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**A STUDY OF THE LEGAL PROTECTION OF TRADITIONAL INDIGENOUS
KNOWLEDGE OF NORTHEAST INDIA: A Legal Approach**

Partha Sarothi Rakshit, Karobi Dihingia & Soumyadeep Chakraborti

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A STUDY OF THE LEGAL PROTECTION OF TRADITIONAL INDIGENOUS KNOWLEDGE OF NORTHEAST INDIA: A Legal Approach

Partha Sarothi Rakshit, Karobi Dihingia & Soumyadeep Chakraborti***

[Abstract: *The magnitude of protecting traditional as well as indigenous knowledge is growing particularly with regards to the third world countries akin to India which is rich in biodiversity. Northeast India's need for effective safeguard of its Indigenous Knowledge (hereinafter referred to as IK) is pertinent to circumvent pilfering of Intellectual Property Rights (IPRs). The protection of traditional/Indigenous knowledge is imperative for communities in the region. On one level, IK plays a significant role in the economic and social organization of these people, and placing and making such knowledge as their exclusive IPRs is also significant at another echelon. The legal shield of Traditional Indigenous Knowledge (hereinafter called TIK) is related to different types of Intellectual Property like the patent, trademark, and geographical indication (GI). This study tries to particularly spotlight the legal protection/shield of TIK on areas such as biodiversity, traditional handloom industries, agricultural practices, indigenous products.]*

Keywords: *IPRs, indigenous knowledge, traditional indigenous knowledge, economic and social organization, biodiversity, agricultural practices, industry, etc.*

I

Introduction

In the legal context, terms like *traditional knowledge* (hereinafter referred to as TK), *traditional indigenous knowledge* (hereinafter referred to as TIK) and *local knowledge* are used interchangeably. However, there is not yet a standardised accepted definition of 'Traditional Knowledge' in the international community.¹In a very

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¹ According to the definition provided in the World Intellectual Property Organisation (hereinafter referred to as WIPO) website, 'Traditional knowledge (TK) is knowledge, know-how,

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general sense it could be said that traditional knowledge comprises two factors – the content of the traditional knowledge itself and expressions of cultural folklore. Expressions of traditional cultural folklore could include art, music, dance, performances, narratives, ceremonies, names, symbols, signs, architectural forms, handicrafts and such other expressions, etc.²

In summary *TIK* is a living body of knowledge passed on through many progenies within a particular community. For example, the use of *Siddha* drug called ‘*Nilavembu Kudineer*’³ for curing dengue is considered to be *TK*. Similarly, Ayurveda is also considered as an ancient *TK* in India and there is a digital library known as the Traditional Knowledge Digital Library⁴ (hereinafter referred to as the TKDL).⁵ China⁶ and Korea have their *TK* digital databases.⁷

In the year 1992, the UN Convention on Biological Diversity (hereinafter referred to as UNCBD) was opened for signature on 5th June, 1992 at Rio de Janeiro, Brazil.⁸ The CBD provided that the signatories must enact local laws to protect *TK* from being transgressed by the profit-making corporations.⁹ Unfortunately, if we examine and

skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.’ Available at: <http://www.wipo.int/tk/en/tk/> (Last visited Oct., 21, 2020).

² World Intellectual Property Organisation, *Traditional Cultural Expressions*, available at: <http://www.wipo.int/tk/en/folklore/> (Last visited Oct., 22, 2020).

³ The Tamil Nadu government had distributed *nilavembu kudineer* concoction to treat people infected with dengue during the outbreak in late 2017. R. Prasad, *Nilavembu kudineer kills dengue virus, protects from Chikungunya*, THE HINDU (Feb., 02, 2019), Available at: <https://www.thehindu.com/sci-tech/science/nilavembu-kudineer-kills-dengue-virus-protects-from-chikungunya/article26161732.ece> (Last visited Oct., 22, 2020).

⁴ Traditional Knowledge Digital Library (TKDL) is a pioneering initiative of India to protect Indian traditional medicinal knowledge and prevent its misappropriation at International Patent Offices. Traditional Knowledge (TK) is a valuable yet vulnerable asset to indigenous and local communities who depend on TK for their livelihood. Council of Scientific and Industrial Research, About TKDL, available at: <http://www.tkdil.res.in/tkdil/langdefault/common/Abouttkdl.asp?GL=Eng> (last visited Oct., 14, 2020).

⁵ Saikat Sen & Raja Chakraborty, *Traditional Knowledge Digital Library: a distinctive approach to promote Indian indigenous medical treasure* 106 (10) CURRENT SCIENCE, 1340-1343 (2014).

⁶ Mohd Shoaib Ansari, *Evaluation of Role of Traditional Knowledge Digital Library and Traditional Chinese Medicine Database in Prevention of Traditional Medicine Knowledge* 36(2) DESIDOC JOURNAL OF LIBRARY & INFORMATION TECHNOLOGY, 73-78 (2016).

⁷ H.C. Jang, *et.al. Ontology for medicinal materials based on traditional Korean medicine* 26(18) BIOINFORMATICS, 2359-2360 (2010).

⁸ United Nations, *Convention on Biological Diversity*, (1760) UNTS 79 (1996).

⁹ *Id.* Art. 8 (j) –

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interpret the provisions of agreement on trade-related aspects of Intellectual Property Rights (hereinafter referred to as the TRIPs agreement) it could be said that the CBD and TRIPs are repugnant to each other because their core objectives are contradictory in nature. The objectives of TRIPs are very commercial in nature while the objectives of CBD on the other hand are to protect the interest of local communities and protection of biodiversity. Article 27.3 (b) of the TRIPs deals with patentability and non-patentability of plant, animal discoveries, and shield of plant assortments.¹⁰ The Doha Declaration,¹¹ in *para* 19, instructed the TRIPs Council to work on the issue of the ambiguity in reading the TRIPs and the UNCBD,¹² relating to protection of TK and folklore.¹³ The shield of TK and folklore issue has been raised and made by the secretariat¹⁴ on three items of its agenda i.e., the assessment of the endowment of Art. 27.3 (b); interlinks amid TRIPS Pact and CBD; and the shield of TK and folklore.

India's TK of various tribes (*includes north-eastern states*) are put to use in a way which is part of the routine lives of these communities.¹⁵ Reducing rate of an herbal or animal species is only a phase in the right course and may not thwart desertion

Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge innovations and practices.

¹⁰ Agreement on Trade-Related Aspects of Intellectual Property Rights, Annexure 1C to the AGREEMENT ESTABLISHING THE WORLD TRADE ORGANIZATION, available at: https://www.wto.org/english/docs_e/legal_e/27-trips.pdf (last visited 15 Oct., 2020).

Article 27.3(b) –

Members may exclude from patentability (b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. It adds that Members, however, shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof.

¹¹ Fourth Ministerial Conference, Ministerial Declaration, WTOWT/MIN (01)/DEC/1 (Nov., 20, 2001), available at: https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.pdf. (last visited Dec., 19, 2020).

¹² *Supra* note 8 Art. 1.

¹³ *See*. Members continue to diverge on interpreting the 2001 mandate and whether the discussions on these topics are negotiations.

¹⁴ Council for Trade-Related Aspects of Intellectual Property Rights, *The Protection of Traditional Knowledge and Folklore Summary of Issues Raised and Points Made*, WTO IP/C/W/370/Rev.1 (Mar., 9, 2006). Available at: https://www.wto.org/english/tratop_e/trips_e/ipcw370r1.pdf. (last visited Oct., 16, 2020).

¹⁵ Council for Trade-Related Aspects of Intellectual Property Rights, *Minutes of Meeting*, WTO IP/C/M/28 (Nov., 23, 2000). Available at: <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/IP/C/W688.pdf&Open=True> (last visited Nov., 2, 2020).

regards to biodiversity preservation.¹⁶ The UNCBD shows that u/Art. 2 (*Para. 4*) deal with State of origin of generic resources denoting the nation, which possesses those generic resources in *in-situ* form and further *in-situ* denote the conservation of methods of biological collection outside their natural surroundings; and u/Art. 8 (*a-j*) of the UNCBD said the confined area, ought to develop and also necessary to enact laws to conserve diversity, shields on ecosystem, restore degraded ecosystems etc.; and the State should ensure national legislation on shield and uphold TK, aboriginal lifestyle, and sustainable use of biological diversity and sharing settlement arising out of such TK and its practice and it should take standard over the guidelines on transnational trade-set by the WTO.¹⁷

In 2007, the UN Declaration of the Rights of Indigenous People (hereinafter referred as UNDRIP) was signed by various nations.¹⁸ However, one must consider that UNDRIP is not a lawfully obligatory mechanism under the intercontinental regulation.¹⁹ The objective of UNDRIP is to empower aboriginal individuals and local communities, thus giving them a right against misuse. These aboriginal and local communities heavily rely upon TK for a number of things (ranging from curing fever with local remedies to using forest fibres to weave clothes), therefore if a corporation tries to patent such a plant/herbal formula and prevent anyone from using the same; the aboriginal and local communities shall have the right to protest and seek lawful solution.²⁰

Indian TKDL has over 3.6 lakh formulations/practices have been transliterated in catalogue of several Indian traditional medicines including *Ayurveda*, *Unani*, *Siddha*,

¹⁶ Andrew Balmford, *et.al.*, *The Convention on Biological Diversity's 2010 Target* 307 SCI. AAAS, 212-213 (2005).

¹⁷ Colin Macilwain, *Diversity Convention in the balance* 403 NATURE: MML, 233 (2000).

¹⁸ G.A. Res/61/25 United Nations Declaration on the Rights of Indigenous Peoples (Sep., 13, 2007).

¹⁹ Mr. Sha Zukang, *United Nations, Frequently Asked questions on Declaration on the Rights of Indigenous Peoples* (International Day of the World's Indigenous People) UNPFII (Aug., 2007), available at: <https://www.un.org/esa/socdev/unpfii/documents/%20FAQsindigenousdeclaration.pdf> (last visited Oct., 24, 2020).

²⁰ UNDRIP, Art. 24 (1) –

Indigenous people have the right to their traditional medicines and maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals. Indigenous individuals also have the right to access, without any discrimination, to all social and health service.

UNDRIP, Art. 24(2) –

Indigenous individuals have an equal right to the enjoyment of the highest attainable standard of physical and mental health. States shall take the necessary steps with a view to achieving progressively the full realization of this right.

and Sowa Rigpa, Homeopathy, Yoga etc.²¹ These have been translated into English, Spanish, French, Japanese and German. India is a signatory with the European Patent Office (EPO),²² UKIPO²³ and USPTO²⁴ in order to prevent the accord of invalid patents to access the International Patent Office (IPO), and access to the TKDL catalogue for the purpose of patent searching and examination.

The western notion of IPR is individual centric and revolves around the author/discoverer of a product or process and the main objective is profit generation; this is reasonably a contrary concept as compared to community rights.²⁵ In TK there is no concept of monopoly or profiteering, but the ultimate objective is well-being of the community. IPR is not just about giving the author/discoverer but it is also about respecting and recognising the efforts of the individuals who made our life better.²⁶ The current system of IPR regime is not capable to serve the needs of the citizens of India (especially aboriginal communities) therefore, a specific legislation needs to be enacted that shall grant TK control to the people.²⁷ Patent based innovation has been a vital aspect of the US in its protective attentiveness. The US-Joint Economic Committee assessed that as much as fifty percent of overall financial development in the US in last five decades (60 years) is attributable to output profit ensuing from inventive discoveries.²⁸ Subsequently, the shield of IPR accorded by patents have become prime accumulation to the US ability to domain its economical superiority.

²¹ The Council of Scientific & Industrial Research TKDL, (*Representative Database of Ayurvedic, Unani, Siddha and Sowa Rigpa Formulation*), AYUSH. Available at: <https://www.tkdil.res.in> (Last visited Nov., 11, 2020).

²² The European Patent Office. *The MoU on Bilateral Cooperation between Office of the Controller General of patents, Designs and Trademarks (CGPD TM) and the EPO*, (Signed in Munich on Nov., 29, 2006) relating to PGP (u/Art.3), Training and Human resources development (u/Art.4), Patent databases and data exchange (u/Art.6), as well as IP awareness and innovation (u/Art.7) etc.

²³ Press Information Bureau. *India & UK sign MoU on IPRs*, PIB (Nov., 7, 2016). Available at: <https://pib.gov.in/newsite/PrintRelease.aspx?relid=153363> (last visited Oct., 7, 2020).

²⁴ United States Patent and Trademark Office, *The USPTO and India's Central IP department agree to cooperate on IP examination and promotion*, USPTO (Dec., 2, 2020). Available at: <https://www.uspto.gov/about-us/news-updates/uspto-and-indias-central-ip-department-agree-cooperate-ip-examination-and> (last visited Dec., 24, 2020).

²⁵ H.M. Mead, *Mataatua Declaration and the Case of the Carved Meeting House Mataatua* 69 UBSL. REV., 70-71 (1995).

²⁶ E.I.A. Daes, *Some observations and current developments on the protection of the intellectual property of indigenous people* WIPO ROUNDTABLE ON INTELLECTUAL PROPERTY AND INDIGENOUS PEOPLES GENEVA (1998).

²⁷ UDDIN, *Development of traditional knowledge under the Intellectual Property Right Regime in North-East India* in DEVELOPMENT VISION OF NORTH-EAST INDIA (U.J. Ahmed. ed.) 22-27 (2010).

²⁸ Aman Raj Khanna, *et. al., India's IPR Regime: Reconciling Affordable Access with Patent Protection* 3(5) ICRIER, 1-69 (2015).

The Indian Patent (Amendment) Act, 2005²⁹ u/ss. 2 (m) and 3(d) provides a unique provision for the patentability of innovative works, establishing stringent norms with relation to pharmaceutical pioneering works. In response to the USTA, 1974, u/s. 301, the US officials may be called upon India to apply its IP legislation in a manner unswerving with section 301 of the USTA.³⁰ A significant Indian IPR Policy has been adopted in May 2016.³¹ It has advocated the assessment of the strategy at an interval of every five years. This would succour in ascertaining gaps in its execution, new challenges and growths; and the areas that need expediting such as enforcement and adjudicatory setups for fighting IPR violations; human resources growth, commercialization of IPRs and lawful and judicial framework (like to have robust, operative IPR laws, which equilibrium the awareness of rights possessors as well as common folks).

Most of the *TIK* in North-eastern states of India has not secluded and registered under the IPR regime,³² The Government of India take initiative defensive strategies to protecting *TIK*.³³ IPRs are acquainted with property rights only in respect of inventions rather than discoveries.³⁴ WIPO working groups on Art. 8(j) of the UNCBD has also advocated in respect of documentation of *TK* against exploitation.³⁵

The INTACH North-eastern part has been occupied on numerous characteristics of the subject, including records of endangered vernaculars, disappearing crafts, and *TK* in this region.³⁶ The last decade, India took initiative to set up TKDL for the

²⁹ The Indian Patent (Amendment) Act, 2005 (Act. No. 15 of 2005).

³⁰ The United States Trade Act, 1974 (19 USC 2101), section 301.

'Responses to certain trade practices of foreign governments In nutshell: it has granted the Office of the United States Trade Representative (USTR) a range of responsibilities and authorities to investigate and take action to enforce U.S. rights under trade agreements and respond to certain foreign trade practices.'

³¹ The National Intellectual Property Rights Policy (May, 12, 2016).

³² Moses Maguipinamei, *Traditional Knowledge, Traditional Cultural Expressions and Intellectual Property Rights of Tribes in North-Eastern Region of India* 6 (2) IRJLIS, 226-236 (2016).

³³ WIPO, *Traditional Knowledge and Intellectual Property-Background Brief*, (that is two types of IP protection are being sought: Defensive protection aims to stop people outside the community from acquiring IPRs over TK. India, e.g. has compiled a searchable database of traditional medicine that can be used as evidence of prior art by patent examiners when assessing patent application). Available at: www.wipo.int (last visited Nov., 29, 2020).

³⁴ *Diamond v. Chakrabarty*, (447 US 303, 1980).

³⁵ The CBD Working Group on Article 8(j), *Related Provisions of the Convention on Biological Diversity* (1998). Available at: <http://www.cbd.int/convention/wg8j.shtml> (last visited Nov., 10, 2020).

³⁶ Moses Maguipinamei, *Id.* at. 228.

protection of rights of medicinal plants in 2001.³⁷ Moreover, the NKC, 2006³⁸ has recommended TK, Traditional Health and TKDL (NKC, 2007)³⁹ in India which ought to be protected the interest of citizens. The Northeast is a “*cultural and biodiversity hotspot*” realizing the immense potential for economic development.⁴⁰ This tag of cultural and biodiversity hotspot has installed greater consciousness and the need for IPRs awareness. In this respect, appropriate legal measures of protecting the traditional wealth must be developed to protect rights and possession over their own cultural property.

The study tries to find out the TIK in *Galo Tribes*, West Siang, Arunachal Pradesh and the State of Assam; to make an attempt to identify the legal protection of TIK under the IPRs and to examine the causes of undermined issues regarding TIK. This study is purely on the basis of primary data (*i.e. survey and data analysis*), legislation, and various reports; and also it is assume that the TIK within North East India were not properly documented in any forms in this regard we need protection of the TIK and their rights under the IPRs, GI, as well as WIPO.

II

Reasons for Protecting Traditional Indigenous Knowledge (TIK)

TIK is of growing importance relating to IPRs issues to the developing countries. This region of biodiversity, TIKs need effective protections in the interest of localities as well as national perspective. The special focus however is on the Northeast perspectives on protection of TIK.⁴¹

TK is the knowledge, knowhow, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.⁴² Examples of TK include knowledge about the use of specific plants or parts and therefore identification of medicinal properties in plants harvesting practices (*e.g. Neem, Tea, Turmeric, Tamarind etc*). Generally, TIK

³⁷ See, CSIR, Traditional Knowledge Digital Library: Representative Database of Ayurvedic, Unani, Siddha & Sowaigpa Formulations, AYUSH. Available at: <https://www.tkdil.res.in> (last visited Nov., 12, 2020).

³⁸ See, The National Knowledge Commission Report to the Nation 2006, (22 NKCGOI 2007).

³⁹ See, The National Knowledge Commission Report to the Nation 2007, GOI 54-61 (2007).

⁴⁰ Sudipto Chatterjee, *et.al.*, *Biodiversity Significance of North East India-for the study on National Resources, Water and Environment Nexus for Development and Growth in North Eastern India* 4 WWF-INDIA, 1-71 (2006).

⁴¹ G.B. Reddy, *INTELLECTUAL PROPERTY RIGHTS AND THE LAW* 395, 396 (2010).

⁴² M.K. Bhandari, *LAW RELATING TO INTELLECTUAL PROPERTY RIGHTS* 290 (2015).

is undocumented and legally protected except few nations like Portugal.⁴³ We need a particular focus on community knowledge and community innovations or discoveries as well as protect their TIKs rights under domestic law(s). However, India is one of the main countries where traditional medicines from plant sources have been used from ancient times.

Initially select some relevant things/plants to study in the field of TIK and IPR subject. It has been discussed by a number of Galo tribal communities about their aboriginal practice for a long time, which is a part of their faith as well as the custom. Researchers select Sipu Puyi and Kabu villages, West Siang district in Arunachal Pradesh regarding TK practices among Galo tribes; and it has to examine that where they are aware about their protective rights under the IPR related laws? Or they have registered their items/natural health heal under the IP regime/GI indication etc. The study further accelerates examinations at Moran and Rangoli village, Sivasagar in the State of Assam to analyses 'traditional muga products' due its usages in their part of life and its unique design and making process. Researchers have collected primary information/ data along with put-up specific TIK, lawful questions to the aboriginal communities both Arunachal and Assam and survey on 150 houses i.e. total 300 people (50 houses from Sipu Puyi and 100 houses from Kabu villages which has been together accumulated information (from aged amid 18-70 years i.e. 150*2 interview 2 family members from each house) total 300 Galo clan people in West Siang district, Arunachal Pradesh relating to Galo Gale, Galo Bolup, Oyin leaf, Oyik leaf, Bali rice). Other side, in Assam, Moran and Rangoli villages (collected information from 300 villagers aged amid 20-70 years both men and women, the researcher visited 50 each house in Moran and Rangoli, Shivasagar, Assam) researchers have examines TIK on Muga Mekhela Chadar (maggot and fancy cloth for women) and 'Muga Riha' (upper body cloth for women) due to its unique making process, durability, and its uncommon costume (original design) since long time practice by the Assamese people; which is almost synonymous to Assam State like 'Bihu festival'.

After experiential and explanatory analysis all informative data (percentile of acceptance from tribal communities/ village peoples regarding traditional aboriginal knowledge) accumulated and concluded that there is a huge aspect on TK in relation to IP regime/GI. A table shows and examine TIK which is given below:

Item/ Natural Medicinal Plants	Practices Tribal community as TIK since	Data info & result (age group)	Usages (Male/ Female) & for which purpose	% of agreed on TIK & Practice	Place/ location of survey/ primary data	Whether TIK is under the IPR/GI?	Is the item protected/ registered under the IPR/GI
Galo Gale	Exclusive handmade	Amon g 18-	Female, (dress length	100% (out of 300)	Vill: Sipu-	Yes due to its unique	Not protected under the

⁴³ Available at: <http://www.wipo.int/policy/en/> (last visited Oct., 25, 2020).

<i>Item/ Natural Medicinal Plants</i>	<i>Practices Tribal community as TIK since</i>	<i>Data info & result (age group)</i>	<i>Usages (Male/ Female) & for which purpose</i>	<i>% of agreed on TIK & Practice</i>	<i>Place/ location of survey/ primary data</i>	<i>Whether TIK is under the IPR/GI?</i>	<i>Is the item protected/ registered under the IPR/GI</i>
	two/three-dimensional multi-colour dress, since 150 years or more.	70 years age group	8-12 ft. & 4 ft. height, its hold from belly to toe) it's usages as usual dress, for day-to-day life, cultural event e.g. Mopin festival.	agreed/ said that its aboriginal knowledge & Skills (all Galo Tribes practice home-made dress since long period without changes its originality)	Puyi & Kabu, West Siang, Arunachal Pradesh	design as well as TK	IPR/GI like Assam 'Gamcha'
Galo Bolup	Unique boat shape handmade can hat since time immemorial practice in Galo community	-Do-	Male (fashion, identity, cultural symbol), its usages as all rituals, cultivation and harvesting time.	99% (out of 300) agreed/ said that it is some TK skills 1% (Unknown)	-Do-	Yes due its unique shape & design.	Not yet, u/the Copyright/Trade-mark.
Oyin leaf (Clerodendrum colebrookianum)	Practice as natural medicine since time immemorial	-Do-	Male & female for reducing Hp level, antibiotic nature; it's a common vegetable available in local markets collected from the jungle to use for	97% (out of 300) practice & consume & believe as maintained Hp level and other health-heel	-do-	Due to its herbal nature with long evidence & trust to maintain Hp level.	Not yet, registrar under the IPR/ IPA

Item/ Natural Medicinal Plants	Practices Tribal community as TIK since	Data info & result (age group)	Usages (Male/ Female) & for which purpose	% of agreed on TIK & Practice	Place/ location of survey/ primary data	Whether TIK is under the IPR/GI?	Is the item protected/ registered under the IPR/GI
			health heals.				
Oyik leaf (<i>Pouzolzia hirta</i> , Blume ex Hassk.) ⁴⁴	Practice as natural medicine since time immemorial	-Do-	Male & Female take it as vegetable (usages & trust to skin-care, anti-bacterial properties, laxative and helpful for lactating mothers)	93% Galo people trust that, it's a medicinal plant usage since time immemorial.	-do-	Due to its herbal nature with long evidence & trust as decrease skin infection (Fungal) e.g. Neem leaf.	Not yet, registrar under the IPR/ IPA
Bali Rice	Growing as <i>Jhum</i> / shifting cultivation also its 100% organic process to cultivate since 150 years or more	-Do-	TIK, practice as Galo Tribes (common cultivation practice in West Siang)	98% (out of 300), Galo tribal people said that it is TIK	-do-	Due to its quality, organic, and nutritional benefits (except to consume diabetic patients)	Not yet, registrar under the IPR/ IPA
Muga ⁴⁵ Mekhela Chadar	Muga silks have been made by Assam's people for 100-150 years/ or more.	Amon g 20-70 years age group (few below	Aboriginal practice by Assam's tribal communities. It's an original & unique	100% (out of 300), Assam people said that it is TIK	Moran and Rongali, Shivsagar, Assam	Due to its quality, natural colour, unique design etc.	Not yet, under the IPR regime. But, GI registered by the ASTEC in 2006 it has been accepted.

⁴⁴ Momang Taram, et. al., *Wild Food Plant Resources of Komaradi Tribe of Upper Siang District in Arunachal Pradesh, India* 33(2) BAFR, 27-35 (2018).

⁴⁵ See, Registered GIs, App. No. 55 (2007, 2008). Available at: <https://ipindia.gov.in/registered-gls.htm> (last visited Nov., 25, 2020).

Item/ Natural Medicinal Plants	Practices Tribal community as TIK since	Data info & result (age group)	Usages (Male/ Female) & for which purpose	% of agreed on TIK & Practice	Place/ location of survey/ primary data	Whether TIK is under the IPR/GI?	Is the item protected/ registered under the IPR/GI
	Mekhla is aboriginal dress to Assam domicile/ which is part of their custom.	<20 years)	quality and design for women clothe as home-made.				
Muga Riha (aboriginal Jaapi design)	Muga silks have been made by Assam's people for 100-150 years/ or more. Riha is aboriginal dress to Assam domicile/ and part of their custom.	-Do-	Aboriginal practice by Assam's tribal communities. It's an original & unique quality and design for women's clothes as home-made.	100% (out of 300), Assam people said that it is TIK	-Do-	Due to its quality, natural colour, unique design etc.	Not yet, under the Copyright or community knowledge protection.

Table: 1 (Researchers explain on the basis of primary data/ survey information collected from Golo Tribal people in Sipu-Puyi & Kabu villages, WS, Arunachal Pradesh & Moran & Rongali villages, Shivasagar, Assam; and composed data collected from survey, statistically analysed to draw conclusion that the above item/plant vegetable TIK, believe and part of their daily life. It's also conclude that around 95% of the tribal communities/ people not aware of the legal shield under the IP regime/ Geographical Indication or group protective interest as per the national/international legal framework)

In West Siang District under the Galo tribes have dominated the region; they are habituated an aboriginal language (undocumented till date), unique homemade traditional dress with design (Gale i.e. girl/ woman dress till legally unprotected but customary recognised since 150 years or more. It has been made of cotton, with three to four dimensional colour designs; its length 8 to 10 fit. Standing 4 to 4.5 fit. Basically, it's a symbol of Galo woman; compulsorily for 'Mopin festival', marriage, cultural meet, all tribal rituals etc.), some herbal vegetables have been eating as to control Hp level, antibiotic agent, and skin care which is available in the surrounding jungle (not cultured) i.e. Oyik

and Oyin leaf; and Galo Bolup (*it's a unique handmade can hat to protect direct sunlight during summer, heavy rain during cultivation as well as harvesting time, beside it's a symbol of manhood to the 'Galo Male'. Galo Bolup has fashionable statements, like any cultural event, marriage, community meeting, etc. it's also not protected under the Copyright Act till date*) is the subject of the study. Regarding Muga 'Mekhla and Riha' is unique, beautiful aboriginal knowledge and skill, which is artistic in nature and needs to protect the TK in Assam, because it has originally been homemade dress by the tribal community since 100-150 years or more. Bali rice (*a red organic variety of rice that requires minimum water to cultivate*) particular variety of rice is suitable for *jhum* cultivation and requires little water and care to grow. As per folklore, this variety of rice was a gift from the gods for the Galo community, and seeds are preserved by natural process in all the Galo tribes for cultivation each year.

III

Traditional Indigenous Knowledge (TIK) under the IPRs

The expression TIK *per se* does not refer to any artefact entitled for IP fortification. However, various terms such as 'traditional intellectual property rights', 'community intellectual property rights', 'traditional group knowledge and practice', 'community rights'; have been proposed in order to recognize the rights which could be derived from traditional knowledge.

The TIK framework is additionally by and large seen as relating to a specific ethnic gathering or domain. Some of the objectives of protection of traditional knowledge are protected by the state concern.⁴⁶ As a result, the protection of TK owned and possessed by the traditional indigenous communities faces many quandaries under the present IPRs regime. The following discussion demonstrates this point.

Identification of Original Inventor

In the case of TIK, the primary and original innovators are the indigenous societies that accumulated the knowledge through several generations. The identification of the 'secondary innovator', i.e., who is refining the traditional knowledge through the use of sophisticated innovative or scientific techniques, procedures and developing new product or result, is comparatively much easier. Hence, identification of the original inventor is hence an intricate task in the case of TK.

⁴⁶ Dr. G.B. Reddy, INTELLECTUAL PROPERTY RIGHTS AND THE LAW 399 (2010).

Identification of Beneficiaries

The principle of benefit sharing which is an important element in the bargain theory rests upon the pre-condition that it is possible to demarcate the community that will be beneficiary of such a bargain.⁴⁷ But in regard to TK, identification of beneficiary is an intricate task and in most cases, when the community holds TK together, it is almost not probable to make out the set of recipients who would be permitted to go halves settlement by way of the lawfulness.

Patents

The Indian Patent Act, 1970 defines 'invention' as a new product or process involving an inventive step and capable of industrial application.

Copyright

Identification of the author and duration of protection will be concerns in the copyright law. Though copyright accommodates the concept of joint authorship, copyright cannot be vested over the entire tribe or community since copyright does not recognize community ownership. Copyright does not recognize perpetual protection also. In such a situation until we develop a *sui generis* system or the concept of community ownership in the Indian copyright law, the customary law must prevail.

Trademark and Design

Even trademarks can be used as a mechanism for the protection of some forms of indigenous art. The brand can be used to consign to a clan, an artist, or an amalgamation of both. It has the flexibility to be used for all forms of folk art, including folk medicines.⁴⁸ On the other hand relating to design it prohibits registration of certain designed which are not new or original or have been disclosed

⁴⁷ Joshua P. Rosenthal, *Equitable Sharing of Biodiversity benefits: Agreements on Genetic Resources*, IBD: Proceeding of the Claims Conference, OECD (1997). Available at: https://www.researchgate.net/profile/Joshua-Rosenthal-4/publication/254824170_Equitable_Sharing_of_Biodiversity_Benefits_Agreements_on_Genetic_Resources/links/0a85e53b43fe411f0f000000/Equitable-Sharing-of-Biodiversity-Benefits-Agreements-on-Genetic-Resources.pdf (last visited Dec., 24, 2020).

⁴⁸ The Trade Mark Act, 1999 (Act. No. 47 of 1999).

That the trademarks: (i) which consists exclusively of marks or indications which may serve in trade production to designate the kind, quality, intended purpose, values, geographical origin or the time of the goods or rendering of services or other characteristics of the goods or services (ii) which consist exclusively marks or indications which have become customary in the current language or in the bonafide and practices of the trade shall not be registered.

to the public anywhere in India or in any other country by publication in tangible form or by use or in any other form with prior permission.⁴⁹

IV

TIK *viz-a-viz* Geographical Indication (GI)

The Law, which appears to be more relevant for protection of TIK, is the Geographical Indications of Goods (Registration and Protection) Act, 1999 which aims at registration and better protection of geographical indications relating to goods. The main object of the law is to prevent unauthorized persons from misusing geographical indications and to protect the consumer from deception.⁵⁰ A geographical indication does not require any element of novelty, originality or inventiveness since it specifically addresses goods produced or manufactured in a specific area it can also be used by a particular tribe or indigenous group to identify the tribe or group to the consumers.

The region is based on vast biodiversity, also is one of the 25 mega biodiversity zones of the world and one of its 18 biodiversity hotspots.⁵¹ To protect these biodiversity resources within the northeast it is essential to take appropriate measures regarding national interest and indigenous people rights. The Central enacted the BDA, 2002,⁵² in this context benefits claimants meaning the keep of biological resources, their by-products creators and holders of knowledge and information relating to the use of such biological resources, innovations and practices associated with such use and application. This law thus provides more of a defensive protection of the TK. Another relevant legislation pertaining to TK in farming is the Protections of Plant varieties and Farmers Rights Act 2001 which aims to protect the farmer's traditional rights to save, use share or sell his farm produce of a variety protected under the Act.⁵³ The village and farming community will be

⁴⁹ The Designs Act, 2000 (Act. No. 16 of 2000).

⁵⁰ See generally, Geographical Indication (GI)-A geographical indication identifies goods as originating in a territory or region, or locality in a territory, where a given quality, reputation, or other characteristic of the goods are attributable to its geographical origin.

⁵¹ L.S. Gassah & C.J. Thomas (ed.), CONSTRAINT AND CHALLENGES TO SOCIAL RESEARCH IN NORTH-EAST INDIA 55-69 (2017).

⁵² The Biological Diversity Act, 2002 (Act. No. 18 of 2003).

This Act is meant for conservation of Biological Diversity, sustainable use of the components and fair and equitable sharing of the benefits arising out of the use of Biological resources and knowledge.

⁵³ The Protection of Plants Varieties Farmers Rights Act, 2001 (Act. No. 53 of 2001).

compensated in case their traditional or local variety is used for the development of new varieties.

V

Suggestive Measures

Regarding *TIK* in the Northeast and Northern part of India having aboriginal dominated clans, they basically practice, believe on aboriginal knowledge and skills relating to food habits, making their own dress in the traditional way, handicraft item and health-healing process. In the absence of national legal-framework on *TIK*; and this also the instructed of UNDRIP,⁵⁴ voted by India. As the tribal aboriginal knowledge customs and defence, the Central needs to enact a law for the attention of tribal literacy and arty invention and designs. India may utilise the ‘*Disclosure of Origin*’ concept as stated in the WTO;⁵⁵ but TRIPS is mum on *TIK* where CBD recognised it. The EU is not opposed to disclosure prerequisites *per se*, and is for making it a compulsory prerequisite at the national and international level.

If any aboriginal *TK* is based on lawful practice it ought to be considered the customary clan rights as per the jurisprudential context and the respective State should have empowered to shield the interest of the aboriginal knowledge skills e.g. Portugal recently passed a legislation to shield the *TK* and plant varieties of Portuguese farmers,⁵⁶ Thai customary medicine,⁵⁷ African *TK* ecology,⁵⁸ Brazil’s *TK*

This Act also facilitates equitable sharing benefits arising out of the use of plant varieties genetic resources that may accrue through a breeder from the sale disposal etc., of the seeds and planting material of a protected variety.

⁵⁴ See, The United Declaration on the Rights of Indigenous Peoples, A/RES/61/295. (Sep., 13, 2007).

⁵⁵ See, WTO, Intellectual property: protection and enforcement (1886, 1994).

‘Disclosure of Origin’ is associated with TK in the patent applications for inventions/discoveries using generic resources and/or TK from developing nations. Developing nations came up with the Disclosure norm as against bio-piracy. The viewpoints of nations have stated in various submissions to the TRIPS Council. Available at: https://www.wto.org/english/thewto_e/whatise/tif_e/agrm7_e.htm (last visited Nov., 23, 2020).

⁵⁶ The Decree-Law (No. 118 of 2002).

Establishing a legal regime of registration, Conservation, Legal Custody and Transfer of Plant Endogenous Material etc.

⁵⁷ The Act on Protection and Promotion of Traditional Thai Medicinal Intelligence (BE, 2542).

⁵⁸ The African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources (2000).

allied generic properties,⁵⁹ and China in 2001 authenticated around 3000 patents on Traditional Chinese Medicine.⁶⁰ Apart from *sui generis* legislation Indian TIK ought to be shield according to Indian context because of diversity in all spars. The Central should enact a 'TIK group/ community protection' legal system and set-up a 'State Level Nodal Officer' to register and observe TIK interest in the specific tribal areas. India has TKDL for informative instruments but we need to protect our national TK, biodiversity, and innovative/unique products from third-party intervention. Every model/ theories have enforced for the time being, then another crisis will be emerging; generally, tribal people have introvert nature due to the long-time isolated from mainstreams; and without their trust, they never share their innovative works; therefore, customary tribal right should be shield under the Constitutional provisions to the governance as in *Sixth Schedule/ Fifth Schedule*.

In the present IP laws such as Copyright Act, has silence on traditional folklore, IPA gives only a defensive shield, Biodiversity is concentrated on generic and biological aspects to justify the need for authenticating. The tribal TIKs which could be utilized as a proof of the '*prior art*' by the examiners of patent offices and settling disputes related to IP at national and international echelon. Like in Northeast India aboriginal traditional practices in areas like Australia and South Africa, indigenous land management, which include slow-burning and purposefully set brush fires are considered key to preventing large-scale wildfires⁶¹ and Kani tribes of south India has been share a medicinal plant '*arogyapaacha*' which have been used as natural healing process and this has been benefits their TK to prepared a sport drug; and Thai aboriginal healers use '*plao-noi*' to treat ulcers. Likewise, '*Oyin leaf* and '*Oyik leaf*' from Galo tribes in Arunachal Pradesh out to benefit their knowledge of skin, diabetic, and Hp medicine.

There is a need for an effective and vibrant steps taken and worked together national and cross-border levels and India should be taken such as a multilateral treaty in the SAARC region at the primary step on TIK; which will more effective to assessment original *vis-à-vis* pirated TK or aboriginal natural medicinal healing process. Because, '*Galo Gale*', '*Muga Mekhla/ Riha*' etc. these handmade cress is based on the TIK ought to support to the sustainable trade and may generate financial development (*which may reduce unemployment in the locality as well as the North-east and Northern India States*), e.g. the Seri tribes of Mexico use the '*Arte Seri*' trade mark

⁵⁹ The Brazil Provisional Measure (No. 2.186-16 of 2001). *Regulating Access to the Genetic Heritage, Protection of and Access to Associate Traditional Knowledge*.

⁶⁰ WIPO: Intellectual Property and Traditional Knowledge.

Booklet no 2: *This is one of a series of Booklets dealing with intellectual property and genetic resources, traditional knowledge and traditional cultural expressions/folklore*, 3 WIPO, No. 920 (E). Available at: www.wipo.int (last visited Dec., 21, 2021).

⁶¹ The United Nations Environment Programme, '*Tapping into indigenous knowledge to protect nature*', (Aug., 8, 2022).

in 1994 and 1995 in 5 different segments to distinguish their craftwork which ought to pathway to social and financial sustainable development;⁶² and even the Mexican Federal Copyright Law encompasses a specific portion on '*popular culture*'; it shields standard culture in its ethical features such as literary, artistic, handcrafts and preserved in a community or society which is unique on TK.⁶³ *Mola fabric*⁶⁴ is part of the aboriginal costume of *Kuna Indians* in Colombia and Panama was comprised as combined trademark.⁶⁵ Likewise, India may adopt an idea for the North and Northeast Indians clans about *TIK* to include in the Copyright Amendment Act a specific segment as '*aboriginal culture and knowledge*'.

There is an urgent need for dialogue between the *TIK* holders, tribal artists, TCEs practitioners, library professionals, and the Central institutions for evolving appropriate legal mechanisms for protecting the IPRs of tribal peoples in Northern part, Northeast, South-west and other tribes on *TK* in India. The US government has legislation '*Indian arts and crafts*' u/the IACA, 1935⁶⁶ to shield and regulate art and crafts. Develop India should be enacting laws like the '*Protection of Indian Traditional Knowledge Act*' as early as possible.

VI

Conclusion

The study finding out isolated IPRs on the *TIK* about to uses (*Galo ethnic name oyin leaf and oyik leaf*) naturally growing eastern Himalayan herb for reduces high blood pressure, blood purifier and has antibiotic properties and helpful for lactating mothers, it has been practiced time immemorial by the Galo Tribal community, West Siang District, Arunachal Pradesh). The traditional handloom products (*made on bamboo, traditional cane*) both Assam and Arunachal Pradesh undermine the legal protections under the IPR's as well as an industry concerned due to proper governance and execution. The State Governments tries to market the handloom

⁶² Anna Friederike Busch, PROTECTION OF TRADITIONAL CULTURAL EXPRESSIONS IN LATIN AMERICA: A LEGAL AND ANTHROPOLOGICAL STUDY 260-263 (2015).

⁶³ See, Capítulo III-De las Culturas Populares. Arts. 157-161 of the Mexican Copyright Law, *Ley Federal del Derecho de Autor* (1996, 2003).

⁶⁴ A full costume traditionally includes a patterned wrapped skirt (*saburet*), a red and yellow scarf (*musue*), arm and leg beads (*wini*), a gold nose ring (*olasu*) and earring in addition to the *mola* blouse (*delemor*).

⁶⁵ Daniel Guttentag, *The Legal Protection of Indigenous Souvenir Products* 34(1) TRR, 23-34 (2015).

⁶⁶ The Indian Arts and Crafts Act of 1935, (25 USC §. 305, 1994).

For the issuing of certification marks by the Patent and Trademark Office (PTO) to ensure authenticity of Indian products, in its 70 years of existence the act was never regulated and they have never had a single prosecution under it.

products (Galo Gale, in Arunachal and Assam '*Mekhla and Riha*' a *beautifully decorated pure cotton handmade women dress*) but insufficient attitude towards the protection of the TIKs.

Even the Constitution of India u/Art. 29 recognize the significance of cultural rights and functions to protect these rights. This also includes the right of the indigenous communities to not have their sacred property used by corporations or individuals for their own commercial gains. In the light of Constitutional mandate till further amendment the TIK is a valuable heritage for the communities and cultures that develop and maintain it, as well as for other societies and the nation as a whole. It is essential to preserve the benefits of *TIK* for the entire mankind because it is culturally, socially and economically valuable. TK is an important lead to the developed countries for their new developments and manufacture of new products. All member countries of WTO are trying to fulfil the minimum requirements of TRIPS and also trying to cover the traditional knowledge within the ambit of intellectual property law. Defensive as well as positive protections have been taken by the countries. Though efforts have been made to protect *TIK* through various aspects of IP laws, there is still a requirement to enact the stringent law for the protection of *TIK*.