



TRADITIONAL KNOWLEDGE AND LIMITATIONS OF IPR

By Princy Varghese
Advocate

Abstract - Intellectual Property throughout the years has developed into one of the most innovative and contriving part of the law, not only has it helped us in witnessing a glorious revolution but has also provided the creator or developer with his deserved share of fame and fortune. Traditional Knowledge (TK) lays the foundation for most of the Intellectual Property innovations but unfortunately, the rudimentary stage of IPR lacks any proper rules or regulations under it. Therefore, IPR has turned out to be both a boom as well as a curse for TK. This paper discusses the basic verity of TK at length along with its dynamic social and economic impact in India and other countries. The paper also lays emphasis on the connecting and disjoining zones between TK and IPR and proposes a recommendation on how to safeguard a communities' indigenous knowledge by going beyond IPR but without muddling the existing scenarios and its impacts on other things and to make the points clearer examples from across the world are also mentioned. Given the multifariousness of the topic, only some basic and key approaches along with some solutions are suggested. Also, case laws that have laid grounds for the development have been mentioned and analyzed, along with the new measures taken by the government for the preservation and the response received

from the respective community are addressed.

INTRODUCTION

If there happens to be one thing that all Indians take pride in general it would be our ancient roots. Writing this article brought back memory of this one incident when one of my US based cousin came to stay with us during holidays, our normal conversations got a bit serious when the foreign return cheekily started making fun of Indian culture by giving reference of Indian woman wearing dozens of bangles and doing the daily chores with unnecessary burden. She further went on to make a sly remark by sloppily stating that Indians have stupid traditions and are constantly imposing it on the younger generation. Meanwhile our grandmother who was sitting along with us the whole time replied with a smile that ¹the outer sides of the wrist are acupressure points for the reproductive organs. Wearing bangles press these pressure points and keeps the reproductive system, wholesome. Ovaries produce estrogen, which helps in many vital functioning of our body for instance keeping our skin and hair healthy meanwhile testosterone are also produced by the ovaries, when balance of these hormones are shaken up it can have a damaging effect on our skins also it can form a bald patch on our scalps (female pattern baldness) The sages while writing the Ayurveda knew the sheer importance of acupressure in our bodies and made it mandatory for women to wear the bangles this could be one reason of why pictures of ancient India is filled with women having long, healthy and lustrous hair for which we could kill for. And with a sly smile

¹ Minaz, Hair Buddha, <https://www.hairbuddha.net/how-to-stop-hair-loss-28-simple-remedies-to-grow-your-hair/>



she concluded by saying Indian culture doesn't look so stupid now does it?

Back then, and even today a lot many would have underestimated and discarded this tiny piece of information, which felt so blunt back then would hold patent value. This article discusses about the Traditional and Indigenous Knowledge which needs to be protected, recognized and eternized.

What exactly is traditional knowledge?

If you are born and brought up in an Indian Household then you surely must have been accustomed to things like drinking turmeric milk when suffering from cold, doing certain yoga poses for body pain or applying a neem paste in case of a body rash. Almost all households in every nook and corner of India holds possession of these small but valuable tips (nuskhe). These tips are passed on from generation to generation thanks to which we have dealt with a lot of illness not just effectively but also naturally with no side effects. These passed on tips are not just restricted to our daily household chores but also persistent in agriculture, business, mental health etc. So, these passed on customs or knowledge practised in a particular household or a particular area is called **Traditional Knowledge**.

Traditional Knowledge (TK) refers to expertise that human beings of a versatile community, in this or other society, primarily base on to revel in addition to local tradition and surroundings that have developed over the years and continuously fashioned by

using improvements and practices of every era. TK is very huge concept and encompass expertise associated with numerous categories like "information of flowers and animals and their houses; minerals and soils and their residences; mixtures of organic and inorganic matters; medicinal know-how; and expressions of folklore in the form of track, dance, track, handicraft, stories and art work. TK is used to preserve the community and its tradition and to maintain the genetic resources vital for the ongoing survival of the community.

The term Traditional Knowledge is being used a lot these days this might leave many people puzzled, since a lot of them seem to also use the term Indigenous knowledge and cultural expressions. By cutting to the chase yes, they are all different and hold different identification value

The meaning of indigenous knowledge and traditional knowledge are inextricably linked, but there are some points of distinction. For instance, all traditional knowledge does not come under indigenous knowledge, whereas all of the indigenous knowledge is a subset of traditional knowledge. This is because traditional knowledge is a much broader term.² Although traditional knowledge and indigenous knowledge are not equivalent, they share many elements, such as being derived from the word of mouth, customary, pragmatic, experiential, and holistic.

This explains why traditional knowledge and indigenous knowledge, are confused with

² Thailand Journal of Law and Policy, <http://thailawforum.com/articles/IP-Traditional-Knowledge-Part1-3.html#:~:text=The%20distinction%20between%20tr additional%20knowledge,than%20the%20knowledge>

%20per%20se.&text=Traditional%20knowledge%20is%20a%20broader,knowledge%20held%20by%20in digenous%20communities.



each other. The distinction between TK and indigenous knowledge relates to the holders regardless of the knowledge per se. Traditional knowledge is a broader category that includes indigenous knowledge as a type of traditional knowledge held by indigenous communities. may have been created by any individual or group of humankind whether indigenous peoples or not. Similarly, indigenous knowledge is therefore part of the traditional knowledge category. That is to say, indigenous knowledge is traditional knowledge, but not all traditional knowledge is indigenous knowledge.

Moreover, Traditional Cultural Expressions (TCEs), also are mostly associated with the "expressions of folklore", this includes a wide range of music, dance, art, designs, names, signs and symbols, entertainment, gig, architectural forms, handicrafts and portrayals, or many other artistic or cultural expressions. These expressions are to be related with the identity of a particular people belonging to their respected areas.

³Traditional cultural expressions -

- are the forms in which traditional culture is showcased and followed;
- form part of the identity and heritage of a traditional or indigenous community;
- are passed down generation to generation.

TCEs are integral to the cultural and social identities of indigenous and local communities, embody know-how and skills, and transmit core values and beliefs. Their protection is centered at the promotion of creativity, enhanced cultural diversity and the

³ Wipo

preservation of cultural heritage. Some main examples of TK from around the world includes –

- **CHINA for Knowledge of acupuncture** – It is postulated that China has been using Knowledge of acupuncture from a very long time as a form of Chinese medicine, and includes acupuncture needling and moxibustion therapy. Acupuncture is a prominent product of traditional Chinese culture and involves stimulating acupoints or other specific points of the body with acupuncture needle or burning moxa-wool over these sites. It encompasses the theories, techniques and devices and equipment related to acupuncture. This helps in expeditious recovery in case of body pain, overall wellness and fitness.

- **AFRICA for Rotational farming** – A very distinct kind of farming is practiced in Tanzania; it is also a brilliant example of a brilliant and resourceful farming system which involves digging small pits surrounded by four ridges on steep slopes to grow cereals on a rotational basis. ⁴During the rainy season, the holes act as reservoirs and intercept the destruction of the cultivated slopes caused by the heavy water flow.

In Kenya, this indigenous tradition has been kept alive by the indigenous people by successfully managing, throughout the years, the risks and threat impacts of natural variability and raw weather, by way of growing traditional crop varieties over a single high-yield mono-cropping system.

- **JAPAN for Kototama** – The indigenous people of Japan persist of a belief system that everything which is alive tend to have a

⁴ Resilience, <https://www.resilience.org/stories/2017-08-14/five-indigenous-farming-practices-enhancing-food-security/>



vibration.⁵ They stress on living in peace and harmony with oneself, fellow beings, all creatures, nature and the universe. They believe that each and every thing in the nature gives out a certain kind of energy. This form of practice enables a person to reach a stage where one feels well in an unwell world. It can also be seen as a life therapy. It is a very tough concept to understand but one can relate with it through the concept of chanting OM and meditating. This understanding has also been used for the wellbeing of human-beings and other creatures. In fact, vibrating energy is vital in the healing practices of everyday life.

- **PHILIPPIEANS for Watercraft Construction-** The Indigenous Knowledge of the Ivatans in the Batanes Islands, Philippines have a long history of struggle and adaptation to typhoons, rough seas and meager resources.⁶ Regardless of these hardships, the indigenous knowledge embedded in their traditional housing and watercraft construction techniques, as well as their social dynamics, prove successful in the face of these disasters. Their exceptional culture demonstrates the harmonious relationship of the Ivatan people with their environment as a means of surviving and coping with these various ecological stresses.

Exploitation and Disorientation of TK

Protection of TK is necessary in order to preserve the unique identity of different cultural groups in the world. It is believed that in the ancient time the indigenous people were not much accustomed to the concept of

migrating hence they were closely familiar to the place where they have been living through all these years. This not only made them appreciate the place but also helped them to open up for a plethora of ideas for sustaining a healthy and happy life. Since every part of the world has a different biome and ecosystem thus each part needs to have a different technique in order to deal with it. The credit of contriving these traditional knowledges throughout these years needs to be given to the respected community or owner. But unfortunately, a third party which mostly happens to be commercial firm deprives the owners of these TKs from the profits gained through it. History has witnessed more than one occurrence where parties have not followed the rule of access benefit sharing, also the knowledge has been used contrary to the belief and mindsets of the community who are curators of the same. Exploiting and squandering of TKs is a great concern for worry for many south Asian communities also the continuous increase of unfair competition is making the custodians of these traditional knowledge restless.

Not only this but also a wide number of indigenous is getting lost because of having no proper records or documentation. A lot of them have been unfortunately been forgotten and vanished over the time. It is not just our duty but also our virtue to preserve and document them. These TKs have time to time proven to be indispensable, they have held their grounds in all situation no matter how

⁵ Yumiko Kawano, Japanese Indigenous Knowledge, https://tspace.library.utoronto.ca/bitstream/1807/25656/3/Kawano_Yumiko_201011_MA_Thesis.pdf

⁶ Rajib Shaw, Indigenous knowledge of the Ivatans in Batanes Islands, https://www.researchgate.net/publication/257836045_Indigenous_knowledge_of_the_Ivatans_in_Batanes_Islands_Philippines



tough it ought to be' this indigenous knowledge can be basis for future research and development. For instance, in Dharmasena it states that ⁷it is clear our traditional belief systems and how our ancestors were connected to the environment and to the universe. Mendis (2002) adds that the ancient water soil conservation ecosystems of Sri Lanka are a classic example of man's active adaptation to nature. They include river diversion systems and storage systems, themselves consisting of small, medium and large reservoirs. These systems had been constructed over a long period of time, beginning in about the mid first millennium B.C. Unless indigenous knowledge is properly documented, analysed and disseminated, there is a risk that within one generation, knowledge could be lost forever. Data bases and resource centres would help to exchange indigenous knowledge from one community to another and promote integration of indigenous knowledge into the development process. Novel information communication technologies (ICTs) facilitate to record the traditional cultural expressions, tacit knowledge and preserve it in library and museum websites and can be accessed through social media tools.

Protection & Application of TK via IPR

⁸In the traditional systems, TK and TCEs were protected by a system of customs and taboos, which ensured the preservation, and proper utilization of resources. ⁹Since there

are no specific sections under IPR for the protection of TK it becomes really hard and confusing to place it under a particular a particular topic. A more realistic and vague approach needs to be taken at the same time, and a clear set of laws and policies should be made. One technique for the system of protection is by using geographical indication and the other way is by ensuring that the TK has been well documented in a digital library or museum. The information must be authentic and the facts should be double checked also any signs of duplicity or confusion should be targeted to be resolved at the earliest and if there appear any sings of conflicts in any two communities' immediate action should be taken to resolve them at the earliest.

¹⁰Since protection of TK sometimes happen to go much beyond the scope of IPR but there happens to be certain other mechanisms as well which provide our TK with a much-needed critical defense system. Some of the examples of the said mechanisms are –

- ENVIRONMENT - The UN Convention to Combat Desertification which was summed up in 1994, bestows and lays emphasis on the protection of TK by asking to share any kind of benefits (ABS) emerging from any commercial trade with respect to the indigenous knowledge.
- HEALTH- WHO has time and again reiterated the applicability of TK in the branch of science and medicine as a provenance of primary health care and has

⁷ Protection of Traditional Knowledge (TK) and Traditional Cultural Expressions (TCEs) of South Asia by Kamani Perera

⁸ Protection of Traditional Knowledge (TK) and Traditional Cultural Expressions (TCEs) of South Asia in Kamani Perera

⁹ Pushpa Laxmanan, Protecting Traditional Knowledge,

https://www.researchgate.net/publication/268632393_Protecting_Traditional_Knowledge_Can_Intellectual_Property_Rights_help

¹⁰<http://www.legalserviceindia.com/article/198-Intellectual-Property-and-Traditional-knowledge.html>



inflicted this in the Primary Health Care Declaration of Alma Ata.

- **TRADE AND DEVELOPMENT**- In 2001 at the Doha Ministerial Conference, WTO adopted the Doha Declaration which instructed the TRIPS Council to investigate the extent of issues in respect of Traditional Knowledge.
- **FOOD & AGRICULTURE**- The recognition and protection of farmers right and TK has been an important topic and has been prioritised by the International Treaty on Plant Genetic Resources for Food & Agriculture.

The traditional expertise is generally classified into two different categories which are classes transcribed apprehension and oral competence. If broadly described ¹¹**Recorded knowledge** it is frequently referred as codified and is to be had mainly within the shape of historic text and manuscripts. These are specifically in those languages which were used in their time of origin. Meanwhile **Oral knowledge** is referred as know-how that is not recorded or codified everywhere. It is transferred best orally from era to generation inside the network. Oral understanding needs more interest to perceive and preserve as it's miles the premise of livelihood for lots indigenous communities.

Some forms of traditional knowledge find expression in culture, stories, legends, folklore, rituals, songs, and laws. Other forms of traditional knowledge are expressed through other forms like ancient manuscripts, drawings, symbols etc.

Scope & Intervention of IPR in TK

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The correlation of indigenous/traditional knowledge with Intellectual Property law has much convoluted transcending legal issues. Unfortunately, IPR fails to provide just one single answer to the arising questions orbiting indigenous knowledge protection. Present Indigenous issues has an unsettling order of scrutiny revolving around copyright, patents, trademarks, designs and/or confidential information. Also, the TK matters are not always legal or commercial in nature they also encompass matter ethical, cultural, historical, political, religious/spiritual and moral dimensions.

Intellectual property law is largely European in derivation and promotes particular cultural interpretations of knowledge, ownership, authorship, private property and monopoly privilege. Indigenous peoples do not necessarily interpret or conceptualize their knowledge systems and knowledge practices in the same way or only through these concepts.

¹²Indigenous peoples' interests in intellectual property law has a worldwide influence and has a grave impact on over millions of indigenous people including researchers, cultural institution, corporation, industry affiliate or government department working in and/or with traditional peoples and/or traditional communities.

However, TK's importance and desirability has modified drastically in the past decade, a strong impulse for saving the TK, and to eternalise it has seen a rising trend. Even so we have failed to establish a comprehensive policy framework either as a secured system under IPR or otherwise so.

¹² <https://web.law.duke.edu/cspd/itkpaper/>



Indigenous people should be taken into serious consideration before formulation of any overarching legislation for usage or research purposes and just like in the very first case that marked TK's existence the ¹³**Hoodia Case** the mayor of the town said "I am happy that others can benefit from our plants. But a San community development facilitator replied: "But it would be wrong if fat white people overseas get slim thanks to us while our children go hungry and uneducated." This case is a classic example of how much of a loss a community and the country suffer when the Traditional Knowledge is stolen and abused by a third party.

It's about time TK is used as an open source target for big companies to fill their pockets, without an appreciation or consideration into its belief system. Indigenous people are asking for their cultural systems and ways of governing knowledge access and use to be recognized as legitimate, and to be respected as custodians/owners/nurturers of knowledge that is valuable within and beyond indigenous contexts.

Censorious scrutiny of agendas and classification are vehemently unavoidable. A strong hold how we do research, how we conceptualize knowledge, how we share knowledge, how we recognize legitimate overlaps in knowledge use and circulation, and the extent of the role of law in influencing our social orders of knowledge exchange, are necessary starting points.

Patentability of Traditional Knowledge:

Indian patent laws do not permit the protection of TK under section 3 (p) of the Indian Patent Act, 1970. ¹⁴As per the common notion an invention or an idea to be patentable the effect or the ideology needs to be new or should have an undiscovered idea which leads the base. Anyhow a knowledge which is familiar or is just an accumulation or replication of an already existing fact or known properties can't be granted a patent. Also determining the spread of extent in TK is also quite exhausting and impractical, many lawmakers also hold the ideology that the learning or intellect which came from a community is for the entire world and not just for a particular group. ¹⁵Also, many indigenous groups have passed on the knowledge to other groups this means that they were already in public domain thus making it trite and thus leaving little or no scope for an innovative or a fresh idea.

Although Indian Law has modified itself with some new propagandas for the promotion and preservation of TK. Since TK has the disadvantage of already being in the public domain and as stated under **Section 2(1)(j)** of the **Patents Act, 1970** invention means a new product or process involving an inventive step and capable of industrial application and **Section 2(1)(ja)** "inventive step" means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art.

¹³ <https://www.publiceye.ch/de/news/detail/stolen-knowledge-the-hoodia-case>

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<https://www.mondaq.com/india/patent/668414/traditional-knowledge-and-scope-for-patent-protection>

¹⁵ <https://timesofindia.indiatimes.com/business/india-business/Traditional-knowledge-culture-can-be-patented/articleshow/27994684.cms>



Additionally Section 3(e) of the Act states that a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or process for producing such substances" is not an invention" sadly enough TK does not fulfil either one of the criteria thus can't be included in the patentable items¹⁵.

¹⁶ "It is required that all patent applications relating to Traditional Knowledge (TK) are correctly identified, screened and classified as "Traditional Knowledge" by RECS Section of Patent Office. The RECS in-charge is required to take due care that no case relating to TK is wrongly screened and classified. Additionally, the person in-charge of screening is required to accord appropriate IPC classification for such TK applications so that these applications can be properly routed for examination to the respective groups such as Chemistry, Pharmaceuticals, Agrochemicals, Biotechnology, Microbiology, Biochemistry, Food, Mechanical, etc. The screening of an application as "Traditional Knowledge" is an administrative process for facilitating the examination and to indicate that the subject-matter of the application is important and has relevance in the context of traditionally known substances, articles or processes for preparing them or their use.

In every case related to TK, the Examiner is required to carry out a thorough search for anticipation in TKDL and/or other databases. If any citation is made from TKDL database, then copy of the citation (English translated)

is required to be sent along with the examination report. ¹⁷When the subject-matter of claims relate to extracts of plant materials containing undefined active ingredients, such claims cannot be said to be novel if the use of such plants or plant materials is pre-known as a part of teaching of TK. ¹⁸However, if the claims relate to alkaloids and/or active principles obtained from the plant materials and structures of the said alkaloids and/or active principles are characterized, which do not form the part of the prior art, such claims cannot be said to involve an inventive step, since the use of said plant materials and their therapeutic effects are known from the teaching of TK." Thus, the prior art motivates the person skilled in the art to isolate the individual ingredients such as alkaloids, flavonoids, phytosteroids, etc.

Role of Geographical Indication in TK

A geographical indication is a sign which shows that a specific geographical area possesses certain qualities which are limited only to the particular region. The area specific quantity, quality and reputation are entitled for a GI tag. GI is mainly given to the products induced from agricultural, natural, manufactured, handicraft originating from a definite geographical territory it is also given to folklores, cultural practices, languages medical practices etc.

In the TRIPS Agreement Geographical Indication in Article 22 is defined as "*indications which identify a good as*

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http://www.ipindia.nic.in/writereaddata/Portal/IPOGuidelinesManuals/1_39_1_5-tk-guidelines.pdf

¹⁷ Bala, Anu, Traditional Knowledge and Intellectual Property Rights: An Indian Perspective (November 1,

2011). Available at SSRN: <https://ssrn.com/abstract=1954924>

¹⁸ Khurana and Khurana, <https://www.khuranaandkhurana.com/2018/10/05/ipr-vis-a-vis-traditional-knowledge/>



originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin".

The Geographical Indications of Goods (Registration and Protection) Act, 1999, was implemented to satisfy a tripartite purpose -

1. By specific law governing the geographical indication of goods in the country which could adequately protect the interest of producers of such goods,
2. To exclude unauthorized persons from misusing geographical indications and to protect consumers from deception and,
3. To promote goods bearing Indian Geographical Indication in the export market. A registered Geographical Indications ensures to prohibit a third party to take undue advantage and without equitable sharing. As per the data recorded on October 25, 2017 a goods wise classification of GI registration shows that Handicrafts reported a maximum number of registrations followed by Agriculture, Manufactured, Foodstuff and Textile being the least.

Karnataka has been leading in filing of Geographical Indications with a total of 39 Geographical Indications registered till date followed by Tamil Nadu and Kerala. The latest product from Karnataka to get Geographical Indication Tag is Mysore Saree. Till date Karnataka has obtained Geographical Indication tag for 19 handicrafts, 16 agricultural, 3 manufactured and one for food product. **Some examples of Geographical Indication are**

Darjeeling Tea - A prominent and the first GI tag in India was registered around 2004

and 2005. Making Tea Board Registered Proprietor of Darjeeling Tea having power to prohibit any third party from availing themselves the title "Darjeeling" for tea that wasn't cultivated in their gardens or is not cultivated as per the standards set out in the code of practice for the registered Geographical Indication.

Pochampally Ikat – Pochampally gets its name from a town Bhoodan Pochampally in Telangana which is famous for its Ikat (weaving pattern).¹⁹The clothes made from this technique got its GI in 2004 meanwhile its logo which consists of a chowka design which is diamond in a square with unlike edges. This was considered as a basic step in saving the local craftsmanship in the country. The Gi tag got tremendous media spotlight leading to instant surge in its sale both domestically and internationally.

Banaganapalle mangoes – Banaganapalle occupies Andhra Pradesh's 70% of mango cultivity, its speciality incudes as the document submitted to the registry stated that 'the skin of the mango having very light spots, stone is oblong in shape and have a very thin seed with sparse and soft fibre all over.' Other unique features include that the mangoes could be stored till 3 months and is extensively used as Table Fruit all over the world for its fibreless Sweet meaty pulp.

Whoever wishes to crack a trade deal must first apply to become authorized users and would need a no-objection certificate (NOC) from Horticulture Development Agency, Represented by Commissioner of Horticulture, Government of Andhra

¹⁹ Sudhakar Reddy, Pochampally Logo, TOI, <https://timesofindia.indiatimes.com/city/hyderabad/p>

[ochampally-logo-durgi-stone-sculpture-get-gi-tag/articleshow/61524978.cms](http://pochampally-logo-durgi-stone-sculpture-get-gi-tag/articleshow/61524978.cms)



Pradesh. ²⁰An estimated 24.35 lakh metric tonnes of mangoes were grown every year in Andhra Pradesh and about 5,500 tonnes of Banganappalle mangoes were being exported annually to countries like the U.S., U.K., Japan and the Gulf nations.

Gruyere Cheese – In 2012 after much talked about brawl between US and European Cheesemakers ended the cheese finally got its tag as PGI. Gruyere gets its name from a town in Switzerland. The fight between the countries got quite aggressive and confusing. As reported by the Daily Reporter ²¹the France applied to the EC to register the name ‘Gruyere’ as a PGI, in the application French Gruyere was described as a cow’s milk cheese with a fat content of between 47% and 52% and holes ranging in size from that of a pea to a cherry.

Landmark Case Laws in TK

Arguments and debates regarding TK are centuries old but some important case laws have held their grounds strong and have bought an IPR revolution in some countries. Most of these cases have helped the world in knowing about a significant culture and their respective indigenous holders. These Indian and international cases have saved a community from being further exploited by a third party. ²²**The Hoodia Case in 1963**, Hoodia happens to be a cactus found in African Dessert, the main active ingredient in the plant was detected and patented by the CSIR South Africa, the research was then

passed on by them to a company in Britain who again patented it as P57. The British Company then publicly proclaimed that a curative for obesity without any adverse effects was found by them. After which the company gained immense popularity and in no time gathered a huge list of pharmaceutical companies as potential buyers. Pzfir a pharma company in US bought the drug for \$20 million. The appetite suppressing molecule in the drugs had potential to do wonders in the market.

People in Africa were extremely poor and barely made the ends meet after much discussions and complaints. Finally, by ²³2003 Pzfir discontinued the production and returned the sublicensed rights to the British company. One of the African paper quotes ²⁴that at a ceremony celebrating the agreement a San participant, said “I am happy that others can benefit from our plants.” But a San community development facilitator replied: “But it would be wrong if fat white people overseas get slim thanks to us while our children go hungry and uneducated.” This case is a classic example of how much of a loss a community and the country suffer when the Traditional Knowledge is stolen and abused by a third party.

Similarly, India has throughout encountered a huge number of conflicts in regard to the Traditional Knowledge held by them, to name a few ²⁵The Neem Case, The Basmati Case, The Turmeric Case. India from the past

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<https://www.lexology.com/library/detail.aspx?g=399bce35-71fe-435e-9976-fb520a4c575a>

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<https://www.dairyreporter.com/Article/2012/12/10/French-Gruyere-cheese-granted-EC-protected-geographical-status>

²²http://gfbr.global/wp-content/uploads/2015/09/Fifth_Casestudy4.pdf

²³ King S. Phytopharm Hit as Pfizer pulls out of Obesity Drug R&D. World Markets Analysis. July 31, 2003

²⁴ Africa News. Marginalised San Win Royalties from Diet Drug. March 26, 2003.

²⁵ Vandana Shiva, TWN, <https://twn.my/title/pirch.htm>



many years have been using these essential items in their everyday household uses but in May 2000 when a company named W.R. Grace bagged a patent in United States and European Union for azadirachtin, the active ingredient in the neem plant and for using azadirachtin for its pesticidal and anti-bacterial properties. This caused a huge commotional stir in Indian's IP community, further the European Patent Office cancelled the patent on the grounds of lack of novelty and inventive step. Similarly, in 1997 when an American Company RiceTec.inc was granted patent in America for rice exactly similar to the Indian and Pakistani bred superior variety of rice called Basmati.²⁶ The patent was challenged and since RiceTec.inc held no ground lost its patent title, thus giving rise to Rice Patent Battle.

Meanwhile, scientists claim that the turmeric case was the first case which was fully overturned by the US Patent office. Raghunath Mashelekar claimed that the success received in the Turmeric Case has impacted not just India in the long run but has also encouraged other third world countries.²⁷ US was forced to revoke the patent grant to two different researchers for their alleged discovery in the power of powdered turmeric to heal the wounds.

Initiatives by the Indian Government

Glad Tidings are that India is one of the emerging leading countries in world who are

²⁶ Charles Goldfinger, The story of the basmati rice patent battle, <https://sciencebusiness.net/news/72228/The-story-of-the-basmati-rice-patent-battle>

²⁷ Jayaraman, K. US patent office withdraws patent on Indian herb. *Nature* **389**, 6 (1997). <https://doi.org/10.1038/37838>

working incessantly towards protecting its TK from biopiracy. India till date has been quite successful in saving our TK from the other countries but unfortunately India still lacks behind in saving the indigenous knowledge from the third parties residing in India itself. Nevertheless, India has made quite a few advances in this region and have introduced new formats for the protection of TK some of them being TKDL, Biological Diversity Act 2002 and Rules 2004, PBR

TKDL

Traditional Knowledge Digital Library aka TKDL is a digital library which contains almost 700000 documentation of Indian TK in medicinal field from Ayurveda, Unani, Siddha and Yoga.²⁸ It consists of almost 37 million pages of documentation in digitized format. Many of the patent offices from across the world has collaborate and have been granted access for carrying out research activities and other examination, some of the patent offices are ²⁹European Patent Office, German Patent Office, Indian Patent Office, Canadian Intellectual Property Office etc.

India has set an example to the world by setting up such a detailed and organized digital platform for Traditional Knowledge.

BIO-DIVERSITY ACT & RULES

³⁰The CBD in one of its agreement stated that a member country should facilitate access to its genetic resources by other parties on

²⁸ TKDL, <http://www.tkdil.res.in/tkdil/langdefault/common/Abouttkdl.asp?GL=Eng>

²⁹ https://www.wipo.int/meetings/en/2011/wipo_tkdil_d el_11/about_tkdil.html

³⁰ Protection of Traditional Knowledge in India, https://shodhganga.inflibnet.ac.in/bitstream/10603/14508/9/09_chapter%203.pdf



mutually agreed terms, but only with Prior access Informed Consent of the region or state providing the raw-materials or info. It also lays down ground rules for an equitable sharing of benefits arising from the resources or traditional knowledge about them. In February 2003 Indian Parliament passed the Biological Diversity Act. It defines itself as "An Act to provide for the conservation of biological diversity, sustainable use of its components and fair and equitable sharing of benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto." (Biological Diversity Act, 2002)

PUBLIC BIODIVERSITY REGISTER

Quite recently India held witness to a landmark judgement which will single handedly promote the recording of traditional knowledge even in the smallest possible nook and corner of a land by the NGT on date ³¹**Chandra Bhal Singh Vs UOI** in which the court ordered the States to adhere to the previous ruling in which the states were supposed to constitute and prepare PBR. Original Application No. 347 of 2016 was heard before the Principal Bench of the NGT on 8 July 2016. The petitioner in this case raised concerns about the slow implementation of the BD Act, 2002. The petition also raised concerns about how the ³²BMCs have not been set up at the local level and the preparation of people's biodiversity registers has not been completed yet and demanded the immediate effect of this

complain to be bought in a short period of time.

What is PBR?

³³PBR is a Public Biodiversity Register this movement has been issued by the government in order to achieve an equitable sharing of the traditional knowledge related to the bio resources. Given the diversity of life and ecosystems, of people and economy, over our vast country in which hunting-gathering and shifting cultivation co-exist with intensive chemicalized agriculture and modern industry, PBR exercises have to be fine-tuned to local conditions. In fact, to do this effectively, it may be appropriate to go down below the level of a Panchayat/ Municipality and as in the case of *Village Forest Committees* organize BMCs at the level of individual villages/ hamlets/ town wards and prepare PBRs at this level. Hence, PBR exercises cannot be set tasks with all details specified, but must provide for sufficient freedom to take on board local concerns and priorities. This documentation needs an involvement of local people at local level. PBR documents knowledge associated with Land Cultivation, Aquatic Bodies, Forests and other traditional knowledge associated with the same. The PBR will not be available for public domain. PBR ensures in storing and helping no looting and can then be devised thereby addressing the IPR concerns.

³¹ Chandra Bhal Singh Vs. Union of India and Others. 2016 (Original Application No. 347 of 2016, N.G.T. New Delhi) Data as on October 2017

³² Life, Policy Paper, <https://thelifeindia.org.in/upload/files/BMC%20%20-%20policy%20paper%20Final.pdf>

³³ Prof. Madhav Gadgil, Public Biodiversity Register, http://wgbis.ces.iisc.ernet.in/biodiversity/sahyadri_english/newsletter/issue15/index.htm



CONCLUSION

This Internet era, no doubt has unsealed our work and culture to multiple exploitation but on the other hand digital libraries and museums are also playing dramatic role for the protection of TK and TCEs for our present and future use. Unfortunately, most of precious TK bearing countries or communities also happen to be the poorest and the most disadvantaged. TK at many points acts as an asset to a country and community it is necessary for us to safe guard it and use it by following the principles of Access and Benefit Sharing (ABS). In this era of significant development in the scientific field we still happen to come across many occurrences where all advanced technology fail, we are left with nothing but natural help and time and again it has proven to be as efficient as it always has been.

But we keep forgetting that a nature has all the answers and unfortunately our upcoming generations keep forgetting this. We are busy finding cures and solutions to the unseen problems that our apprehensive future holds. Protection of TK is not just a virtue but also a, safe guarding our dying heritage not just puts us in a position of a national advantage but also benefits the present and future generation.
