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ACCESS AND BENEFIT SHARING FROM THE INDIGENOUS PEOPLES' PERSPECTIVE:
THE TBGRI-KANI 'MODEL'

C.R Bijoy



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C.R Bijoy*

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C.R Bijoy, (Independent Researcher and Activist), Doctor's Quarters, Sri Ramakrishna Hospital, 395 Avarampalayam Road, Coimbatore, Tamil Nadu – 641 044, INDIA, Email: cr.bijoy@gmail.com

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1

TRANSFER OF KANI ADIVASI KNOWLEDGE: A BENEFIT SHARING MODEL

1.1 The 'Discovery'

In 1987, a team of scientists was surveying the ethnobotanical knowledge of the Kani community in the Thiruvananthapuram forest in the southern part of the Western Ghat region in the state of Kerala as part of the All India Coordinated Research Project on Ethnobiology (AICRPE).¹ Mallan Kani and Kuttimathan Kani, the Kani guides felt no tiredness during the long treks, while the scientists felt fatigued. The Kani guides constantly ate some fruits and offered these to the scientists. When consumed the fruits gave the scientists a jolt of energy. The Kani guides said that knowledge about the fruits was sacred and not to be revealed to outsiders. The scientists promised not to 'misuse' the information and offered an equal share in the rewards if the plant was made into a product and

marketed. After much persuasion, the guides identified the plant as '*arogyapacha*' (which translates roughly to 'evergreen health'), *trichopus zeylanicus* spp. *travancoricus*, a perennial rhizomatous herb. Detailed scientific investigation, including chemical screening to isolate the active principles was carried out. Though documented and described earlier, its traditional use and special properties were not known to the 'outside' world.

Detailed investigations carried out at the Regional Research Laboratory (RRL) in Jammu confirmed the anti-fatigue property of *arogyapacha*. Phytochemical screening and pharmacological studies revealed the presence of certain glycolipids and non-steroidal compounds (polysaccharides) with profound adaptogenic immuno-enhancing anti-fatigue properties. Each plant bore only two to three fruits. Therefore, its evergreen leaves weighing 100-200 gm were a better option to provide a larger source for commercial production of a product with this anti-fatigue property.

The scientists moved to the Tropical Botanic Garden and Research Institute (TBGRI) at Thiruvananthapuram in Kerala in 1990.² The Herbal Product Development Division (Ethno-pharmacology) of TBGRI developed the product 'Jeevani', a polyherbal drug with three other medicinal plants, namely *withania somnifera* (ashwagandha), *piper longum*, and *evolvalus alsinoides*, in addition to *arogyapacha*.³ The main clinical efficacy of anti-fatigue was from *arogyapacha*. Further investigations revealed health promoting properties, which were scientifically validated. Evaluations of shelf life and clinical properties

1 Dr P. Pushpangadan was the Chief Coordinator of the All India Coordinated Research Project on Ethnobiology (AICRPE) and also a scientist at the Regional Research Laboratory, Jammu—one of the 40 laboratories functioning under the Council of Scientific and Industrial Research (CSIR), the premier autonomous Research and Development (R & D) organisation established by the Government of India in 1957, and Dr S. Rajasekharan was the head of an AICRPE unit based at Thiruvananthapuram, Kerala. The Department of Science and Technology of the Government of India launched the All India Coordinated Research Project on Ethnobiology (AICRPE), a multi-institutional and multidisciplinary project, in 1982 under the Man and Biosphere Programme (MAB). With the creation of Ministry of Environment and Forests (MoEF) by the Government in 1983, the MAB programme along with AICRPE was transferred to it. A coordination centre for AICRPE was established at the Regional Research Laboratory (RRL). Dr P. Pushpangadan, then a scientist at this institute, was appointed as the Principal Investigator and Chief Coordinator of this project that operated at 27 centres across the country. One of the units of this project was at the Government Ayurvedic College, Thiruvananthapuram headed by Dr S. Rajasekharan and another at the Foundation promoted by Arya Vaidya Pharmacy (AVP) at Coimbatore. AICRPE documented the rich knowledge system of Adivasis on over 10,000 plants, many wild animal and birds.

2 The Tropical Botanic Garden and Research Institute (TBGRI) was established by the Government of Kerala, India, in 1979 as an autonomous body. In 1997, the Ministry of Environment and Forests, Government of India, accorded it the status of grant-in-aid Centre of Excellence in Conservation and Sustainable Utilisation of Tropical Plant Diversity.

3 This division with its research facilities and expertise in ethno-pharmacology was established under a project signed between TBGRI, DANIDA (Danish Development Aid Agency) and the Royal Danish School of Pharmacy, Copenhagen, Denmark as a joint research programme on Indian Medicinal Plants. While the research data is jointly owned and published, patents, if any, arising out of the work was to be the sole property of TBGRI. TBGRI was to acknowledge the technical and financial support of DANIDA in their development efforts in R & D capacity building (from Personal communication with Dr P. Pushpangadan).

were also carried out.⁴ After appropriate clinical trials, a standardised herbal product was formulated that had anti-fatigue, adaptogenic and immuno-enhancing properties. The product was ready by the end of 1994.

To obtain a license for the production of a pharmaceutical product, the product must be tested either in the modern pharmacological framework or through the codified formulary of Indian systems of Medicine (Ayurveda, Sidha or Unani). The modern pharmacological framework involves activity-guided isolations of single molecules, which means the creation of a commercial product requires a wait of fifteen years or more as well as a huge investment. On the other hand, the codified formulary of the Indian systems of Medicine, based on which the license for production and marketing under the Drug Control Act could be obtained, does not however recognise local knowledge. Therefore the product Jeevani was explained in terms of the codified Ayurvedic formulary. *Arogyapacha* was referred to in Ayurvedic parlance as *Dinvya Varahi*.⁵ This strategy enabled TBGRI to obtain license for the production of Jeevani from the Drug Control Department of the Government of Kerala in 1996. This could then allow TBGRI to transfer technology for production and marketing. The process of preparation of the novel immuno-enhancing anti-fatigue, anti-stress and hepato-protective herbal drug Jeevani was also filed in India in 1996 but was yet to be awarded.⁶ The patent

application does not mention the Kani informers or the Kanis. The Executive Committee of TBGRI disapproved of the filing of an international patent under Patent Cooperation Treaty administered by the WIPO (World Intellectual Property Organisation) due to 'paucity of funds'.

1.2 The Transfer of Technology and The 'Model'

TBGRI transferred the technology for production of Jeevani to Arya Vaidya Pharmacy (Coimbatore) Limited (AVP),⁷ through an agreement.⁸ The license came into force on 10 November 1995 for a limited period of seven years. As per the agreement, AVP was to pay TBGRI (a) a license fee of Rs 1,000,000 of which half was to be transferred to TBGRI on signing the agreement and the balance on transfer of the know-how by TBGRI and (b) royalty at the rate of two per cent of the ex-factory sale price of the product made by AVP for a period of ten years from the date of commercial production. The seven-year license period ended in 2002 and was not renewed with AVP. Nor has TBGRI struck fresh deals with any other company.

TBGRI technology transfer was based on the Council of Scientific & Industrial Research (CSIR) pattern of technology transfer wherein 60 per cent of the license fee and royalty received from such technology transfer goes to the institute. 80 per cent of the remaining 40 per cent is given to the inventors and twenty per cent to the supporting staff.⁹ However, TBGRI's significant departure from the CSIR pattern was a ten per cent reduction in the license and royalty to the institute and a 'voluntary' surrender of the portion that was due to the 'inventors' and supporting staff (both from within TBGRI) to the members of the Kanis. In effect, TBGRI

4 Studies revealed anti-fatigue, anti-tumour, anti-gastric ulcer, anti-stress, anti-allergic, anti-oxidant, adaptogenic, aphrodisiac, immunomodulatory and hepatoprotective properties.

5 This is one of the 18 'divine' herbs mentioned in the ancient Ayurvedic treatises *Charaka Samhita* and *Susrutha Samhita*.

6 Twelve active compounds were isolated from *arogyapacha*. Five process patent applications were filed since 1994. A process of preparation of novel immunoenhancing anti-fatigue, anti-stress and hepato-protective herbal drug, Jeevani (Pushpangadan, S. Rajasekharan and George V., Patent application number 959/MAS/96, 4 June 1996); K.K. Butani, D.K. Gupta, B.S. Taggi, K.K. Anand, R.S. Kapil, Pushpangadan P, and Rajasekharan S, A process for the Isolation of a Glycolipid Fraction from *Trichopus Zelyanicus* Possessing Adpatogenic Activity, Patent application number 8/Del/94 (1994). Three more patent applications in which this plant was included were made. One was for diabetes (957/MAS/96, June 4, 1996), the second a sport medicine, Vaji (958/MAS/96, 4 June 1996) and third, a process to prepare an herbal preparation for cancer (MAS/650/2001). Of these five, 'benefit-sharing' was attempted for the herbal drug 'Jeevani'. The patent was sealed only in late 2005 and was yet to be awarded (as on October 2005 wide personal communication by Dr S. Rajasekharan, TBGRI).

7 AVP is an Ayurvedic drug manufacturing company headquartered in Coimbatore, Tamil Nadu, with manufacturing facilities in Kerala, was established in 1948.

8 The Agreement for Licensing of Know-how signed between Tropical Botanic Garden & Research Institute and The Arya Vaidya Pharmacy (Coimbatore) Ltd., 10 November 1995. Full text of the agreement is available at <http://www.wipo.int/tk/en/databases/contracts/texts/html/tbgri.html>.

9 The Council of Scientific and Industrial Research (CSIR) is the premier industrial R&D organisation in India constituted in 1942 by a resolution of the then Central Legislative Assembly. It is an autonomous body registered under the Registration of Societies Act of 1860.

parted with 50 percent of the license fee as well as royalty to an autonomous institutional mechanism to benefit the Kani informers who provided the original lead for the development of the drug, those who hoped to get some economic gain from the commercialisation of *arogyapacha* through collection, cultivation and sales, and to the Kanis of Kerala in general as a community as indicated in the by-laws of the Trust. This did not include the Kanis of Tamil Nadu. The Executive Committee and the Governing Body of TBGRI approved this major departure from the accepted practice in this specific instance in 1994. This was also facilitated by Article 8(j) and Article 15.7 of the Convention on Biodiversity (CBD),¹⁰ which required the member countries to ensure equitable sharing of benefits accrued from the use of biodiversity and associated knowledge system — the stakeholders/knowledge providers.¹¹ CBD had been ratified by India just then in February 1994 and was therefore obliged to promote its provisions despite the absence of national legislation to this effect.

'Kerala Kani Samudaya Kshema Trust' (KKSS) was registered as a society in November 1997 as the institutional mechanism to receive the share in license fee and royalty received by TBGRI from AVP. It was to undertake economic activities for the continued supply of *arogyapacha* to AVP for a sustained production of Jeevani as well as welfare activities for the members. KKSS was formed with nine members and its membership since then is reported to be about 1000. About Rs 650,000 (this included about Rs 150,000 by way of half of the two per cent royalty) was transferred by TBGRI since 1999 (after the KKSS was constituted) till date.¹² A sum of less than Rs 20,000 remained to be transferred by TBGRI under the benefit sharing. There was no formal agreement between TBGRI and KKSS on this 'benefit-sharing' arrangement that was an experiment. In the prevailing policy and legal vacuum, the Government of Kerala has not officially declared

this 'model' or any modified version as its policy or formula. Therefore this 'model' is not TBGRI's official policy or formulation.

The Executive Committee of the Trust in its first meeting on 19 March 1999 at the Kallar Mattammodhu Kani tribal settlement decided in consultation with TBGRI to invest Rs 500,000 (half the license fee) as a fixed deposit and also decided to pay Rs 20,000 each to Mallan Kani and Kuttimathan Kani (secretary of the Trust), and Rs 10,000 to Eachan Kani, the individual Kani informers in this bio-prospecting. These special incentives were from the Rs 50,000 accrued as interest in the first year from the deposit. Subsequently, KKSS was constructing a community hall-cum-office for itself at Chonampara tribal settlement, Kottoor, Thiruvananthapuram District.

1.3 The Commercialisation of Jeevani

Jeevani sold at Rs 160 for a 75-gram jar, was successfully marketed in India and abroad, including countries such as USA and Japan. With this commercialisation, *arogyapacha* from the forest began to be extensively collected and the traders moved in. Moreover the plant was considered endangered. The Forest Department took steps to clamp down on the natural collection by seizing harvests and filing cases. With this, the traditional and customary practice of collection and use of *arogyapacha* by Kanis, hitherto ignored by forest officials, became severely restricted and more significantly 'criminalised' and punishable under law. Objection to the collection of *arogyapacha* for the market stemmed from *arogyapacha* not being listed under the 'minor forest produce' for the purpose of collection and transportation for sales from the reserve forest.¹³

Increased illegal and destructive collection of *arogyapacha*, intensified policing by forest officials and consequent confiscation of large quantities of the plant, increasing demand and need for regular supply of fresh leaves to AVP led TBGRI scientists to develop a protocol for cultivating this plant. TBGRI scientists also promoted fast multiplication through both vegetative and tissue

10 Convention on Biological Diversity (hereafter Biodiversity Convention), Rio de Janeiro, 5 June 1992, reprinted in 31 *Int'l Leg. Mat.* 818 (1992).

11 Personal communication dated 6 October 2005 from Dr P. Pushpangadan, Director, National Botanical Research Institute, Lucknow and former Director of TBGRI when the TBGRI-Kani 'model' was experimented with.

12 Total royalty received by TBGRI from AVP during the period 10 September 1996 to 30 September 2004 was Rs 232,888.55 (Personal communication by Dr S.Rajasekharan, TBGRI)

13 The Forest Department subsequently agreed to include *arogyapacha* in the list of Minor Forest Produce but by then the manufacturing license given to AVP had expired.

culture methods to produce large scale planting materials for supply to Adivasis or indigenous people for cultivation, including any other Adivasi group who could cultivate and meet the increasing demand for the product.

It was attempted to ensure a regular supply of *arogyapacha* to AVP through the cultivation of this perennial undergrowth. But it was found that the medicinal qualities of the plant were lost, unless grown in the natural forest habitat in the shade of the forest canopy. So TBGRI organised 50 Kani families living inside the forest to cultivate and pre-process the plant under the supervision of the TBGRI scientists. It was calculated that each family with one or two acres of *arogyapacha* under cultivation could earn about Rs. 20,000 to Rs 30,000 per acre in the initial years and more in subsequent years. In October 1997, AVP proposed to the Kerala Forest Department and Tribal Welfare Department to pay Kanis some seed money for cultivation with a buy-back arrangement. But this could not go forward as non-forestry activities are not permissible within the forest under existing laws.

As the areas for collection and some part of the cultivation were within the Reserve Forest under the State Forest Department, the department also demanded a share of the license fee and royalties as due to them. The Kerala Forest Department later permitted the 'cultivation' of *arogyapacha* within the adivasi settlement area that continues to be illegally controlled by the Forest Department in violation of the Forest Act and the 1990 circulars of the Ministry of Environment and Forest related to settlement of forest rights.¹⁴

14 Ministry of Environment and Forests, Government of India, Circular No. 13-1/90-FP, 18 September 1990, addressed to the Secretaries of Forest Departments of all States/ Union Territories. The six circulars under this are:

- 1) FP (1) Review of encroachments on forest land
- 2) FP (2) Review of disputed claims over forest land, arising out of forest settlement
- 3) FP (3) Disputes regarding pattas/ leases/ grants involving forest land
- 4) FP (4) Elimination of intermediaries and payment of fair wages to the labourers on forestry works
- 5) FP (5) Conversion of forest villages into revenue villages and settlement of other old habitations
- 6) FP (6) Payment of compensation for loss of life and property due to predation/ depradation by wild animals

Meanwhile NutriScience Innovation LLC Ltd. Connecticut USA, the US distributor for AVP, registered Jeevani as a trademark at the United States Patent and Trademark Office bearing Serial No. 75692281 on 27 April 1999.¹⁵ AVP did not contest this infringement nor did it attempt to register Jeevani as a trademark in the US.¹⁶

The TBGRI-Kani 'model' is claimed to be unique, and post-facto claimed to be the 'only known case where Article 8(j) and Article 15 of the Convention on Biodiversity (CBD) was fully implemented' (emphasis added).¹⁷

15 Trademarks in the US are protected by Trademark Act of 1946, 60 Stat. 427, as amended, codified in 15 USC 1051-1127 and is administered by the United States Patent and Trademark Office (USPTO). The law is entirely enforced through private lawsuits. An applicant residing outside the United States may list a domestic representative, that is, the name and address of any person residing in the US upon whom notices or process may be served for proceedings affecting the mark. In the case of *Jeevani*, NutriScience later withdrew its claim under pressure on 13 July 2001. Great Earth Enterprises Inc, New York filed '*Jeevani Jolt*' as a trademark bearing Serial No. 75955444 on 8 March 2000 with the same formulation. See Ministry of Health and Family Welfare, Patenting of Traditional Indian Medicine by USA (Delhi: Press Information Bureau, Ministry of Health and Family Welfare, 08 March 2006).

16 A few more companies such as Herbal Holistics International are reported to be marketing *Jeevani* in the US at rates ranging from US Dollar 16 to US Dollar 39 per pack.

17 This is mentioned in most discussions on the TBGRI-Kani 'Model'. For instance see P. Pushpangadan, P. Pushpangadan Model of Benefit Sharing (Lucknow: National Botanical Research Institute, 2000); Anil K. Gupta, Rewarding Conservation of Biological and Genetic Resources and Associated Traditional Knowledge and Contemporary Grassroots Creativity (Ahmedabad: Indian Institute of Management, Working PaperNo.2003-01-06, 2003); R.V. Anuradha, Sharing With Kanis: A Case Study from Kerala, India (Delhi: Kalpavriksh, 1998); Anil K Gupta, WIPO-UNEP Study on the Role of Intellectual Property Rights in the Sharing of Benefits Arising from the Use of Biological Resources and Associated Traditional Knowledge (Ahmedabad: World Intellectual Property Organisation (WIPO) and the United Nations Environment Programme (UNEP), 2004); Vijesh V. Krishna and Unai Pascual, Optimal Compensation for Indigenous Knowledge Holders in Biodiversity Contracts: A Case Study from India (Cambridge: Department of Land Economy, University of Cambridge, 2004).

While at one end of the spectrum the TBGRI-Kani 'model' has been internationally acclaimed as a pioneering model in benefit sharing,¹⁸ at the other end, the model is seen as 'more or less a public relations exercise for the policy makers, academics and some civil society groups who needed a justification for their own involvement in facilitating exploitation of biodiversity and the traditional knowledge that comes along with it now turned into a global showcase for biological theft'.¹⁹

The hype that this departure generated also brought prevailing inadequacies and conflicts into the open. Many Kani elders believe that their traditional knowledge is sacred and should remain exclusive; that the '*Plathis*' (Kani healers or medicine men who are the repositories of medical wisdom) nor '*Moottukanis*' (Kani chiefs) were consulted and that the informers had no right to divulge this sacred knowledge for monetary consideration. In September 1995, a group of nine Kani healers protested to the Chief Minister of Kerala, who is also the Chairman of TBGRI Governing Body, opposing the sale of their knowledge to a private company. The Kerala Institute for Research, Training and Development of Scheduled Castes and Scheduled Tribes (KIRTADS), a separate Directorate of the state government under the Scheduled Castes and Schedules Tribes Development Ministry, has been publicly critical of the TBGRI-Kani 'model'. KIRTADS had in 1995 drafted a state level bill for the protection of the Intellectual Property Rights of the Scheduled Tribes of Kerala through exclusive rights to Adivasi communities - yet another unique initiative that has been lying in limbo.

18 The TBGRI-Kani 'model' has won the UNDP (United Nations Development Programmes) 'Equator Initiative Prize' 2002 for innovation in poverty eradication and sustainable development and is invariably top in the list of case studies on 'benefit sharing' models mentioned in various reports and documents, for instance by such organisations as UNDP. This was one and the only one from India of 27 groups selected from amongst 420 nominated projects from 77 countries from within the equatorial belt. The award carries US Dollar 30,000 for each group and a certificate of appreciation.

19 Devinder Sharma, *Selling Biodiversity: Benefit Sharing is a Dead Concept* (2004), available at <http://www.mindfully.org/WTO/2004/Selling-Biodiversity-Sharma3may04.htm>; see also J. John and Sindhu Menon, *Kerala Tribe Accuses Indian Biologists of Stealing Knowledge* (London: PANOS Biopiracy, 1998).

1.4 The Kanikar

The Kanikar (Kani) inhabit the southern part of the Western Ghats. The British in their time had colonised the natural wealth of the Kanikar's ancestral domain which the states of Kerala and Tamil Nadu managed as internal colonies.²⁰ With the creation the two states Kerala and Tamil Nadu their ancestral domain was divided. The states pushed them further to the periphery of smaller administrative units, that is, the districts, taluks and panchayats. They live in parts of Thiruvananthapuram and Kollam districts in Kerala and Tirunelveli and Kanyakumari districts of Tamil Nadu. Their population is about 25,000 of whom over three-fourths live on the Kerala side while the rest inhabit Tamil Nadu.²¹ The revenue and forest departments of these two southern states now hold most of these lands while the remaining parts of the lands have been appropriated and converted as estates and plantations by powerful non-tribals. The Kanikars are pushed into marginal enclaves scattered across the southern part of Western Ghats.

A part of the ancestral domain of Kanikar covering 128 sq km in the Thiruvananthapuram district has been declared the Neyyar Wildlife Sanctuary. Contiguous to Neyyar is the Kalakkadu Wild Life Sanctuary (a tiger reserve) covering an area of 223 sq kms and the Mundanthurai Wildlife Sanctuary of another 567 sq kms, both in the Tirunelveli District of Tamil Nadu. A larger area (that includes the Neyyar Wildlife Sanctuary) of 1,701 sq kms was declared the Agasthyamala Biosphere Reserve in 2001. Access to these areas is severely restricted, many thousands have been evicted and the remaining faces the threat of eviction. In addition, large tracts of the Kanikar's habitat are classified as forests in both the states.

20 The Attingal princely rulers recognised large parts of their ancestral domain in olden times. In the eighteenth century, Marthandavarma Maharaja allotted 36,000 acres through a royal *neetu* (royal order) to 21 prominent Kanikars. Of this 25,954 acres and 82 cents are in Thiruvananthapuram and 10,045 acres and eighteen cents are in Kanyakumari districts. The Indian state refuses to recognise this.

21 Raymond Gordon Jr. ed., *Ethnologue: Languages of the World*, SIL Code: KEV, ISO 639-2: dra (Dallas: SIL International, 2005).

All the existing studies on the TBGRI Kani 'Model' mention their population at about 16,000 confined only to Thiruvananthapuram district.

2

CUSTOMARY LAW AND PROTECTION OF ADIVASI/INDIGENOUS PEOPLES' TERRITORIES AND KNOWLEDGE

2.1 An Overview

The symbiotic relationship between the Adivasis with their ancestral domain led to their distinct and sound understanding of their surroundings developing a knowledge system often referred to as 'indigenous knowledge' (IK) which has been transmitted over generations. This manifests in their culture, customs and beliefs with biodiversity facilitating the evolution of a complex ecological map of knowledge.

The practices of protecting biodiversity and their sustainable use are amply reflected in the customs of most indigenous and local communities. Customary laws and traditional institutions of governance constitute the basis of biodiversity conservation, sustainable use and preservation; and development of IK. Territorial rights and self-determination are fundamental to this. National and international laws and policies, along with the modern development paradigm, criminalise these traditions by not recognising and providing effective legal status to them. Through the process of colonising territories and expropriating natural resources as enclosures to be secured and policed for the market with the state as an instrument of this colonisation, customary laws and practices in fact, are adversely affected. This undermines indigenous knowledge and in effect denies indigenous peoples' right to produce knowledge.

This has been made possible with the adoption of a predominantly individual-based rights system and the commodification of natural resources with the state as the eminent domain denying indigenous notions of collective heritage and a community perspective of land and resources. Common good is replaced by exploitation of resources for profit or personal aggrandisement.

Matters such as natural resource management, which used to be a community domain were a prime casualty with the colonial imperatives for appropriation. The current Indian legal system establishes a unified Indian

law except in matters of family, religion and inheritance. Their concept of a common heritage facilitating the development of knowledge had very little space in the modern legal system. However, they continued in social practice and started to decline, with the body of state laws systematically eroding and destroying such social practices using the precedence of state made laws over customary law. This is in spite of the Constitution of India recognising customary law, which, in reality, subjected them to a requirement of being in consonance with state-made law. Laws were progressively enacted without due consideration towards existing customary laws.

The Indian Evidence Act, 1872 is one of the earliest legislation that formally recognised customs to establish matters related to rights through the examination of practices recorded in village administration or settlement records. These records invariably do not exist or are grossly incorrect and incomplete and hence were ignored by the state. The judiciary, relying on such official records, too often denies customary rights. The Indian Easements Act, 1882 provides for securing private rights, public rights and rights to certain classes of persons or sections of the public based on examination of customary rights. The forests, essentially a community domain, under the state forest laws since 1865 further replaced by the 1927 Indian Forest Act, transformed customary rights of communities into privileges and concessions sanctioned by the state and enjoyed at the will of the state and its forest officials despite scope for their recognition in law. This rapidly eroded IK and practices.

As said earlier, the Constitution of India recognises customs and customary practices. The term 'law' in Article 13 includes 'customs' and 'usages' having the force of law but not infringing any of the fundamental rights conferred by part III of the Constitution. Article 21 on fundamental rights confers Right to Life, not merely of animal existence but life with human dignity, and right to livelihood except according to a due process of law. Article 39(b) enjoins a duty upon the state to direct its policy towards ensuring that the ownership and control of the material resources of the community are so distributed as best to serve the common good. Under Article 46, the State is obliged to see that Scheduled Tribes are not open to exploitation and deprived of their rights on account of their illiteracy

and low status. Part IV-A of the Constitution imposes a duty on the citizens to value and preserve the rich heritage of the composite culture; and to protect and improve the natural environment including forests, lakes and rivers, which are great reservoirs of IK. However, these are directives to be promoted through legislations.

Most of the indigenous communities have little exposure to modern systems of judicial redress. As against this, people are well aware of their own customary laws; therefore it is easy for them to approach their traditional institutions for the administration of justice. Besides, cases are decided keeping in mind the needs of the society and the victim, and the capacity of the accused to withstand justice.

Article 244 of the Constitution is a specific provision for Administration of Scheduled Areas and Tribal Areas through the Fifth Schedule and Sixth Schedule. The provisions of the Fifth Schedule apply to the administration and control of the Scheduled Areas and Scheduled Tribes in any State except the states of Assam, Meghalaya, Tripura and Mizoram for whom the provisions of the Sixth Schedule apply.

Under the Panchayat (Extension to Scheduled Areas) Act (PESA) of 1996 for the Fifth Schedule, for the first time, there is a clear direction that the Legislature of a State shall not make any law that is not in consonance with the customary law, social and religious practices and traditional management practices of community resources (Clause 4a). This law was enacted after a nationwide mobilisation of Adivasis to enact such a law. Removal of dissonance between tribal tradition of self-governance and modern legal institutions was the most important outcome that was expected of the PESA. A village itself is defined as a habitation or a group of habitations or a hamlet or a group of hamlets comprising a community and managing its affairs in accordance with traditions and customs (Clause 4b) and the village assembly shall be competent to safeguard and preserve the traditions and customs of the people, their cultural identity, community resources and the customary mode of dispute resolution (Clause 4d). Though the Act was enacted a decade ago, none of the states with Fifth Schedule areas have passed legislations in total conformity with the provisions of PESA. The states disregarded the major components of PESA, did not amend existing laws to be in consonance with PESA

and continue to violate PESA.²² In addition,²³ the President of India and the concerned governors of the State have the duty to preserve, protect and defend both the Constitution, including this special feature concerning the Scheduled Areas, and the law including the customs and usage of Adivasis subject to only one condition, namely that it does not affect the basic structure of the Constitution. The Governor is given immense power to apply or not to apply any Act to the Scheduled Area, and make regulations for peace and good governance of the Scheduled area. But these too have been belied. The consequence of these acts of omissions and commissions is the further exasperation of the crises and conflicts in Adivasis' areas creating a situation of a virtual breakdown of the Constitution itself. Most of the Adivasi homelands have officially become conflict areas.²⁴

In the Sixth Schedule areas, the District Councils and Regional Councils in the North Eastern states of Assam, Tripura, Meghalaya and Mizoram have the powers to enact laws related to social customs. There are the formal modern central laws, traditional customary laws from within the community, and laws by Autonomous District Councils. Consequently there are three institutions for justice administration – traditional institutions dealing with customary and folk laws, formal administrative bodies and the Autonomous District Councils. The Sixth Schedule Areas bar application of Acts of Parliament and State Legislature to areas in the subject matter where Autonomous Council is authorised to make and extend

22 According to a study commissioned by the National Institute of Rural Development, Hyderabad between 2001 and 2003, Fifth Schedule areas are constituted within the states of Madhya Pradesh, Himachal Pradesh, Jharkhand, Chattisgarh, Andhra Pradesh, Orissa, Maharashtra, Gujarat and Rajasthan. However, states such as Kerala, Tamilnadu, Karnataka and West Bengal have continued to ignore the demand by Adivasis to declare their habitations under the Schedule till date.

23 See Constitution of India, Para. 2 and 3 of the Fifth Schedule and Article 60 and 159.

24 According to a Home Ministry Report, there were 156 districts in 13 states that were considered to be under the sway of the Maoists as on September 2004 which had increased to 170 districts in 15 states by mid-2005. Many of them are tribal dominated districts. See Communist Party of India-Maoist (CPI-Maoist), Left-wing Extremist Group, available at http://www.satp.org/satporgtp/countries/india/terroristoutfits/CPI_M.htm and 'India's Naxalites: A Spectre Haunting India', *The Economist*, 17 August 2006.

laws. These provide scope for bodies to evolve appropriate laws that recognise the customary rights, provided the political space is evolved through a democratisation process. All of this takes place in the context of intense conflicts with the formal modern administrative bodies and, to a lesser extent, the Autonomous District Councils trampling on traditional systems.

Article 371A and 371G of the Constitution are special provisions that recognise customary laws in the North Eastern states of Nagaland and Mizoram respectively. Under these provisions, no Act of Parliament in respect of religious or social practices of the Nagas and Mizos, their customary law and procedure, administration of civil and criminal justice involving decisions according to customary law, and ownership and transfer of land and its resources, shall apply to the States of Nagaland and Mizoram unless the Legislative Assembly of the concerned states so decides. The historic political assertion, often militant, along with these enabling constitutional provisions ensure relatively better and effective command over resources and strong traditional governance systems as compared to the other Adivasi regions in the sub-continent.

For the first time, the 'right of access to bio-diversity and community right to intellectual property and traditional knowledge related to forest biodiversity and cultural diversity' features in the law 'Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006' in 3(k) under 'Forest Rights'. This too emerged only through a nation-wide struggle by Adivasi movements.

2.2 Historical Injustice

Roughly about twenty per cent of the land area in the country, considered the most inhospitable areas, constitutes the traditional habitat of Scheduled Tribes (ST) who are 8.8 percent of the total population. There are also people who identify themselves as Adivasis but are not formally recognised as Scheduled Tribes. Between 1951 and 1990 alone, nearly 8,539,000 have been displaced constituting at least 55.16 per cent of the total displaced²⁵ and about eleven per cent of the

total ST population. Displacements since 1990 have escalated exponentially for development projects, conservation of forests and protected areas.

2.2.1 Forest Rights

Of the lands that were the traditional habitat of Scheduled Tribes, about 70 per cent have been taken over as forests. There are 187 tribal districts in the country covering 33.6 per cent of the land area but has as much as 37 per cent of the nation's forest cover and an overwhelming 63 per cent of the dense forests.²⁶ The area classified as forest has been increasing in order to reach an arbitrary target of 33 per cent set in the Forest Policy of 1952. At present 20.64 per cent (678,333 sq kms) of the total land area is under this category. 23 per cent of the forest area (156,700 sq kms) or about five per cent of the total land area has been declared protected areas with the establishment of 92 national parks and 500 wildlife sanctuaries. About four million people, mostly Adivasis, continue to inhabit the forest area, hounded, starved and under threat of forced eviction.

While declaring an area as 'forests', the colonial Indian Forest Act 1927 required that their rights be recorded and settled. However, this was not carried out at all or was carried out in a grossly unjust manner as in most other parts of the country.²⁷ The Wildlife Protection Act of 1972 further drastically curtailed the few concessions that they enjoyed and at the mercy of the forest officials, in the areas declared as protected areas — the wildlife sanctuaries and national parks. The Forest Conservation Act 1980 threatens to evict large numbers of those still inhabiting the 'forests' whose rights were not recorded and settled as per law till date, but instead treating them as illegal 'encroachers'.

The issue of denial of the legal rights of forest dwellers across the country in the areas declared as 'forests' reached an explosive situation erupting into a national crisis because of the intervention of the Supreme Court of India in a case popularly known as the 'forest case'²⁸.

²⁵ See Draft National Tribal Policy, Ministry of Tribal Affairs, Government of India, available at <http://tribal.nic.in/finalContent.pdf>.

²⁶ See State of Forest Report 2003, Ministry of Environment and Forest, Government of India.

²⁷ B. D Sharma, Resolution of Conflicts Concerning Forest Lands - Adoption of a Frame by Government of India (1990), available at http://www.doccentre.net/docsweb/ativasis_&_forests/land_conflicts_report.pdf.

²⁸ T.N. Godavarman Thirumalpad v. Union of India and Others, Supreme Court of India, Writ Petition (Civil) No. 202 of 1995.

The Court intervention provided the Forest Department extra-constitutional powers that was used liberally and brutally across the country until it resulted in the national crisis. The crisis led the Ministry of Environment and Forests to acknowledge that 'the historical injustice done to the tribal forest dwellers through non-recognition of their traditional rights must be finally rectified'.²⁹ To partially rectify this historic injustice, the Ministry of Tribal Affairs passed the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.³⁰ The bill seeks to settle land rights; rights to forest produce and grazing, usufruct rights, restoration of illegal cancellation of titles, grants and leases to lands, traditional and customary rights, rights to common community resources, habitat rights for primitive tribal groups, right to access to bio-diversity and community right to intellectual property and traditional knowledge, and right to protect forests.

2.2.2 Land Rights

Large tracts outside the 'forests' are designated as revenue lands under state control. Most of the village commons and family holdings are not recorded and therefore either encroached by non-tribals or controlled by the state as state property. Collective rights to lands are not permissible under the present legislative framework. Lack of notions of land as a property among the Adivasis and the failure of the state officials to record actual enjoyments resulted only in a small section of the Adivasis managing to obtain titles to part of their holdings. These too have been systematically alienated. This is despite Article 244 of the Indian Constitution that demands protection of land rights besides others.

In Kerala, the Kerala Scheduled Tribes Act (Restriction on Transfer of Lands and Restoration of Alienated Lands) was enacted in 1975. But the rules were framed after a decade in 1986. Despite the explicit orders of

the Kerala High Court in 1993, most of the alienated lands were not restored. Instead the state sought to replace the 1975 law with another law in 1999, which in effect denies restoration of alienated lands. The Kerala High Court struck down this part of the law as unconstitutional. The case still lies pending in the Supreme Court.³¹

Large sections of the Adivasi population who could not get their lands recorded and became landless fall outside this protective land law as this is applicable only to those few who managed to get their land holdings officially recorded. Marginalised and pushed to starvation, Adivasi assertions in Kerala led to an agreement on 16 October 2001 between the State government and the leaders of the movement. Under this agreement, all landless Adivasis and those owning less than an acre were to receive up to five acres within one year. This too has not been fulfilled yet.³²

In the state of Tamil Nadu, the situation is much worse. There are no protective land laws for Scheduled Tribes in the state. The Constitution has been blatantly ignored and therefore violated. The absence of constitutionally required protection to the Scheduled Tribes has intensified the crisis of survival.

2.2.3 Governance

With the colonisation of Adivasi territories, the continued perpetuation of the legacy of colonisation through the instrument of law and the authority established under these laws, the Adivasi areas in the

²⁹ See T.N. Godavarman Thirumalpad, note 28 above, the affidavit filed in the Supreme Court by the Ministry of Environment and Forest, Government of India on 21 July 2004.

³⁰ The original draft was modified by the Joint Parliament Committee for finalisation of the Bill in February 2006. The Bill passed on 15 December 2006 in the Lok Sabha and 18 December 2006 in the Rajya Sabha received the President's assent on 29 December 2006. Full text of the Act is available at <http://tribal.nic.in/actTA06.pdf>.

³¹ These acts of the Kerala government violate Articles 3, 13 and 14 of ILO Convention 107 (ratified by India) that relate to protection of properties, respect of customary procedures of transmission of traditional ownership of lands, prevention of non-tribes from securing ownership or use of lands belonging to tribals and provision of more land when they have not the area necessary for providing the essentials of normal existence. They also violate Section II of the ILO Convention 169 on Indigenous and Tribal Populations (which India is yet to ratify), which explicitly recognises the concept of territoriality of the tribals and the relationship it has with their identity, and their right to ownership and possession over lands traditionally occupied. These ignore Part VI of the UN draft Universal Declaration of the Rights of Indigenous Peoples.

³² C.R. Bijoy and K. Ravi Raman, 'Muthanga: The Real Story Adivasi Movement to Recover Land', 38 *Economic and Political Weekly* 1975 (2003).

country have been systematically taken over for purposes of conservation and extraction. The Constitution however, provides for various degrees of self-governance under Article 244 through the Fifth Schedule and Sixth Schedule providing scope for the development of a self-determining, self-governing system based on traditions. But instead an alien political, administrative and judicial system was systematically imposed through the subversion of Article 244. The loss of territory, the massive instability created, for instance, by state-sponsored development and conservation that has displaced, by a conservative estimate, ten million Adivasis and the waves of migration into these areas, often state sponsored or mediated, have resulted in the weakening of and the break up of traditional governance system. At the same time, these have not been supplanted with alternate governance systems. These areas are left adrift and so poorly administered that most of the Adivasi areas are now designated as disturbed areas. The introduction of the Panchayat Raj (Extension to Scheduled Areas) Act in 1996 (PESA 1996) in the Fifth Schedule Areas formally recognised the primacy of the village assembly thus opening up a new sense of hope for revitalisation and reconstruction of communities. However, state governments have resisted their coming into operation through various means.

Both Kerala and Tamil Nadu have not brought Adivasi habitations under the Fifth Schedule despite recommendation from the Dilip Singh Bhuria Committee constituted by the central government to recommend the framework for PESA 1996. Also, one of the terms of the agreement on 16 October 2001 between the Kerala government and the leaders of the Adivasi movements was to pass a cabinet resolution to bring Adivasi habitations in the state under the Fifth Schedule. This has not materialised. In Tamil Nadu there is a recommendation in 2002 that 'All tribal habitations (hamlets/ villages) should be declared as 'Scheduled Area' under article 244(1) of the Constitution', but nothing has come out of it.³³ The scope for revitalisation of Adivasi villages and the constitutional provision for self-governance available at least in law have been denied to the Adivasis of these two states.

³³ Adi Dravida and Tribal Welfare Department, Report on Tenth Five Year Plan 2002-2007 (Chennai: Adi Dravida and Tribal Welfare Department, 2002).

The TBGRI-Kani 'model' is to be contextualised in this milieu of denial of fundamental rights for livelihood and survival leading to a constitutional break down in the Adivasi areas, repeatedly pointed out in the various official documents of the Government of India.³⁴ The protection of cultural and intellectual property is connected fundamentally with the realisation of the territorial rights and self-determination.³⁵

The Adivasis' knowledge system and cultural heritage have developed in relation to the natural environment and is due largely to the spiritual and material relationship Adivasis share with their land and territories — a relationship that continues to strongly influence indigenous cultures. Hence, Adivasis' cultural and intellectual rights cannot be enjoyed and developed if they are deprived of their territorial rights and self-governance. 'Benefit sharing' essentially deals with the issue of the rights of traditional communities over their resources and knowledge. The success of any 'benefit-sharing' system depends on the bargaining capability of the community and its members and their ability to dictate the transaction. Therefore, a benefit-sharing 'model' has to satisfy these fundamental requirements for it to be a 'model'.

3 NATIONAL AND INTERNATIONAL POLICY AND LAW: THE CONTEXT

3.1 CBD and The National Biodiversity Act 2002

India, a party to the CBD, is obliged to take legislative, administrative and policy measures with the aim to conserve biodiversity. Equally, it is expected to ensure that a framework for fair and equitable access and benefit sharing for biological and genetic resources that is

³⁴ See Government of India, Twenty-Ninth Report of the Commissioner for Scheduled Castes and Scheduled Tribes (1987-89) (New Delhi: Government of India, 1990).

³⁵ Discrimination Against Indigenous Peoples: Study on the Protection of the Cultural and Intellectual Property of Indigenous Peoples, UN Sub-Commission on Prevention of Discrimination and Protection of Minorities, UN Doc.

justiciable evolves. More specifically, the concerns relate to how these resources are acquired, and what would be the formal relationship between those who have historically held these resources and associated IK (IK holders) and those parties who seek the knowledge for commercial purposes.

The sixth meeting of the Conference of Parties to the CBD in April 2002 (COP 6) deliberated on the interpretation of Article 15,³⁶ and arrived at Decision VI/24. This brought forth 'the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilisation',³⁷ which are voluntary. They are the first widely accepted criteria for the licensing of access to genetic resources. These Guidelines are to serve as inputs in developing and drafting legislative, administrative or policy measures on access and benefit-sharing with particular reference to provisions under Articles 8(j), 10 (c), 15, 16 and 19;³⁸ and contracts and other arrangements under mutually agreed terms for access and benefit-sharing.

The Guidelines, amongst others, provide for the development of a national competent authority who may incorporate the following with specific reference to indigenous and local communities in the development of mechanisms and procedures for access, and fair and equitable benefit-sharing regimes (Article 16 of the Convention), prior informed consent (in conformity with Article 15, paragraph five of the Convention) and mutually agreed terms recognising the protection of traditional knowledge, innovations and practices of indigenous and local communities:

- effective participation and involvement of indigenous and local communities in the process of access and benefit-sharing in general and in a case-to-case basis;
- ensuring that decisions are made available to relevant indigenous and local communities ;

- enhancing indigenous and local communities' capacity to represent their interests fully at negotiations;
- respecting customs, traditions, values and customary practices of indigenous and local communities;
- ensuring that the knowledge, innovations and practices of indigenous and local communities have been respected, preserved and maintained;
- ensuring legal certainty and clarity;
- respecting established legal rights of indigenous and local communities associated with the genetic resources being accessed or where traditional knowledge associated with these genetic resources is being accessed;
- obtaining prior informed consent of indigenous and local communities and the approval and involvement of the holders of traditional knowledge, innovations and practices in accordance with their traditional practices;
- making provision to ensure the continued customary use of genetic resources and related knowledge;
- possibility of joint ownership of intellectual property rights according to the degree of contribution.

The CBD recognises national governments as the authority to determine access to genetic resources. But it is silent about the ownership or property rights of these resources.

The Biological Diversity Act 2002 was enacted to strictly regulate international access to bioresources for research and commercial use with heavy fines for breach of the Act.³⁹ The Act provides for establishment of bodies at different levels – national, state and local. The Act regulates access to biological materials and/or IK by Indian and non-Indian citizens. Non-Indian citizens or non-resident Indians or a corporate body not registered in India cannot use biological material originated from India for any research or commercial activity without prior permission of the National Biodiversity Authority (NBA) set up under the Act. The Act prohibits the

³⁶ See Biodiversity Convention, note 10 above, Article 15, Access to Genetic Resources.

³⁷ The Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilisation, Conference of Parties to the Biodiversity Convention, Decision VIII/4, April 2002. The full text of the guidelines is available at <http://www.biodiv.org/decisions/default.aspx?m=cop-06&d=24>.

³⁸ See Biodiversity Convention, note 10 above, Articles 10, 16 and 19.

³⁹ India, the Biological Diversity Act, 2002. The full text of the Act is available at http://envfor.nic.in/divisions/biodiv/act/bio_div_act.htm.

transfer of results of research (except for the existing collaborative research project) related to such biological material or associated IK to non-citizens of India, without prior approval of NBA. There are penalties for not adhering to this provision. These provisions are to get control over expropriation and exploitation of bioresources and IK. Any person who is seeking protection of IPR generated out of bioresources or IK has to take prior permission of the NBA, before s/he can even file for such protection. This provision applies not only to non-Indians but to Indians also. The Act has the main aim of conservation and sustainable use of biodiversity. While doing so, the Act also recognises and provides for rewards to the developer of the new biological material.

However the regulation of access for the Indian citizens applies only when there is commercial involvement or monetary gain. For research purpose, Indians are not required to obtain permission from the NBA. The Act empowers the NBA to impose royalties (and compensation when somebody is doing something wrong) to ensure equitable sharing of benefits to all concerned parties. Furthermore, the NBA can stop access to any bioresources that are in danger of getting extinct.

The Act constitutes a fund raised through fees, royalties and fines to help in sharing benefits, support conservation efforts and socio-economic development of areas from where bioresources are accessed.

Prior Informed Consent (PIC) is not required in the Indian legislation; rather prior intimation of the National and State Biodiversity Boards is required. No explicit links are provided between the State and the holders of knowledge or biological resources; the decision lies ultimately in the hands of state rather than the holders themselves. The Material Transfer Agreement (MTA) in the Indian legislation is to set up a National Biodiversity Fund to 'channel benefits to the benefit claimers'. However, the legislation does not state what is required to be the precise elements of the MTA.

Institutions of self-governance are to constitute Biodiversity Management Committees for primarily documentation of biodiversity and chronicling of knowledge related thereto. They have no powers *vis-à-vis* giving recognition to the customary rights of the local people over the biodiversity, access to biological and

genetic resources or benefit-sharing as per the rules, which were notified in 2004.

Access of local people and communities to biological resources are subject to existing laws and conservation needs as determined by the Act. Intellectual Property Rights (IPR) through grant of joint ownership of IPR to the NBA, or where benefit claimers are identified, to such benefit claimers, are permissible under the Act. Therefore, while the bill refers to the CBD, the aim and spirit of the Convention is not put into place. The primary aim is to affirm national (read 'state') sovereignty over the country's biodiversity through the establishment of a regulatory mechanism to control, regulate access to and use of bioresources in India.

Article 8(j) of CBD recognising the claims of indigenous people and communities find no concrete expression in the Act. Article 6 of the CBD requires countries to prepare a National Biodiversity Strategy Action Plan (NBSAP). The report 'Securing India's Future' was finalised by a Technical and Policy Core Group appointed by the Ministry of Environment and Forests in late 2003. Development of NBSAP was the most extensive environmental planning process ever undertaken in the country. The report, for instance, recommends innovative legal or other means of traditional knowledge rights that do not fall into the trap of privatised IPR like patents. However, the Ministry has rejected its own report as 'for the major part scientifically invalid.'⁴⁰

The problem associated with the implementation of benefit sharing also emerges out of the existence of two inconsistent international agreements, the Convention on Biological Diversity (CBD) and the Trade Related Aspects of Intellectual Property Rights (TRIPS). While the CBD urges, national sovereignty over biological resources; access to biological resources through mutually agreed terms and prior informed consent; and fair and equitable benefit-sharing resulting

40 See Ministry of Environment and Forests, National Biodiversity Strategy and Action Plan Submitted by the NGO – Kalpavriksh has Been Rejected (Delhi: Press Information Bureau, Government of India, 5 October 2005). See also Kalpavriksh Environmental Action Group, Towards the Formulation of India's National Biodiversity Strategy and Action Plan: A Background Paper (Delhi: Kalpavriksh Environmental Action Group) available at www.rupfor.org/downloadq/BEG%20Background%20paper%20for%20IIED%20workshop.pdf

out of the use of biological resource and associated knowledge, the TRIPS Agreement does not acknowledge these, but propagates a proprietorship regime and monopolistic intellectual protection. The legislative process in the country is clearly dictated in this instance by World Trade Organisation (WTO) — TRIPS and the market dictates rather than CBD.

3.2 TRIPS and The Emerging Regulatory System

At present there are no formal laws to prevent anyone from appropriating knowledge from the indigenous communities. TRIPS is now the key international agreement promoting the harmonisation of national IPR regimes. It covers four types of intellectual property rights namely patents, geographical indications, undisclosed information (trade secrets), and trademarks.

The Patents Act of 1970 as amended in 1999 and 2002 does not grant patents (extended from process patent to product patent) to subject matter which was available to the public by means of use, written description or in any manner in any country, or which was used by local and indigenous communities prior to the date of filing the application for patents. The Act considers knowledge available (oral or otherwise) within local/indigenous communities 'to be anticipated', a 'prior art', and hence not patentable. Patenting requires satisfying the criteria of novelty and inventiveness. The Patent (Amendment) Act 2005 added technical advance and/or economic significance as a criterion of 'inventive step'.

In the absence of laws that recognise and regulate formal transactions of Traditional Knowledge (TK), the scope for benefit sharing in law is almost absent. Instances of knowledge in the public domain being patented elsewhere are widely in vogue. However, this does not prevent or regulate formulation of products derived from TK or IK that are not patented or patented or the patent period of which is expired from being licensed for production and marketed under other relevant laws as has been in the case of Jeevani for instance.

Traditional knowledge does not meet the conditions required of the legally defined IPR regime as they do not fulfil the legally defined criteria of novelty, inventiveness and industrial applicability. IPR regimes are based on individual rights where as TK is by and large collective.

The Indian patent laws, which were amended in 2002, contain provisions for mandatory disclosure of source and geographical origin of the biological material used in the invention while applying for patents in India. Provisions are also incorporated to include non-disclosure or wrongful disclosure of the same as grounds for opposition and for revocation of the patents, if granted. To ensure TK is not patented, provisions have also been incorporated in the law to include anticipation of invention by available local knowledge, including oral knowledge, as one of the grounds for opposition as also for revocation of patent. In order to further strengthen these provisions, a new provision has been added to exclude innovations, which are basically TK or aggregation or duplication of known properties of traditionally known component or components from being patented.

The Geographical Indications of Goods (Registration and Protection) Act, 1999 is derived from Articles 22, 23, and 24 of the TRIPS Agreement that aims to create a register (for purposes of establishing protection) indicators which identify a good as originating in a territory or region or locality, where a given quality, reputation or other characteristics of the good is essentially attributable to its geographical origin. This is to prevent the encroachment into the markets and the protection of markets for communities that have traditionally produced these varieties. It is meant for the community and not for individuals as against patents. The Act permits any association of persons or producers or any organisation or authority established by law representing the interest of the producer of goods to register a geographical indication.⁴¹

The Trade and Merchandise Marks Act, 1958 protects trademark on physical goods or commodities traded consisting of a word or invented word, phrases, symbol, design, signature, device, letter, numeral, brand, heading, label, name written in a particular style, the shape of goods other than those for which a mark is proposed to be used, or any combination thereof or a combination of colors and so forth including those symbolised by the name of a person, living or dead. To be in conformity with TRIPS, the Trade Mark Act 1999 was enacted and notified on 15 September 2003 extending

⁴¹ Anitha Ramanna, 'Policy Implications of India's Patent Reforms: Patent Applications in the Post-1995 Era', 37 *Economic and Political Weekly* 2065 - 2075 (2002).

the trademark registration to services also and including specific protection for well known marks. The new Act also seeks to make internationally acclaimed brand names freely available for use in India. Under the new Act, the term of registration is extended to ten years from seven years, subject to renewal. The offences under the Act have been now made cognisable and non-bailable with increase in the punishment.

The mark chosen should not be similar to an existing mark of another person nor be one expressly prohibited under the Act. The marks devoid of any distinctive character, or which are only indicative of the kind, quality, quantity, purpose, value or geographical origin of the goods, or which are marks already in vogue in the trade due to their customary use may not be registered. But these disqualifications do not apply to marks, which have already acquired distinction due to their popularity and consistent use. The registration provides protection only in India. Registering the mark separately in the respective country under the relevant laws is required for protection in that country.

The Madrid system, an international registration system administered by the International Bureau of the World Intellectual Property Organisation (WIPO) in Geneva, Switzerland, facilitates registration of trademarks in multiple jurisdictions around the world. It consists of the International Registration of Marks 1891 and the Protocol Relating to the Madrid Agreement 1989 which came into operation on 1 April 1996. The Union cabinet of the Government of India acceded to the Madrid Protocol in early 2007 entailing amendment to the Trade Mark Act 1999 to enable transfer of technology through trademarks licensing and franchising and speedy registration of Indian marks in different markets worldwide to be in conformity with the emerging TRIPS regime.⁴²

Protection of Plant Varieties and Farmers' Rights Act 2001 is another legislation to meet India's obligation to TRIPS to encourage trade and market of seeds through regulation. This Act provides for the farmers to claim a share for their contribution in development and registration of a variety, if it has been derived using a

farmers' variety. The Act acknowledges farmers as conservers, cultivators, preservers, developers and breeders. A Gene Fund for sharing of benefits and to support conservation efforts is also envisaged. The Act also protects extant varieties. The Government has powers to regulate varieties to be protected. For instance, it may restrict certain varieties if it feels that the variety should not be developed further on account of some damage to the society at large. Compulsory licensing provisions are also incorporated in the Act. The breeders of new plant varieties using genetic material from public sources like the gene banks will get a breeder's right and will be entitled to make profits. They must be required to pay for germplasm they access, whether they succeed in getting a new variety commercially established or not. Mandatory disclosure of the geographical location from where the genetic material has been taken and information relating to the contribution, if any, of the farming community involving such variety, has been made. The protection provided to a plant variety bred by a breeder can be cancelled if there is an omission or wrongful disclosure of such information. It also provides for preservation jointly or severally of wild species or a traditional variety, with or without added value, which has an economic use.

These regulatory laws and mechanisms which are emerging as a result of issues raised by TRIPS are essentially to protect the domestic market interests rather than the explicit recognition of rights to resources, access, benefit sharing and protection of related IK or TK.⁴³

3.3 Legitimising Bio-Prospecting and Market Rights

Benefit sharing in the emerging IPR regime, it is argued, requires documenting TK to identify both the knowledge and knowledge holders. Documentation and registration, it is believed, would establish the knowledge

⁴² Government of India, Accession to the Madrid Protocol, 1989 relating to the Madrid Agreement, 1891, administered by The World Intellectual Property Organisation (Delhi: Press Information Bureau, Government of India, 8 February 2007).

⁴³ R.A. Mashelkar, 'Intellectual Property Rights and the Third World', 81(8) *Current Science* 955-965 (2001). See also Ajeet Mathur, 'Who Owns Traditional Knowledge?', 38 *Economic and Political Weekly* 4471-4481 (2003); K. Mukhopadhyay, *Traditional Medicinal Knowledge of India: An Overview of Commercialisation and Benefit Sharing* (New Delhi: UNCTAD, February 2002); Sophia Twarog and Promila Kapoor eds, *Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International Dimensions* (New York and Geneva: United Nations Conference on Trade and Development, UNCTAD/DITC/TED/10, 2004).

in the public domain and therefore prevent patenting anywhere under the IPR regimes in the form in which it exists. But by itself, documentation is not expected to facilitate benefit sharing with the holders of TK nor how they should be benefited. Documentation could of course enable patenting and commercialisation of innovations based on TK.

Documentation of IK in an organised manner started as early as 1982. A number of government institutions are involved in this work such as the Council for Scientific and Industrial Research, National Botanical Research Institute, Central Drug Research Institute, National Institute of Immunology, Tropical Botanical Garden and Research Institute, National Medicinal and the Aromatic Plant Institute.

The opening up of the globalised market, external pressures from TRIPS and the emergence of a significant interest group within the country that supports the new market and IPR regimes have led India to attempt to be in the forefront through pioneering initiatives in this arena in the rush to garner an advantageous position in the global market. The Indian government set up the Traditional Knowledge Digital Library (TKDL), an electronic database, to document public-domain information about medicinal plants including traditional systems such as Ayurveda, Unani, Sidha, Naturopathy and folklore. The information is then classified under Traditional Knowledge Resource Classification (TKRC), an information retrieval system linked to International Patent Classification (IPC).⁴⁴ This is to make the information available worldwide to national patent offices through the IPC system to establish 'Indian' rights to that knowledge so that they are not awarded patents since a claim could be laid then that the knowledge is already in the public domain.

The National Innovation Foundation (NIF) of India, established in 2000 by the Department of Science and Technology, Government of India, provides institutional support in scouting, spawning, sustaining and scaling

up grassroots innovations and helping their transition to self-supporting activities. NIF established the National Register of Innovations and Unique Traditional Knowledge (NRITUK). These innovations are to be supported for incubation and conversion into viable business opportunities. Society for Research and Initiatives for Sustainable Technologies (SRISTI), a non-governmental initiative based in Ahmedabad in Gujarat established in 1993, promoted the 'Honey Bee Network' to document and promote innovations through entrepreneurship. The Honey Bee database of 12,000 innovations collected and documented by SRISTI would be part of the National Register of Innovations to be managed and supported by NIF. Grassroots Innovations Augmentation Networks (GIANs) in various geographic regions have been established to link up innovations, investments and enterprises. Input of formal science and technology, design, handholding support for project planning and management, finance and marketing intelligence to enable transition of an innovation into product and then into enterprise. The National Biodiversity Act also indicates village or community biodiversity chronicles/ registers to be carried out at a national level.

However, this opens up innumerable possibilities to commercialise the knowledge through marketable products. Anyone could improve a piece of TK and establish novelty within a narrow range. The innovation could be patented without as much as a reference to the original knowledge holder. The owner of the patented property is also under no legal obligation to share any part of the profit gained with the original holders of that TK.

These processes have anyway been the prevalent practice. But with the establishment of a harmonised international IPR regime, these processes gain further legitimacy, gets systematised and organised, and also regulated. More decisively, TK that is most often not amenable to concepts of 'private property' in any form of known IPRs could now be brought within the ambit of 'private property'.

Bio-prospecting requires harvesting tangible organic material for genetic manipulation or for extracting and exploiting the information provided by the organic material, informational resources available in the public domain and/or ethno-biological knowledge. A commercial enclosure of privatised ecosystems and

⁴⁴ IPC of World Intellectual Property Organisation (WIPO) is used by the national patent offices worldwide in classifying the subject matter contained in patent documents. Each patent document bears one or more IPC codes assigned to it by the respective Patent Office. The data available is primarily useful to determine the validity of the patent application for sealing of patents that are applied for.

knowledge in commodified global commons requires exclusion of vast sections of peoples from access to resources while resources are increasingly regulated and policed. Living traditions gets stored as ex situ collections while traditional communities as indigenous peoples divorced from heritage would rapidly lose both TK and TK holders. For these reasons, Adivasis have even demanded a moratorium on registering of TK.⁴⁵

Finally, Adivasis are painfully aware of the extreme limitations of the dominant discourse on 'rights' that revolves around notions of 'property' and 'ownership' which are alien to and in contradiction with their worldview. For Adivasis, custodianship and stewardship, which are duty-based, is closer to their relationship with the living world. Therefore intellectual heritage need to be protected while TK needs to be protected from IPR. When Adivasis talks of Adivasi rights, it also includes the right to have this different worldview.

4 ANALYSIS OF THE KANI ACCESS AND BENEFIT SHARING MODEL

Assessment of the TBGRI-Kani 'model' of 'Access and Benefit-Sharing' require the assessment of national legislations or absence of national legislations in relation to the CBD implementation, issues that relates to the implementation of the national legislations or absence of national legislations with respect to the recognition and respect to rights of indigenous peoples besides the issues of territorial rights, rights to resources and self-governance/self-determination.

TBGRI-Kani 'model' of 'Access and Benefit-Sharing' was simply a voluntary initiative of primarily the scientists involved and TBGRI, which was not legally obligatory or mandatory. The formulation Jeevani, which was yet to be awarded patent, though derived from the Kanis, the IPR of Kanis or their contribution to the

formulation was not attempted to be formally accorded due recognition. The knowledge informers, who themselves are members of the Kanis in this case, violated customary rights of Kanis by not obtaining the free and prior informed consent of either the knowledge holders or their traditional chiefs or generally obtaining consent of the community. The resource rights of the Kanis consequent to the commercialisation of *arogyapacha* worsened and criminalised their limited access (in violation of relevant forest laws) to the resource that they had traditionally enjoyed. Neither the Kanis nor the Kani informers have any say in determining either the extent of access to the resources which customarily fell within their ancestral domain nor were they a party to the negotiation in benefit-sharing. Neither were they involved in defining benefits (monetary or non-monetary) and the quantum of benefits. Moreover, the voluntary benefit sharing that emerged was not formalised between the Kani informers and the institutional mechanism of interested members of Kanis set up by TBGRI with TBGRI. These violated the features explicitly contained in CBD 8(j) read with 15.

At another level, the legal obligation of the state to record and accord rights to the people living in the forests as well as to prevent alienation of lands and restoration of illegally alienated lands to the Adivasis/IPs remain unfulfilled. The constitutional provisions to land, forest and natural resources remain wilfully violated by the state and private interests forcing the Adivasis to resist the state's continued violation of laws and to force the implementation of its own laws. The constitutional provisions, to some extent of the self-governance that is legally available elsewhere in the country, have been denied to the Kanis.

Notwithstanding the inadequacies in CBD, the national legislations and actions to fulfil the obligations of CBD further limits and dilute the CBD obligations. Fulfilment of TRIPS is itself not in harmony with CBD and more often in contradiction with CBD. IPR regimes in line with TRIPS override CBD obligations. Together, the new legal regimes, rather than recognising the rights of Adivasis/IPs, further infringes their rights accorded in national and international laws.

⁴⁵ See Report on the Workshop on Traditional Knowledge and Biodiversity organised by the Secretariat of the Convention on Biodiversity in November 1997, UNEP/CBD/TKBD/1/3 (15 December 1997).

5 CONCLUSIONS

The right to permanent sovereignty of indigenous peoples over natural resources is implicit in international law particularly in the right of ownership of the lands they historically or traditionally use and occupy, the rights to self-determination and autonomy, the right to development, and the right to be free from discrimination amongst others.⁴⁶ This right is a collective right that requires the States to respect, protect, and promote the governmental and property interests of indigenous peoples (as collectivities) in their natural resources. The legal expropriation of the resources that once belonged to indigenous peoples, by the State, is discriminatory and contrary to international law and constitutes vestiges of colonialism. This ought to be discarded to ensure that Adivasis enjoy ownership of and benefits from the natural resources on or under or otherwise pertaining to the lands they historically occupy and use. The authority of indigenous peoples to manage, conserve and develop their resources according to their own institutions and laws must be adhered to. Where Adivasis, for valid legal reasons, do not own or control the natural resources pertaining to all or a part of their lands or territories, the Adivasis concerned must nevertheless share in the benefits from the development or use of these resources without any discrimination and must be fairly compensated for any damage that may result from development or use of the resources.

Self-determination, under certain conditions, collective ownership of lands and territories, exercise of customary law according to social and cultural practices, legal and political representation through their own institutions

and control over their own indigenous knowledge are rights claimed by Adivasis/IPs that are not claimed normally by other sections. These explicitly calls for securing legal recognition and lived experiences of the rights of governance of communities (i) over their biological resources; (ii) to collectively decide over development project/programmes by recognising the free, prior and informed consent of the Adivasi/IPs through the use of indigenous customary laws; (iii) to collectively benefit from the use of their biological resources; (iv) to their innovations, practices, knowledge and technologies acquired through generations; (v) to collectively benefit from the utilisation of their innovations, practices, knowledge and technologies; (vi) to use their innovations, practices, knowledge and technologies in the conservation and sustainable use of biological diversity; and (vii) to the exercise of collective rights as legitimate custodians and users of their biological resources.

⁴⁶ Erica-Irene A Daes, *Prevention of Discrimination and Protection of Indigenous Peoples: Indigenous Peoples' Permanent Sovereignty Over Natural Resources* (Geneva: Final Report of the Special Rapporteur, E/CN.4/Sub.2/2004/30, UN Sub-Commission on the Promotion and Protection of Human Rights, Commission on Human Rights, Economic and Social Council, 13 July 2004). *See also* Article 3, 12, 24, 26 and 29 of the UN Draft Declaration on the Rights of Indigenous Peoples Relating to Indigenous Knowledge and Cultural Heritage (Geneva: Office of the United Nations High Commissioner for Human Rights, 26 August 1994).

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