TRIPs.<sup>12</sup>

The proposal to amend TRIPs was first tabled in 2006 and has since found favour with many governments in the South,<sup>13</sup> though it has little social backing. The proposal focuses on Article 29 of TRIPs which lays out the rules of “disclosure”: information that applicants have to provide in patent applications. In doing so, unfortunately the proposed TRIPs amendment does not challenge the idea of patents on life at all, for which most TK-holders have long been rallying.<sup>14</sup>

## Protection Regimes

The bazaar and its IP rules have come to have a bearing on other processes, national and international, that were meant to protect people’s

knowledge and knowledge-holders from the excesses of the IP system. The *Convention on Biological Diversity* (CBD) was the world's response to the outcry of "biopiracy" from communities. Article 8(j) of the CBD insists that the knowledge, innovation and practices of indigenous and local communities be respected, preserved and maintained.

There are two important points to note here. First, that the CBD directive comes to states in the context of *in situ* measures required to be taken. This implies that the protection of both knowledge and its holders must be in the locations where they are based – that is, in their communities and respective countries. Secondly, that these endeavours are subject to national legislation. The net effect is correspondingly less responsibility of protection on the provider countries that possess these rather than the user/accessor countries that exploit them.

By the time India came to design its national legislation on the subject, the *Biological Diversity Act 2002*, the macroeconomic policy, was being determined by the bazaar. The CBD itself had begun to look like a forum for bio-trade, rather than a venue to address the global problem of "biopiracy". This is partly due to the manner the issue of IP has been handled in the context of the bazaar. Global rules on IPR have not yet been made subject to the overall objectives of the CBD – those being conservation, sustainable use, and lastly, fair and equitable sharing of the benefits arising from genetic resources. Further, in some developed countries there is even outright denial of the very phenomenon of "biopiracy".

Nonetheless, India had proposed that TRIPs be harmonised with the CBD and not the other way around. The global battle for change in the TRIPs language continues. It is also important to note that most mainstream protection regimes use the term TK to refer to people's wisdom cultures. Many of these people, the TK-holders, on the TRIPs-CBD relationship believe that there is an inherent conflict between the two, and that TRIPs needs to be adequately amended to remove such a conflict. According to them, for the real protection of people's knowledge the bazaar needs to be trimmed to size by amending TRIPs so as to oblige all WTO members to make life forms and parts thereof non-patentable. Alternatively, patents for inventions based on TK and its derivatives need to be excluded.

One of the most talked-of experiences from India is that of the Basmati rice patent which made international news in the 1980s.<sup>15</sup> Yet, supposed safeguards in global rules or national laws have not stopped a US multinational from retaining a somewhat trimmed patent on rice lines. Neither has it prevented other US companies to continue even today to sell Basmati "Grown in The USA" under another form of IP protection – trade marks.<sup>16</sup> Apart from India, Basmati was also originally and continues to be grown by farmers in Nepal and Pakistan. Thus, the issue of resources and knowledge common and shared across political boundaries has also not found a solution under the CBD.

Even though the CBD enjoins that the wider application of knowledge, innovation and practices must occur with the approval and involvement of the Indigenous and local communities (ILCs), it is not so in the bazaar. The protection of TK-holders necessitates a new kind of biodiversity governance – one that puts them centre-stage. For that their full and free prior informed consent has to be made real in any decision-making by the state. Intra-community they already have their customary systems for such consultation. And for them protection itself would imply that their traditional processes be given legal recognition.

However, that is of little consequence to the knowledge bazaar. Moreover, it has remained dominated by large and influential economic interests, whether party to the CBD or non-parties (such as the US). The US has also taken India to the WTO DSM for alleged non-compliance of TRIPs.<sup>17</sup> The US-India Business Council also actively engages in lobbying and advocacy work in India for strong IP standards and their enforcement. In reaction to India's demand for disclosure certificates in patent applications, the US Administration instead insists on a national legislation approach with a contract-based access and benefit sharing (ABS) system. In other words, at the point of access mutual agreements that are negotiated will bring in returns as benefits will make up for it. The logic is that there should be no hindrances to patents and the global rules of TRIPs that make the bazaar.

There is therefore little surprise that official discussions for TK protection at the national level are now happening under the auspices of the Ministry of Commerce. Its agenda is driven by the imperatives of trade in TK-based products.

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The Ministry of Commerce’s positions on TK are in response to the bazaar, and so its orientation is essentially towards what is favourable to industry.<sup>18</sup> The Ministry of Commerce frames the national debate on TK protection with reference to global-level talks – for instance, those at the World Intellectual Property Organisation (WIPO), within bilateral free trade agreements (FTAs), or under any multilateral trade treaties (WTO). The CBD itself invited a trade-oriented pro-IP body – WIPO, to examine issues regarding access and disclosure in IPR applications. At WIPO, an Inter Governmental Committee (IGC) on Traditional Knowledge, Genetic Resources and Traditional Cultural Expressions is working on a treaty text for TK protection.<sup>19</sup>

It is only a question of time before new so-called protection regimes will emerge from locales other than from where TK itself evolves.

## Biodiversity Legislation

The Indian Parliament enacted the *Biological Diversity Act* in 2002 in compliance with the CBD.<sup>20</sup> The relevant executive agency, the Union Ministry of Environment and Forests, subsequently notified the Biological Diversity Rules in 2004.<sup>21</sup>

Together, the *Biological Diversity Act* and Rules comprise the domestic biodiversity regime, under which protection for India’s TK and its holders is envisaged in various ways. The Central Government’s statutory duty [s.36(5)] is to “respect and protect the knowledge of local people relating to biological diversity”, as recommended by the National Biodiversity Authority (NBA).

At the central level, the NBA was set up in 2003 under the Ministry, but recommendations to that effect are still to be formulated. At meetings conducted by non-governmental organisations through 2008, the NBA was requested to initiate action on people’s knowledge protection. On the basis of an NGO text, the NBA issued draft *Protection, Conservation and Effective Management of Traditional Knowledge Relating to Biological Diversity Rules 2009*. However, the text has not been finalised.

The *Biological Diversity Act* also prescribes the harnessing back of benefits from the accessors of TK to the local communities identified as “benefit-claimers” (s.21). This has had limited success. Out of 109 access agreements signed by NBA in more than six years (from about 700 applications), INR 43 lakhs (approximately equivalent to AUD

\$75,400) have been collected.<sup>22</sup> These monies are still to be redistributed amongst TK-holders through the Biodiversity Funds set up at different levels under the biodiversity regime. But the real challenge is that the original knowledge-holders are not easily identifiable in each case.

The NBA is empowered to oppose in any other country the grant of any IPR on biological resources obtained from India or knowledge associated with biological resources derived from India [s.18(4)]. This provision of the law has not ever been invoked. It is both a hugely expensive exercise to challenge individual patent at different patent offices overseas. Moreover, so as to keep a track on the grant of illegal patents is another tedious task. Unfortunately, the burden of this falls on the provider country rather than the one accessing the TK, whether legally or with due diligence.

Thus far conservation has not got the top priority in implementation of the law. But even when it does, if the guaranteed access to those resources is not assured to local communities that rely on it for continuance of their biodiversity-based knowledge, innovation and practices, then there is small hope for that knowledge. The *Biological Diversity Act* does allow for local growers and cultivators, along with traditional healers to continue as before without the need for permissions from the government, but the current development paradigm poses serious risks to biodiversity. It is also displacing people from their locales.

A key expectation from the biodiversity legislation was that it would check the grant of illegal and unjustified patents or other IPRs based on India’s biological resources by other countries and foreign companies. However, the biodiversity framework has become a venue to screen IPR applications. To be able to do so, the focus of implementation is on the operationalisation of the ABS framework. The *Biological Diversity Act* and Rules lay down a specific procedure for both the access of TK and approval for seeking IPR. In effect, it is about manufacturing consent from the knowledge-holders and potential “benefit claimers” defined under the law. The legal provisions dealing with grant of access were brought into effect only in 2004 after the NBA was fully in place.<sup>23</sup> The due process entails making an application to the NBA in the prescribed form with payment of fees.<sup>24</sup>

The procedure for seeking prior approval from the NBA before seeking an IPR also necessitates

consultation with the concerned community at the local level through the BMC in the area. But experience has shown that this is not always possible.<sup>25</sup> For in some cases, either the exact geographic area from where the resource is sourced is not precisely known, or in other cases either the SBB or the BMC has not been formed. While the law does describe the situations in which such approval can be either restricted or revoked, there is little evidence to show that those provisions have been ever invoked. Under the *Biological Diversity Act*, the NBA is regarded as the protector of biodiversity. If grant of access leads to violation of terms and conditions by the accesser, then the access should be revoked as it is not an absolute right granted by CBD. The access cannot go against the objectives of sustainability, but there are no post-approval monitoring measures in place to determine that.

The *Biological Diversity Act* also defines who are “benefit claimers”, but the question is whether the real biodiversity keepers on the ground are really benefiting. The creators and holders of knowledge also have changed since the last 20 years. The definition under the *Biological Diversity Act* intended to cover local peoples may now end up giving coverage to those who by law are being recognised as “creators” (formal breeders in the NARES under the PVP law) or “holders” of knowledge (national repositories designated under the *Biological Diversity Act*). While the forms and fees for access have been detailed, India does not have a national access policy. Yet, 190 biological resources categorised as “normally traded commodities”: do not fall under the ABS regime (s.40).

This is a major carve-out to the applicability of the national ABS regime. In other words, if a biological resource is being traded in such high volumes, then it is exempt from the PIC and MAT under the *Biological Diversity Act*. Trade in the bazaar again takes primacy.

### Intellectual Property

While both the biodiversity and IP legislation in India claim to be about protecting TK, they do not prevent it from being placed in the bazaar. Situated there it is not only vulnerable to being (mis)appropriated, but it is also commodified and privatised. Its very treatment as if it were property remains problematic to TK-holders. The very same bazaar then sells back to these original innovators products and services derived from their

biodiversity-based knowledge. The so-called free market does not give them freedoms to innovate and create as they please. Nor does it respect their relationship with the resource and knowledge as it exists. For the holders of TK, it does not have to be turned into property before it can be valuable. “Value adding” is what gives the bazaar its justification.

Under the law on patents in India, a supposed “invention”, *which in effect is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components*, is not regarded as an invention and therefore is not patentable.

The patent law recognises TK of not only Indian TK-holders but anyone’s elsewhere. There are provisions in the Indian patent legislation that make prior art a ground to revoke a claim for novelty. TK as novelty-destroying prior art invalidates a patent, as patent rights are given to inventions that are new with an inventive step. Developing a fool-proof legal definition of prior art remains a challenge.

The *Patent Act* also provides for pre-grant and post-grant opposition for TK-based patents. Where an application for a patent has been published but a patent has not been granted, the grant of patent can be opposed on the ground “that the invention so far as claimed in any claim of the complete specification is anticipated having regard to the knowledge, oral or otherwise, available within any local or indigenous community in India or elsewhere” [s.25(1)(k)].

Even after the patent has been granted, but before the expiry of a period of one year from the date of publication of grant of a patent, any person interested may give notice of opposition to the Controller on the ground “that the invention so far as claimed in any claim of the complete specification was anticipated having regard to the knowledge, oral or otherwise, available within any local or indigenous community in India or elsewhere” [s.25(2)(k)]. India is also one of the countries to modify its patent application procedure to require the source or geographic origin of the biological material to be disclosed in a patent specification [s.10(4)(D)].<sup>26</sup>

Where an application for a patent has been published by the Patent Office, but the patent has not yet been granted, any person may oppose the grant of patent on the ground of the absence

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of disclosure or wrong mention of source of geographical origin of biological material used for the invention [s.25(1)(j)]. This could lead to revocation of the patent [ss.64(1)(p) and (q)]. A broader power under the *Patent Act* given to the Central Government is make a declaration for revocation of a patent in public interest (s.66).

Another important intellectual property law relating to plant variety protection (PVP). This is how the Government of India has chosen to be in line with TRIPs. Anything less than a PVP law would not have been acceptable to developed countries and India’s trading partners like the US, Japan and the EU. India’s *Protection of Plant Varieties and Farmers’ Rights Act* (PPVFR Act) was passed in 2001. The idea of PVP is modelled on European practice, although India’s PPVFR Act is not as severe on farmers’ freedoms as are on its European counterparts. PVP gives rights to plant breeders rights over crop varieties that they may have developed. The criteria for protection requires that the plant variety be new, distinct, uniform and stable. In the Indian version of the PVP law the chapter on Farmers’ Rights (FR) was retro-fitted, thus locating FR in an IPR law.

The PPVFR Act recognises farmers as breeders, making them eligible to register the crops that they may have developed under the specific category of “farmers’ variety” (FV). This is how the farming communities are being lured into the IP system. FV is defined as “what has been traditionally cultivated and evolved by the farmers in their fields or is a wild relative or land race or a variety about which the farmers possess the common knowledge” [s.2(l)(i) and (ii)]. However, an application for registering an FV by farmers or community or group of farmers can be submitted only on endorsement by the concerned Panchayat Biodiversity Management Committee/District Agricultural Officer/Director of Research of concerned State Agricultural University/District Tribal Development Officer. Moreover, the PPVFR Authority has set a time limit by which FVs will be registered.<sup>27</sup>

Farmer groups across the country are at crossroads on whether to register varieties developed by them and come into the fold of this IP system or stay out of it.

A farmer is defined in the Act, as including “one who conserves and preserves, severally or jointly, with any other person any wild species or traditional varieties or adds value to such wild species or traditional varieties through selection

and identification of their useful properties [s.2(1)(k)(iii)]. Farmers’ planting material and their TK of local crops is what formal breeders – be it in the public or private sector, build on to make so-called “new” seed products. Thus, farmers are being encouraged to share samples of their varieties in lieu of (genome saviour) rewards and recognition from the Gene Fund set up under the PPVFR Act. It does not follow that farmers are encouraged to use their own varieties. Farm-saved seed is direct competition to the seed industry. The entire formal system of seed research and development, production and marketing is geared towards the promotion of hybrid and/or transgenic seeds.<sup>28</sup>

IP laws such as those granting PVP and proposed seed legislation facilitate the sale of such “new” crop varieties as proprietary products. Those seeking IPRs on “new” planting material, despite it either being biological material or based on local crop know-how from India, do not need to take the prior permission of the NBA. The PPVFR Act has its own mechanism to provide for benefit sharing to conservers and providers of genetic resources. It puts the onus on the farming community to file a claim attributable to the contribution of the local people in the evolution of any plant variety. The claim once verified by the government centre receiving the claim and upon the Authority being satisfied, after giving opportunity to the breeder to file any objection(s), will only then grant a sum of money as compensation to be paid to the TK-holders by the breeder who used their variety to develop their own IPR-protected one.<sup>29</sup>

## Knowledge Management

The state machinery has become a means to connect and relocate both knowledge and knowledge-holders into this bazaar. Making an inventory of stock before entering a bazaar to trade is standard practice. Likewise, a nation-wide exercise to document TK has been given maximum emphasis in India since the *Biological Diversity Act* began to be implemented. The Biological Diversity Rules make documentation the main function of the local-level BMCs. Government-sponsored documentation is ongoing in various state departments. This has taken several forms, from an *ex situ* collection of biological material (to which the TK relates) and gathering of geospatial data to recording TK information in digitised inventories.

The *Biological Diversity Act* states that NBA may (not “shall”) consider registering the knowledge for protection. Thus, registration is an optional

measure, which is not mandatory to do under this law. This could be at the local, state or national levels. The term “registration” is not elaborated in the law. But in the *Biodiversity Rules* of 2004, issued to implement the *Biological Diversity Act*, the idea of registers and databases has been introduced. The NBA is given the option “to take steps to build up databases and to create information and documentation system for biological resources and associated TK through biodiversity registers and electronic data bases, to ensure effective management, promotion and sustainable uses” (Rule 12). As the language explains, this is for managing and promoting the use of TK and not simply protecting it. The current emphasis is on showcasing Indian TK in the bazaar to be able to negotiate more access and benefit sharing (ABS) deals.

The NBA and the State Biodiversity Boards set up under the *Biological Diversity Act* are concentrating on requiring local communities to first re-organise themselves into Biodiversity Management Committees (BMCs), and secondly, to make People’s Biodiversity Registers (PBRs) chronicling all the local biological resource and the traditional knowledge. The official PBR is in a pre-set format (with tables for the kind of information required) that needs to be filled by BMCs with the help of researchers and students and be validated by scientists.<sup>30</sup> The information collected in the PBRs is then to be computerised and compiled in the electronic Indian Biodiversity Information System (IBIS). Once the PBR information becomes a part of the IBIS, given the digital divide it would be in a format not easily accessible to the BMCs and local communities.

While the knowledge may have been entered in these PBRs, the PBRs themselves do not have any sort of legal protection in India to date.<sup>31</sup> Accordingly, serious concerns have been expressed by local groups about the country-wide PBR exercise without either an adequate framework for the formation of BMCs or the necessary protection of the knowledge recorded. It is evident that the knowledge once recorded in the PBRs is likely to be in a format that cannot be used by most members of local communities without external help. Meanwhile, the main function of the BMC has been reduced to mere preparation of PBRs in consultation with local people. Although the Rules state that PBRs shall be maintained and validated by the BMCs (Rules 22.10), but the method to be used has not been elaborated. There

is no legal protection to ensure that the knowledge documented within the PBRs is not misused or misappropriated. One electronic database on TK prepared outside the *Biological Diversity Act* is an oft-cited example from India – the Traditional Knowledge Digital Library (TKDL).<sup>32</sup> This is a collection of existing literature in Indian systems of medicine (ISM).

This is a collection of existing literature in Indian systems of medicine (ISM) – Ayurveda, Unani, Siddha and Yoga, re-recorded in digitised format in five foreign languages. This is meant to enable international patent offices granting patents based on Indian TK to be able to screen out applications that are not genuinely new and inventive. India’s people have long been raising concerns about “biopiracy”. The TKDL is envisaged as a tool to provide proof of pre-existing knowledge.

The year India joined the WTO, was also when the Department of Indian Systems of Medicine and Homoeopathy (ISM&H) was created in March 1995. In November 2003, it was renamed the Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (AYUSH). This Department functions under the Ministry of Health and Family Welfare. The TKDL is an initiative of AYUSH and the Council of Scientific and Industrial Research (CSIR) that functions under the Ministry of Science, Technology and Earth Sciences. There is not much everyday interaction with the Ministry of Environment and Forests that oversees the *Biological Diversity Act*, nor does the TKDL include any biodiversity-associated knowledge.

The Government of India has through the CSIR signed memoranda of understanding (MoU) with patent offices of a host of countries starting with the European Patent Office (EPO) in 2009.<sup>33</sup> The MoU gives EPO examiners on-line access to information related to Indian TK in all phases of the European patent grant procedure as governed by the *European Patent Convention*. Similar MoUs between India and USA, German, United Kingdom, Canada and Japan have also been signed. The TKDL Access Agreement was also signed with IP Australia in January 2011. These are precisely those technology-rich developed countries that use biological resources and related knowledge to develop products and services. The onus of appealing at these diverse fora if and when there is evidence that patents have been wrongfully granted, as well the cost of maintaining the entire

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TKDL infrastructure remains on the Indian side. Yet questionable patents are only one part of the problem. The TKDL is no help for the actual traditional healers in the continuance of their knowledge systems.

## Conclusions

How biodiversity-centred knowledge-based societies organise themselves around what they know about the living world determines their social standing, ecological ethos and value systems. For a farmer without their seeds can no longer be a farmer, nor a fisher woman remain a fisher without the fish and neither can a healer be a healer unless there is access to their herbs. Their knowledge of their local living resources and their relationship with them is their identity. The law seems to be struggling to encapsulate within several protection regimes the essence of that relationship. It is certainly not that of property.

If a proposed s.3A (as debated in the Parliamentary Committee in 2000-2001 considering the text of the *Biological Diversity Act* before its passage) had been included, the *Biological Diversity Act* with other IP laws might have been very different. The proposed section stated that all biodiversity resources will be held by the government; but they are not owned by the government nor are they private property. Its wording specifically said that the government holds them in trust to enhance community control over them. There are only a few states like Kerala in South India, that have articulated their own IPR policy with respect to TK in medicine. The policy document places that knowledge in the commons. The draft Biological Diversity Rules of Nagaland in North East India define “community intellectual property” as belonging to the community as a whole, rather than to individual inventors.<sup>34</sup>

The credibility of the IP system is more in question today than ever before. It is therefore timely to address alternative ways to foster creativity and reward innovation. This means not only extracting the “protection” debates from the bazaar, but making people’s knowledge protection part of the solution for those at the bottom of the pyramid. India’s knowledge-holders have been making that call for some years now. The knowledge bazaar and those who run it also need to heed that call.

\*The views reflected herein are those of the Campaign for Conservation and Community

Control over Biodiversity, India. This article is based on the presentation made by the author at the First Indigenous Knowledge Forum organised by the Faculty of Law, University of Technology of Sydney in Sydney, Australia, 1-3 August 2012.

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- 7 TRIPs covers the following areas of intellectual property: copyright works, trademarks, geographical indications, industrial designs, layout designs of integrated circuits, undisclosed information and patents.
- 8 Article 27.1 of TRIPs states that: “[s]ubject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. Subject to paragraph 4 of Article 65, paragraph 8 of Article 70 and paragraph 3 of this Article, patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.”
- 9 Articles 27.2, 27.3(a) and 27.3(b) of TRIPs.
- 10 The Parliament of India passed the *Protection of Plant Varieties and Farmers’ Rights Act 2001* as its sui generis law to fulfill India’s TRIPs obligations.
- 11 Khor, M. “A Worldwide Fight Against Biopiracy and Patents on Life”, (Third World Network). Available at: <http://www.twinside.org.sg/title/pat-ch.htm>.
- 12 Submission by India to the Committee on Trade and Environment of the TRIPs Council dated 14 July 2000 WT/CTE/W/156; IP/C/W/198. Available at: [http://www.commerce.nic.in/trade/wtopdfs/wt\\_cte\\_W156.pdf](http://www.commerce.nic.in/trade/wtopdfs/wt_cte_W156.pdf).
- 13 GRAIN TRIPs – Close call in Geneva (Seedling 26 October 2008).
- 14 GRAIN TRIPs – Close call in Geneva (Seedling 26 October 2008).
- 15 In 1997, the Texas based US corporation RiceTec Inc. obtained Patent No. 5663484 from the US Patent and Trademark Office (USPTO) on “Basmati rice lines and grains”. Several NGOs in India together filed a case in public interest in the Supreme Court of India in March 1998 seeking the Court’s direction to urge the Government of India to challenge the patent at the USPTO primarily on the grounds that the patent by the foreign company is in violation of sovereign rights of the country, which include the indigenous and inherent knowledge systems of India’s small farmers who have developed Basmati rice. Due to the pending legal challenge before the Supreme Court and a resulting Court Order the Government of India was directed to take action to protect the biodiversity and TK of the country. In June 2000, the Indian Government filed a “Request for Re-examination” at the USPTO. Only five out of the original 20 claims of the company were allowed to stand.
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- 19 Further information on WIPO's work on Traditional Knowledge, Genetic Resources and Traditional Cultural Expressions/Folklore is available at: <http://www.wipo.int/tk/en/>.
- 20 The full text of the legislation is available at: <http://nbaindia.org/content/25/19/act.html>.
- 21 The full text of the *Biological Diversity Rules* 2004 is available at: [http://moef.nic.in/divisions/biodiv/gsr-261\(c\).html](http://moef.nic.in/divisions/biodiv/gsr-261(c).html).
- 22 The Agreement signed by the Applicant with NBA (MAT) is available at: <http://nbaindia.org/text/19/Statusapprovalsagreementsigned.html>.
- 23 Sections 3, 4, 5, 6 and 7 of the Chapter on "Regulation of Access to Biological Diversity" in the *Biological Diversity Act* came into effect from 1 July 2004.
- 24 Form I & III appended to the *Biological Diversity Rules* 2004 with payment of INR 10,000 & INR 500 respectively as the requisite fee. Available at <http://nbaindia.org/content/26/23/application.html>.
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