

Balancing Innovation and Tradition: An Analytical Study of the Interface between Intellectual Property and Cultural Appropriation in India

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Abstract

India, with its rich and diverse cultural heritage, is vulnerable to practices which may undermine its traditional knowledge. Intellectual Property (IP) rights, while designed to protect innovation and creativity, can also play a crucial role in safeguarding traditional knowledge. Cultural appropriation, which essentially refers to the unauthorized use of indigenous knowledge and practices by foreign entities who exploit these lesser-known art forms, expression or traditional knowledge relating to lifestyle and well being with an objective of commercial exploitation, has increasingly become a concern in the global south, including India. There have been several instances of cultural appropriation like patent claims on Indian traditional knowledge which have been part of local customs since time immemorial by misrepresenting the origin of the product or diluting the traditional knowledge and portraying it as a scientific breakthrough. Therefore, this paper explores the intersection of cultural misappropriation and protection under IP laws for appropriators in the context of India's heritage. This paper examines the challenges faced by indigenous communities in protecting their traditional knowledge such as loss of traditional knowledge, economic disadvantages and disrespect to the community. This paper highlights the importance of balancing the rights of indigenous communities with the broader public interest in accessing and enjoying cultural heritage. The study aims to focus on bottlenecks in the current IP system that fail to adequately protect traditional knowledge from misappropriation. It also explores the ongoing debates around fair benefit-sharing mechanisms, the importance of maintaining a traditional digital library that is accessible to all and the need for a sui generis system that aligns with the unique characteristics of traditional knowledge. The

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study advocates for stronger legal protections, ethical considerations and raising awareness across nations about the value of traditional knowledge which are crucial for fostering respect and preventing further exploitation. Moreover, recommendations are explored to suggest safeguarding the cultural heritage of indigenous communities in India against the backdrop of global intellectual property regimes by implementing robust IPR protection for traditional knowledge that can safeguard against unauthorized use and exploitation.

Key words: Cultural appropriation; Indigenous communities; Intellectual Property (IP); Traditional knowledge; Unauthorized use.

I. Introduction

The interface of cultural appropriation and protection of intellectual property underscores multifaceted issues, especially when there is concern regarding the use of traditional knowledge from the Global South. Appropriations of ancient knowledge, for example, multinational corporations seeking patent protection on the use of *Plumbago indica* and sandalwood oil for the purpose of medicinal uses highlights the challenges in respect of protection of indigenous knowledge from the trap of unauthorized commercial exploitation.³ In another instance, a cosmetic company filed a patent specification with the European Patent Office, in 2014, in respect of an invention, which involved wrinkle-reduction compound based in ancient plants found in India. Consequently, the Indian Council for Scientific and Industrial Research (ICSIR) raised an objection on the basis that the knowledge behind such alleged patent application was already an inherent part of the cultural heritage of India and different documents indicate use of such knowledge from antiquity. As a result, the patent was not granted. On a similar note, a patent application filed by Santalis Healthcare Corporation in respect of an invention based on sandalwood oil for treatment of cancer was not granted by the United States Patent and Trademark Office (USPTO) because of the existence of prior use of knowledge in Indian tradition. Such instances emphasize the restriction of the present intellectual property regime in respect of effective recognition and protection of group authorship. The commercial use of such cultural assets gives rise to substantial cultural and economic exploitation and deprives the traditional communities, which are the holders of such knowledge,

³ Parveen Yadav & Saroj Bohra, *Traditional Knowledge: Penetrating Intellectual Property*, 27 J. INTELL. PROP. RTS. 427, 427-433 (2023).

from gaining actual benefits against unauthorized commercial use of traditional knowledge. The present study intends to analyse the relevant challenges and suggest necessary measures regarding the issue of cultural appropriation within the realm of intellectual property law.

II. Understanding Cultural Appropriation

In the book, 'Who Owns Culture?' Susan Scafidi attempted to define 'Cultural Appropriation' as 'taking of intellectual property, cultural expressions or artifacts, history and knowledge from a particular culture.'⁴ This definition expressly attaches the concept of cultural appropriation to intellectual property. However, in this respect there is dearth of legal discussions. As defined by Sari Sharoni, in 2016, 'cultural appropriation' involves the act of taking a product from a 'source community' and reprocessing it within a different cultural context.⁵ In spite of these academic definitions, there is absence of a universally accepted definition of cultural property, since this concept differs based on the perspective, legal framework, jurisdiction and interests of the stakeholders involved. Certain bilateral or multilateral agreements have tried to define cultural property and attempted to reach mutual understandings or compromises. The definition of cultural property can be influenced by the state, which owns the property or by a different state, which is looking for its compensation.⁶ Such variations in perspectives indicate that the expression, 'cultural property,' is ambiguous and incapable of having an objective definition. In certain cases, cultural property is classified based on different factors, like, monetary value, historical value, material compositions or categories of use. These categorizations are based on how different states perceive as what deserves protection, which is further influenced by the cultural priorities and interests of the respective states.

⁴ Susan Scafidi, *Who Owns Culture? Appropriation And Authenticity In American Law* (Rutgers Univ. Press 2005).

⁵ Sari Sharoni, *The Mark of a Culture: The Efficacy and Propriety of Using Trademark Law to Deter Cultural Appropriation*, 26 FED. CIR. B.J. 407 (2017).

⁶ Irimi Stamatoudi, *The Notions of Intellectual Property and Cultural Heritage: Overlaps and Clashes*, in *Research Handbook on Intellectual Property and Cultural Heritage* 8, 8-37 (Irimi Stamatoudi ed., Edward Elgar Publ'g 2022).

Although in certain cases the terms ‘cultural property’ and ‘cultural heritage’ are used interchangeably, it becomes important to identify the distinctions between them.⁷ The concept of cultural property is related closely to property law and ownership and highlights the rights of the possessor. This perspective justifies prioritizing individual rights over collective cultural heritage.⁸ On the other hand, the cultural heritage law focuses on the protecting cultural assets for benefiting present and future generations. The cultural property law stands at an interaction with divergent areas, like personal property, real property and intellectual property. Protection of cultural property is related to tangible property, like monuments and antiquities as well as intangible assets in the form of traditional cultural expressions, folklore, genetic resources and traditional knowledge. These forms of property do not get effective protection under intellectual property law. This analysis of cultural property underlines the intricacies of protection of cultural heritage in a globalized world, where cultural appropriation gives rise to important legal and ethical concerns.

Cultural diversity forms an important part of global development and it receives protection from international law, which, in turn, provide protection through different legal framework. The significance of cultural diversity in upholding global harmony is highlighted by the Convention of UNESCO on the Protection and Promotion of the Diversity of Cultural Expressions. This Convention supports the rights of different cultures to develop the respective heritage in their locality. This protection recognized the autonomy of individuals over their cultural identities. It aims to protect their freedom related to creative expression in the backdrop of the multi-dimensional character of human culture. In this regard, the United Nations Declaration on the Rights of Indigenous Peoples play important role in taking care of the welfare of indigenous populations. These legal instruments intend to bring harmonious coexistence among different cultures. Although not directly, but implicitly these instruments underline the present challenges related to cultural appropriation, which aims at preserving the diversity.

⁷ L.V. Prott & P.J. O’Keefe, ‘Cultural Heritage’ or ‘Cultural Property’? 1 Int’l J. Cultural Prop. 307, 307-320 (1992).

⁸ Fiona Macmillan, Intellectual Property and Cultural Heritage: Towards Interdisciplinarity, in Handbook on Intellectual Property Research (Irene Calboli & Maria Lilla Montagnani eds., Oxford Univ. Press 2021).

The evolution of cultural property law can be traced from cultural property law.⁹ Early reference to 'cultural property' can be identified in 'the Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict, 1954.' Later, this term found reference in 'the UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, 1970.' The concept of 'cultural heritage' was dealt with in 'the European Convention concerning the Protection of Archaeological Heritage, 1969' as well as in 'the UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage.' Subsequently, many regional as well as national legal instruments, such as 'the Protection for the Protection of the Architectural Heritage of Europe, 1985,' 'the UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects, 1995' and 'the Council of Europe Convention on Offences relating to Cultural Property, 2017' addressed the concerns related to protection of cultural heritage.¹⁰

III. Cultural Appropriation Relating to Indian Traditional Knowledge: Present Cases

The concept of cultural appropriation and misappropriation is a complex and nuanced issue.¹¹ Cultural misappropriation occurs when individuals adopt or utilize elements of a cultural tradition without a deep understanding or respect for their significance. For instance, wearing Indian clothing as a fashion trend, or adorning oneself with Rudraksha malas and other religious symbols, without an earnest appreciation for their spiritual meaning and purpose, can be considered a form of cultural misappropriation. In the Indian context, Rudraksha and other religious accessories hold profound symbolic and practical significance. They are not merely decorative items to be worn for aesthetic purposes or to fit into a certain social gathering. These objects are often associated with specific practices, beliefs, and spiritual disciplines, and their use and display are governed by cultural norms and traditions. When such sacred elements are taken out of

⁹ Manlio Frigo, *Cultural Property v. Cultural Heritage: A 'Battle of Concepts' in International Law?* 86 INT'L REV. RED CROSS 367, 367-378 (2004).

¹⁰ Irini Stamatoudi, *The Notions of Intellectual Property and Cultural Heritage: Overlaps and Clashes*, in *Research Handbook on Intellectual Property and Cultural Heritage* 8, 8-37 (Irini Stamatoudi ed., Edward Elgar Publ'g 2022).

¹¹ Darren Hudson Hick, & Reinold Schmücker, eds., *The Aesthetics and Ethics of Copying* (Bloomsbury Academic 2016).

their original context and used merely to serve a temporary fashion or trend, it can be seen as a disrespectful and insensitive act. It diminishes the inherent value and significance of these cultural artifacts, effectively "killing the whole spirit" behind their existence. Therefore, it is crucial for individuals to approach the adoption of cultural elements with a deep sense of reverence, understanding, and a genuine desire to honor the traditions from which they originate.

A. Fashion and textiles

The misuse of Indian traditional textile patterns, such as Bandhani, Ikat, and others, by Western designers and companies is a prevalent issue. These intricate and time-consuming techniques have been passed down through generations of Indian artisans, yet their cultural significance is often overlooked or exploited for commercial gain. Bandhani, a tie-dye technique that involves tying knots in fabric before dyeing (coloring), has been used in India for centuries. The resulting patterns, often featuring intricate geometric or floral designs, are a hallmark of Indian textiles. Western fashion brands have frequently appropriated Bandhani patterns, often simplifying or altering them to suit their artistic visualizations. This practice can undermine the cultural significance of Bandhani and devalue the work of Indian artisans.¹²

Ikat, a resist dyeing technique where the pattern is created before the fabric is woven, is another example of Indian textile heritage that has been appropriated. Ikat textiles, with their vibrant colors and intricate patterns, are renowned for their beauty and complexity. Western designers have often used Ikat patterns in their collections, often without acknowledging their Indian origins. This appropriation can contribute to the erasure of Ikat's cultural significance and the exploitation of the artisans who produce these textiles.¹³ Beyond Bandhani and Ikat, there are countless other Indian textile patterns that have been appropriated by Western designers. From Kalamkari block printing to Kantha embroidery, Indian textile traditions offer a rich source of inspiration for the fashion industry.

¹² RITU SETHI & JUNHI HAN, *HANDMADE FOR THE 21ST CENTURY: SAFEGUARDING TRADITIONAL INDIAN TEXTILES* (UNESCO New Delhi 2022).

¹³ Behera, Sudarsan, Khandual, Asimananda, & Luximon, Yan, *An Insight into the Ikat Technology in India: Ancient to Modern Era* (2019), available at https://www.researchgate.net/publication/331096059_An_insight_into_the_ikat_technology_in_India_ancient_to_modern_era/citation/download (last visited Aug. 10, 2024).

However, it is essential that this inspiration is harnessed in a way that respects the cultural heritage of India and supports the livelihoods of Indian artisans.

B. Yoga and Ayurveda

One of the major aspects of Indian culture that has been appropriated in worst way possible is 'Yoga'. It is a common understanding that lots of people around the world practice yoga but it has been misappropriated in many ways like redefining it as a solely physical activity.

Today one can look at misappropriated forms of Yoga in various forms such as hot yoga, beer yoga, wine yoga, goat yoga. These types of practices erase the true meaning and origin of yoga. and justice because yoga has been culturally appropriated. It doesn't mean you can't practice it or its offensive to practice it. Now, the issue with yoga is how its commonly commercialized in Western context. Now, yoga practices are based on traditions that go back thousands of years in South Asia but this context and much of the essence of yoga's meaning has been stripped away with yoga being commercialized so much. Many people think of it as a type of exercise and nothing more. Now it's important to know that with yoga, the physical component is just a small fraction of the practice, there is a spiritual part as well. The story of how it got turned into the form of exercise, today isn't a pretty one. When the British colonized India, lots of people were persecuted. Consequently, people who promoted yogic teachings, which was deep rooted in spirituality, were also persecuted because of political reasons. This catalyzed a coercion towards western style athletics and aesthetics. So, yoga was forcibly transformed into just that. Now, many lineages maintain the deep spiritual practices, but had to keep these teachings private for fear of violent repercussions. Now, throughout the history of colonization, demonizing the spiritual practices of indigenous people and people of color is part of how colonizers have justified violence against them.¹⁴ So, what is important that we do not redefine yoga as a solely physical practice doing so legitimizes what Western people like about yoga and invalidates its original meaning. Now, many of the yogic teachings that were brought to the West were done so with this

¹⁴ Nandita Sharma & Cynthia Wright, *Decolonizing Resistance, Challenging Colonial States*, 35 SOC. JUST. 120 (2008).

continual colonial coercion, with a need to appease and appeal to the Western mind by either.¹⁵

C. The case of patenting of Neem, a case of biopiracy

Bio piracy is illegal which includes the patenting of living organisms, microbes or plants or animals without letting know the owners of those plants or those animals or those traditional practices and by not giving them any commercial benefits. Corporations of the Western world, they have exploited Indian traditional knowledge since last two decades and been reaping immense profits by pretending the knowledge and genetic resources of the third world communities as their own. Once patented, the patent owner can effectively prevent the competitors from producing the product.¹⁶ For centuries the western world ignored the Neem tree and its properties but the practices of Indian peasants and doctors were not deemed worthy of attention by the majority of the British, French and Portuguese colonists in India.

In India we have used Neem for first aid, cosmetic and for curing inflammation, redness caused by any medical issues. Neem is still used for these medical purposes in various parts of India also there is a anti fatigue drug called 'Jivani' which is prevalent in *Kani* tribes, native to southern part of India. They use the drug 'Jivani' for getting energy. The Neem is known as the village pharmacy because of its healing properties and it has been used in Ayurveda Medicine for more than 4000 years ago. Even in today's date, it is being used for various medicinal purposes. Neem is also called "*Arista*" in Sanskrit, a word that means perfect, complete and imperishable. The various parts of the Neem tree like seeds, bark and leaves contain the compounds which have proven antiseptic, antiviral, antipyretic and inflammatory and antifungal uses.¹⁷

If we look at the history of this case there was a timber importer Robert Larsen from USA in 1971, he observed that tree (Neem) is useful and began importing

¹⁵ Chidi Oguamanam, *Local Knowledge as Trapped Knowledge: Intellectual Property, Culture, Power and Politics*, 11 J. WORLD INTELL. PROP. 29 (2008).

¹⁶ Marcia Ellen DeGeer, 'Biopiracy: The Appropriation of Indigenous Peoples' Cultural Knowledge', New Eng. J. Int'l & Comp. L. 179:181 (2002).

¹⁷ *Herbal Remedies: 20 Health Benefits of Neem*, NEEMFOUNDATION.ORG, (Aug. 20, 2024, 9:30AM), <https://neemfoundation.org/herbal-remedies-20-health-benefits-of-neem/#:~:text=Neem%20Tree%2C%20also%20known%20as,many%20medicinal%20and%20beauty%20properties.>

neem seeds to his company headquarters at Wisconsin. In 1992 Grace and company, they secured the rights to the formula that have been used to make emulsion from the neem seeds to make a powerful pesticide. It also begins suing Indian companies for making the emulsion, even though the product is based on Indian traditional knowledge. So, there arises a dispute. Where a US corporation calling it a discovery, actually it is stealing and pirating of indigenous practices and knowledge of Indian people. The problem is that W R Grace does not have a patent on the trade self, but rather on the process of making the emulsion out of the name. So, to bring the attention of the world community, the Neem campaign was started by various NGO's and individuals in India in 1993. This was done to mobilize the worldwide support to protect indigenous knowledge systems and resources of the third world from piracy by the western countries, particularly in the light of emerging threats from intellectual property rights regime under the WTO and the TRIPS agreement. The Neem patent became the first case in the world to challenge European and US patent on the grounds of biopiracy. Four-year fight pays and the case judgment came on 13th September, 1997. The European patent office accepted the arguments offered by the Indian scientists and rejected the order of the US Patent office to award the patent to W R Grace Company. The Indian scientists argued that the people of India have known the medicinal properties of name for thousands of years, and hence no other company can patent its properties.

D. The case of Turmeric

Turmeric is a well-known flowering plant of 'Curcuma Longa' of ginger family 'Zingiberaceae'. The roots of turmeric plant are being used since thousands of years for different medicinal purposes and for culinary purposes. The issue relating to patent arises when a patent on turmeric was awarded to the University of Mississippi Medical Center in May 1995 specifically for the use of turmeric in the wound healing and that patent was filed by an NRI who was studying in University of Mississippi. Facts were provided from Indian knowledge, where turmeric has been used medicinally for thousands of years, concerned grew about the economical and socially damaging impact of this piracy.¹⁸ CSIR argues that

¹⁸ *The Use of Turmeric in Wound Healing*, Report on Intellectual Property and Genetic Resources in the Life Sciences, World Intellectual Property Organization, available at <https://www.wipo.int/export/sites/www/tk/en/docs/use-of-turmeric-in-wound-healing-e.pdf> (last visited Aug. 8, 2024).

turmeric has been used for thousands of years for healing wounds and rashes and hence its medicinal use was not the new thing for Indians and they must protest on this.¹⁹ Their claim was supported by various document evidences of traditional knowledge, including Sanskrit script text and papers published in 1953 by the Journal of Indian Medical Association. The US Patent was granted on May 1995. CSIR requested for the examination of us patent in October 1996. The first action rejecting all the patent claims was initiated in March 1997. There was number of responses by the patent holder. Second action report was given. The patentee interview was held with the examiner and upon re-examination, proceedings concluded in the favor of CSIR in April 1998. So, within three years we got the patent revoked in the USA. So, in order to prevent further cases of biopiracy, CSIR India directed the for creation of a massive database that will record all the practical ideas proposed in Indian knowledge systems. Such database is intended to deny any bio piracy on the basis of prior knowledge of their use having existed.

E. The Basmati Rice case

The Basmati rice case involves a dispute over a US patent granted to RiceTec Inc., a company based in the United States. In 1997, RiceTec was granted Patent titled "Basmati Rice Lines and Grains," which covered new rice lines produced by crossing semi-dwarf varieties from India and Pakistan with 22 traditional Basmati varieties. The patent application included 20 arguments, not only for the novel rice lines but also for different varieties based on traditional farmer-bred Basmati varieties. Furthermore, RiceTec also appropriated the name "Basmati" and assumed exclusive control over new varieties derived from the traditional rice varieties cultivated by generations of farmers. The distinctive characteristics of Basmati rice, such as its fragrant aroma, long and slender grain, and unique flavor, are intrinsically tied to the geographic region of the larger Punjab area, which is divided between India and Pakistan. This business practice was deemed misleading to the public, as it involved the marketing of different and inferior goods under the Basmati name, adversely impacting the export market of India and Pakistan. In response, the Government of India filed an application for re-examination of the patent in the year 2000, arguing that the rice lines in question lacked inventiveness and innovation.

¹⁹ Article 8(j) of Convention on Biological Diversity (CBD).

F. Cuisine (misrepresentation or claiming ownership of Indian dishes)

Soleil Ho is an American chef, food writer, podcaster, and restaurant critic. She has said these lines in context of cultural appropriation in food and cuisines. “*When you divorce a food from its place and time, you can ignore global civil unrest and natural disasters.*”²⁰

When a person or a group of people or an organization appropriating elements of a non-dominant or marginalized or historically disadvantaged community for economic benefit. All of this becomes more problematic when people whose culinary culture is represented by members of the dominant group do not benefit. The social harm involved, in cases of cultural appropriation often leads to an exoticization or fetishization of the minority culture, you know, for example, when we look at something like turmeric latte, which is “Haldi Doodh” (Milk mixed with turmeric powder) for an average Indian and pretty much all Indian kids have grown up with. We have a lot of food bloggers on social media that are now getting up and espousing the various benefits of it without giving any credit, without even stating where it's from and that becomes very problematic. What's also problematic is when these recipes are fashioned into healthier versions of the original dish. Normally the claim associated with it would be that it's healthier because it has less oil or less spices. One more issue really is that perpetuating a negative stereotype about a culture and its food. Cuisine essentially defines and distinguishes cultural identities. It speaks an ethnic language, and it opens a window to understand history of a community in its own way, very deeply situated and reflective of past structures in its production and consumption. That is why a critical assessment of all of this is absolutely necessary for us to be able to detect cultural appropriation and point it out when it's necessary. Everybody who has an opinion can put it out but in a hyper globalized world cultural simulation, or in exchange of food, is an ongoing and it's a constant process. Let's take another example of Curry, Indian cuisine is remarkably diverse, showcasing a multitude of regional variations that present an extensive array of Flavors, ingredients, and cooking techniques. By reducing this rich culinary tradition to a single term like "curry," one fails to appreciate the complexity and depth that

²⁰ *Otherizing Culture Through Food*, LIFE OF REFINEMENT (August. 22, 2024, 10:00 AM), <https://lifeofrefinement.com/tag/bitch-magazine/#:~:text=%E2%80%9D%20When%20you%20divorce%20a%20food,products%20will%20always%20find%20safe.>

characterize Indian food. Each region in India has its own unique dishes, influenced by local ingredients, climate, and cultural practices, which cannot be encapsulated by a single word. The diversity of Indian dishes ranges from the spicy and tangy flavours of South Indian *sambar* to the rich and creamy textures of North Indian *butter chicken*, each deserving of its own identity and recognition.²¹

Another issue is commodification and stereotyping, Indian food is frequently exoticized, depicted as mysterious and alluring, often accompanied by stereotypical imagery that does not accurately reflect the culture or the cuisine. This portrayal can perpetuate harmful stereotypes and misconceptions about Indian culture, reducing it to mere entertainment rather than a rich and complex tradition. Such exoticization can lead to a lack of understanding and appreciation for the true essence of Indian culinary practices. The commodification of Indian food, particularly within fast-food chains, often results in the simplification of flavours and ingredients to cater to mass markets. This approach compromises the authenticity of the cuisine, as traditional recipes are altered or diluted to appeal to a broader audience. The unique spices and cooking methods that define Indian cuisine are frequently lost in this process, leading to a homogenized version that fails to represent the true culinary heritage of India. Such a limited perspective can result in a misrepresentation of Indian cuisine, as certain dishes may not accurately reflect the culinary heritage of the entire country. The richness of Indian food lies in its diversity, and failing to recognize this can lead to a superficial understanding of its cultural significance. When Western chefs or food companies adopt Indian recipes or techniques, they often neglect to give proper credit to the original creators. This oversight erases the contributions and cultural heritage of those who have historically shaped Indian cuisine, leading to a loss of recognition for their invaluable input.

In 2020, *Bon Appetit* a food magazine faced significant backlash after a former employee shared a racist meme on social media.²² This incident sparked a broader

²¹ *The Rich Diversity of Indian Cuisine: A 2024 Culinary Journey through Regional Delicacies*, GANESHA EK SANSKRITI (Aug. 21, 2024, 11:00 AM), available at <https://ganeshaksanskriti.com/blogs/news/the-rich-diversity-of-indian-cuisine-a-2024-culinary-journey-through-regional-delicacies>.

²² Rachel Premack, *Bon Appétit Is Facing Internet Backlash and Hundreds of One-Star Reviews for Its Version of the Traditional Haitian Dish Soup Joumou*, BUSINESS

conversation about diversity and inclusion within the food industry. In response, the magazine committed to reviewing and updating its recipe archives to ensure they were more inclusive and respectful of different cultures. While there have been no publicly reported instances of BBC Good Food facing major controversies due to its recipe titles, the magazine has likely been involved in internal discussions and reviews to ensure its content aligns with modern standards of cultural sensitivity.

IV. Legal framework relating to protection against cultural appropriation.

Protection of cultural heritage and intellectual property stands at interesting cross-roads because of the existence of underlying differences between the legal frameworks which regulate protection of cultural and intellectual property as well as because of the discrepancies in theoretical foundations of such protection. Cultural property has been broadly classified as tangible and intangible assets. Monuments, statues, antiquities and paintings are considered as tangible assets. Intellectual property, traditional cultural expressions or folklore, traditional knowledge and genetic resources are considered as intangible assets. This category of intangible assets does not effectively align with the characteristics of conventional characteristics of subject matter that are protected as intellectual property. Even though there are conceptual inconsistencies, these concepts highlight cultural value, which is very significant.²³

In this juncture, the efforts brought by the World Intellectual Property Organization (WIPO) in enforcing the international protection of intangible assets require analysis. The Intergovernmental Committee (IGC) of the World Intellectual Property Organization on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore was established in 2000. This IGC deliberates on developing legal framework and policy recommendations to deal with the distinct issues, rising from the protection of such intangible assets, which fails to align with the requirement of traditional forms of intellectual

INSIDER INDIA, (Aug. 11, 2024, 10:00 AM) available at <https://www.businessinsider.in/thelife/food/news/bon-apptit-is-facing-internet-backlash-and-hundreds-of-one-star-reviews-for-its-version-of-the-traditional-haitian-dish-soup-joumou/articleshow/79538329.cms>.

²³ Irini Stamatoudi, *The Notions of Intellectual Property and Cultural Heritage: Overlaps and Clashes*, in *Research Handbook on Intellectual Property and Cultural Heritage* 8, 8-37 (Irini Stamatoudi ed., Edward Elgar Publ'g 2022).

property. The initiatives undertaken by this IGC intend to maintain an equilibrium between the concerns of indigenous and local communities and the attributes of intellectual property protection. The purpose of such initiatives is to create a framework that can provide effective protection at international level to such traditional cultural expressions or genetic resources. The deliberations of this IGC are presently going on and efforts are made to bring consensus among member countries on the issue of protection of cultural property.

The UNESCO Convention on the Protection of Intangible Cultural Heritage deals with different domains of intangible cultural heritage, such as, oral traditions and expression, including language as a medium of intangible cultural heritage; performing arts; social practices, rituals, festive events; knowledge and practices related to nature and the universe; traditional craftsmanship. According to WIPO, traditional cultural expressions include “include music, dance, art, designs, names, signs and symbols, performances, ceremonies, architectural forms, handicrafts and narratives, or many other artistic or cultural expressions.”²⁴ Traditional knowledge, according to WIPO, is “knowledge, know-how, 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.”²⁵ In addition to that, the WIPO and UNESCO developed the Model Provisions for National Laws on the Protection of Expressions of Folklore against Illicit Exploitation and other Prejudicial Actions to establish a balanced framework of law that will prevent misappropriation of folklore. The objective of these provisions to provide a guide to the countries in developing laws to protect traditional cultural expressions.²⁶

In India the primary legislations which protect different forms of intellectual property are the Copyright Act, 1957, the Patents Act, 1970, the Trademarks Act, 1999, the Designs Act, 2000, the Geographical Indications of Goods (Protection and Registration) Act, 1999. The Copyright Act, 1957 protects works of original

²⁴ *Traditional Cultural Expressions*, WIPO, (Aug. 22, 2024, 10:00 AM), available at [https://www.wipo.int/tk/en/folklore/#:~:text=Traditional%20cultural%20expressions%20\(TCEs\)%2C,other%20artistic%20or%20cultural%20expressions.](https://www.wipo.int/tk/en/folklore/#:~:text=Traditional%20cultural%20expressions%20(TCEs)%2C,other%20artistic%20or%20cultural%20expressions.)

²⁵ *Traditional Knowledge*, WIPO, (Aug. 20, 2024, 11:00 AM), available at <https://www.wipo.int/tk/en/tk/>.

²⁶ UNESCO, Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and other Forms of Prejudicial Action, 1982.

work of authorship. The Patents Act, 1970 protects novel inventions, which involves inventive steps and industrial application. The Trademarks Act, 1999 offers protection to distinctive trademarks, that has adequate graphical representation. However, these conventional statutory protection of intellectual property fails to offer effective protection to traditional knowledge or traditional cultural expressions. Copyright protection in India requires originality, fixation and authorship to qualify for statutory protection in India. Since the traditional cultural expressions and folklore are already available in public domain and there is no definite authorship of such expressions, it becomes challenging to offer statutory protection to such folklores because of the requirement of originality and authorship. Although the law of patents protects novel inventions, but the Patents Act, 1970 excludes from the scope of patentability any invention which is based on traditional knowledge. Therefore, any invention, especially related to genetic resources cannot get protection as such inventions will lack novelty and inventive step. To a certain extent the Geographical Indications of Goods Act can offer protection to manufactured goods, such as traditional handicrafts. However, this protection does not extend to protection of knowledge as such.

V. Challenges and Opportunities in the Protection of Cultural Misappropriation in India

A. Challenges in quantifying cultural appropriation

A key concern in cases related to misappropriation includes the delay in enforcing mechanisms to secure the novelty and priority of traditional knowledge. There are always strong grounds present for challenging decisions of foreign patents in context of Indian traditional knowledge. Traditional knowledge is something that should be protected as a valuable asset, as it is the basic form of indigenous and local communities' livelihood and lifestyle, without which they cannot proceed for their daily routine. Many of the tested traditional knowledge is used for the production of certain noble products have commercial values. Through traditional knowledge, the agriculturalist conserve and maintain the biodiversity and make sustainable agricultural practices. The documentation of traditional knowledge provides lesser chances of bio piracy, whereby the native traditional knowledge is prevented against the misuse and misappropriation of our products by the third parties. However, creation and maintenance of a database bring a series of challenges with itself.

B. Analysis of the Trends in Cultural Appropriation Over Time

Table 1 contains a summary of study of instances (done for the purpose of this article) relating to cultural appropriation over past few decades and issues and challenges faced. One common observation that comes out of this study is lack of proper database which preserves the traditional knowledge and provides a reference to entire world about ancient Indian wisdom.

Table 1: Challenges faced in past defending traditional knowledge

Case	Date	Issues Raised	Challenges Faced	Outcome
Turmeric Patenting Case	1997	US Patent granted for turmeric's use in wound healing	Lack of awareness of traditional knowledge, difficulty in proving prior use	Indian government successfully opposed the patent
Basmati Rice Dispute	2002	US patent granted for a genetically engineered Basmati rice	Lack of evidence of prior use, challenges in proving traditional knowledge	Indian government successfully opposed the patent
Neem Patenting Case	2005	US patent granted for neem's insecticidal properties	Difficulty in proving prior use, lack of documentation of traditional knowledge	Indian government successfully opposed the patent
Yoga and Ayurveda Patenting Cases	No Specific date	Attempts to patent specific yoga poses or Ayurvedic formulations	Lack of clear definitions and boundaries, difficulty in proving traditional knowledge	Mixed outcomes; some patents have been opposed successfully, while others remain in dispute

Traditional Medicine Database Case	Ongoing	The CSIR-TKDL Unit has signed a Non-Disclosure Agreement with the National Biodiversity Authority for evaluating and identifying modalities for possible inclusion of information from the People's Biodiversity Register (PBR) into the TKDL database.	Lack of standardization and documentation, challenges in protecting traditional knowledge	Ongoing efforts to develop comprehensive databases and protect traditional knowledge
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C. Gaps and Areas for Further Research

Government of India created a database for Traditional Knowledge Digital Library (TKDL), where the drugs and the traditional knowledge of Ayurveda, Yunani, Siddha and other system of medicines which exist in India for centuries. there is⁹ a provision to update the knowledge in real time on this platform so that we will have a document of traditional knowledge which will prevent further cases of bio piracy of Indian indigenous drugs. It is an initiative of CSIR which is supported by Directorate of Ayurveda, Yoga & Naturopathic Unani, Sidda & Homoeopathy under the aegis of Ministry of Ayush. The defensive protection provided by TKDL is very important.²⁷ However, all the information that feature

²⁷ The term “defensive protection,” when applied to traditional knowledge and genetic resources, refers to measures aimed at preventing the acquisition of intellectual property rights over traditional knowledge (TK) or genetic resources by parties other than the customary custodians of the knowledge or resources. The development of measures for defensive protection have constituted a major component of the work of the Committee. See Report by Intergovernmental Committee on Intellectual Property and Genetic

in TKDL are secondary sources. Whenever, one looks into defensive protection, that is in form of database and register. That is one way of protecting knowledge by telling the other person that this knowledge already exists. However, one can raise a doubt that this is not a positive form of protection. This is not empowering the local communities against such misappropriation. Although this is helping to show that this information is already available. So, what is the major advantage of such documentation, that it can prevent erroneous grant of intellectual property rights by IP regimes of other countries.

Table 2: Impact of TKDL on prevention of cultural appropriation

Parameter	Data	Impact
Total number of entries in the TKDL database	Approximately 3.6 million formulations (as of 2024)	Prevents patent applications with similar existing practices. 353 patent applications have been either withdrawn/deemed withdrawn or amended or set aside on the basis of TKDL evidence thus protecting Indian traditional knowledge. ²⁸
Total number of entries under traditional medicine/yoga category	A total of 418885 formulations including 119269 in Ayurveda, 236399 in Unani, 54689 in Siddha, 4151 in Yoga and 4377 in <i>Sowa Rigpa</i> have been transcribed so far into the TKDL database. ²⁹	TKDL with its vast dataset, prevents major challenges identified in Table1.
Knowledge transfer	TKDL database is shared with 14 patent offices across	Prevents exploitation and to protect Indian traditional

Resources, Traditional Knowledge and Folklore Fifth Session, Geneva, July 7 to 15, 2003, https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_5/wipo_grtkf_ic_5_6.doc (accessed Aug. 10, 2024).

²⁸ Press Release, Press Information Bureau, available at <https://pib.gov.in> (last visited Aug. 12, 2024).

²⁹ *Ibid.*

	world ³⁰	knowledge at Patent Offices worldwide.
Challenges faced by TKDL	Under the National Biological Diversity Act, 2002 & its Rules, the National Biodiversity Authority has been keen on People's Biodiversity Register (PBR). This register will be for formal recording and maintenance of comprehensive information on availability and knowledge of local biological resources, their medicinal or any other use.	Difficulty in digitizing all traditional knowledge, ensuring accuracy and completeness of data, and addressing issues of intellectual property rights.

Table 2 demonstrates that by sharing millions of formulations with patent offices globally, the Traditional Knowledge Digital Library plays a crucial role in preventing biopiracy and protection traditional knowledge from wrongful patent claims. However, digitizing traditional knowledge remains a challenge regarding accuracy and compliance.

Table 3: Challenges Faced by India's Traditional Knowledge Digital Library (TKDL)

Challenges	Explanation
Data Collection and Digitization	Gathering and digitizing diverse traditional knowledge from various sources, including manuscripts, oral traditions, and local communities, can be time-consuming and resource-intensive.

³⁰ As per the extant Government of India approvals in place, the access of the database is given to patent offices world-wide that have signed non-disclosure access agreements with the CSIR. Fourteen patent offices including the Indian Patent Office (Controller General of Patents, Designs & Trade Marks), European Patent Office, US Patent Office, Japanese Patent Office, German Patent Office, Canadian Patent Office, Chile Patent Office, Australian Patent Office, UK Patent Office, Malaysian Patent Office, Russian Patent Office, Peru Patent Office, Spanish Patent & Trademark Office and Danish Patent & Trademark Office have been granted access to the TKDL database.

Data Quality and Accuracy	Ensuring the accuracy, reliability, and completeness of the digitized data is crucial to maintain the integrity of traditional knowledge.
Language Barriers	Many traditional texts are written in regional or ancient languages, making it difficult to translate and understand them accurately.
Intellectual Property Rights	Determining ownership and intellectual property rights of traditional knowledge can be complex, especially when it involves collective or communal knowledge.
Cultural Sensitivity	Respecting the cultural and spiritual significance of traditional knowledge is essential to avoid misappropriation or misuse.
Access and Dissemination	Making the digitized knowledge accessible to researchers, scholars, and the general public while protecting sensitive information presents a challenge.
Funding	Adequate funding is required for the ongoing maintenance, development, and expansion of the TKDL.
Collaboration and Partnerships	Fostering collaboration with international organizations, academic institutions, and indigenous communities is essential for the success of the TKDL.

Table 3 reveals the crucial hindrances in the maintenance of the Traditional Knowledge Digital Library. This table highlights the challenges pertaining to access to traditional knowledge. It suggests that long-term effectiveness requires sustained collaboration with indigenous and international partners.

D. Statutory Limitations of IP regime

The statutory limitations of Indian Intellectual Property (IP) laws pose significant challenges in protecting this invaluable asset. Table 4 identifies limitations of IP regime in context of protection of traditional knowledge. One of the primary limitations is the requirement of novelty and originality for granting patents. Traditional knowledge (TK), being passed down through generations, often lacks the requisite novelty or originality to qualify for patent protection. Additionally, the concept of "prior art" in patent law can also hinder the protection of TK, as traditional knowledge may be considered prior art, thereby disqualifying it from

patent protection. Copyright law, while offering protection for original literary, artistic, and musical works, may not adequately safeguard TK.³¹ Traditional knowledge, often expressed in oral traditions, folklore, and artistic expressions, may not meet the specific requirements for copyright protection, such as fixation in a tangible form. Trademark law, intended to protect distinctive signs used to identify goods or services, may not be suitable for protecting TK. Traditional knowledge, often embodied in symbols, designs, or patterns, may not qualify as trademarks if they are not used to distinguish goods or services in commerce. Furthermore, the challenge of proving ownership of TK is another significant obstacle.³² Traditional knowledge is often collectively owned or passed down through generations, making it difficult to establish a clear chain of ownership. This lack of clear ownership can hinder the ability of indigenous communities to assert their rights and prevent unauthorized exploitation of their TK.

In addition to above, there is provision in the Biological Diversity Act, 2002 and this is implemented by the National Biodiversity Authority as a provision of course whenever there is a patent application which contains about genetic records there is a permission applicant would need from the National Biodiversity Authority.³³ In the application to the National Biodiversity Authority that applicant have used this particular genetic result in the patent application or for the particular invention. Without this approval from the NBA applicant cannot go ahead.

Active benefit sharing means when you have taken the information from a knowledge holder. But here the catch point is that the person willingly gives the required information, but there has to be something that goes back to the person. This is all comes under something known as the conventional biological diversity, where it talks about equitable sharing of benefits with the knowledge holder. So, there are provisions in the above-mentioned act which gives a formula as to how benefit has to go back to the community, or the person from whom the

³¹ Mathias Siems, *The Law and Ethics of 'Cultural Appropriation'*, 15 *INT'L J.L. IN CONTEXT* 408 (2019).

³² Graham Dutfield, *Developing and Implementing National Systems for Protecting Traditional Knowledge: Experiences in Selected Developing Countries*, in *Protecting and Promoting Traditional Knowledge: Systems, National Experiences and International Dimensions* 141 (2004).

³³ Biological Diversity Act, 2002, § 19, Acts of Parliament, 2002 (India).

knowledge is being taken.³⁴ There is also another provision in the traditional, independent act, which says that whenever you use a genetic result, you will have to disclose the origin of that a particular genetic resource. This is that some extent will give you an idea of where you have procured those materials from.

Table 4: Issues with IP regime and Protection of TK³⁵

Copyright	Patent	Trademarks/GI/Plant variety
In sources of traditional knowledge notion of authorship is difficult.	Assigning a name of inventor for a TK will have issues while making a patent application.	TK holders often find it difficult to get these registered because of complex formalities of the law. Requires scientific reports and information.
Copyright generally has time limit of protection. Whereas people's cultural identity/expressions/folklore would require permanent protection.	Fixed duration for protection	--
Copyright requires a work to be fixed but traditional expressions are transferred orally from generation to generations	--	--
Copyright assignment to a collective group of people is problematic.	--	--

³⁴ Biological Diversity Act, 2002, § 21, Acts of Parliament, 2002 (India).

³⁵ Refer framework provided by Graham Dutfield, *Protecting Traditional Knowledge and Folklore* (2003).

The Forest Rights Act, 2006 was enacted to strengthen the position forest dwellers by guaranteeing their traditional rights to land, sustainable livelihood and forest management. This enactment contains provisions related to access of biodiversity, community right to intellectual property, traditional knowledge, recognition of customary laws and practices and so on. These are indirect ways of protecting the traditional knowledge, not direct. Now talking about The World Intellectual Property Organization. All countries are discussing a binding regime to protect traditional knowledge and traditional cultural expressions and also genetic records. However, the problem with this whole negotiation that is going on is all countries are involved. It has been going on for over 20 years now. It started way back in 2001 why we need such a protection everybody understands, but what needs to be addressed is the commercial use beyond the traditional context because we know that traditional knowledge is highly vulnerable and prone to be misused commercially. Another important aspect is that why stringent law has to be international law because all national laws are all territorial, India may have enacted a law in but that's not applicable to parties in USA. So whatever regime that we have has to be more all-encompassing, it has to be something which everyone will follow. So just having it localized manner in a particular country will not help, which is why we must work towards internationally binding regime also establish some minimum standards of protection have to be set in local laws so that it helps all these traditional knowledge holders and beneficiaries who are custodians of the particular traditional knowledge. There is an he Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC, or IGC-GRTKF) has been constituted there are meetings periodic meetings which are going on and negotiations started since from 2001 what they have done right now is segregated the genetic resource's part and some consensus has been arrived at for the genetic resources. We had a diplomatic conference in 2024³⁶ and The Preparatory Committee of the Diplomatic Conference approved the necessary modalities of the Diplomatic Conference, including the draft rules of procedure.³⁷ The negotiations will start soon based on a Basic Proposal and hopefully we can see some concrete recommendations. The instrument is under

³⁶ Diplomatic Conference on Genetic Resources and Associated Traditional Knowledge, Geneva, May 13-24, 2024, <https://www.wipo.int/diplomatic-conferences/en/genetic-resources/> (last visited Aug. 9, 2024).

³⁷ *Ibid.*

discussion and we still have a very long way to go because there is no consensus among different countries to agree on several blocks which are there. The importance of having such a *sui generis* law will be they empower communities which will promote traditional knowledge that is available. It will control access and commercial exploitation. If someone takes that knowledge from them without their own consent, they will be able to contest it. Control remains with natives and also when they are willingly sharing such information this would be a great boost to research and development in that area.

VI. Conclusion and Suggestions

India's rich cultural heritage, spanning from ancient time to till date, is a testimony to its vibrant historical legacies and diverse traditions. From ancient scriptures and intricate art to traditional music and dance, this cultural tapestry is a national treasure that must be preserved for future generations. However, many incidents in past have led to growing concern of cultural appropriation. This practice, even though unintentional, involves the application of traditional knowledge from another culture without proper acknowledgment or respect. While cultural exchange can enrich societies, appropriation may prove to be harmful, corroding the cultural identity of the native or original communities which have preserved their knowledge generations after generations.

To contest this emerging issue, a global cooperation is required. An international intellectual property legal framework, which is specifically designed to address issue of cultural appropriation. An international cooperative regime is the need of time for protecting cultural heritage of indigenous communities across the world and ensuring that its use is respectful and ethical. This framework ought to address important factors such as the ownership and licensing of cultural elements, as well as mechanisms for addressing instances of appropriation.

While discussing this issue we must acknowledge protection measures that are implemented so far. One of the effective measures is creation of TKDL, the mechanism of this database and its working has been already been discussed in this article. Table 5 containing data collected from the website of the traditional knowledge digital library shows the outcome that has been achieved by this database till date. This data also proves that developing such digital library has been effective in preventing bio-piracy as it can be seen that in a span of 15 years,

375 applications have been rejected to protect traditional knowledge and prevent bio-piracy.

Table 5: Outcome of TKDL against Bio Piracy

S. No.	Patent Office	No. of Cases
1.	European Patent Office (EPO)	154
2.	United States Patent and Trademark Office (USPTO)	34
3.	Controller General of Patents Designs and Trademarks (CGPDTM)	134
4.	Canadian Intellectual Property Office (CIPO)	37
5.	IP Australia (AIPO)	15
6.	United Kingdom Patent & Trademark Office (UKPTO)	1
	Total	375

Table contains data from TKDL official website, which provides data from 2009 to till date.³⁸

There is a prevalent argument that Geographical Indications (GI) are one of the most suitable protection measures in order to preserve traditional knowledge.³⁹ The case of *Kota Doria* sarees have shown the potential of geographical indications for protection and revival of traditional production processes.⁴⁰ To appreciate the idea of GI's as an instrument to protect and revitalize biocultural heritage, intense backing is needed from the state agencies, Government of India and NGOs, to empower traditional fabricators to assess and enhance the markets for their products, establish representative associations, apply for GIs and monitor and enforce them. The data in figure 1 is result of a survey conducted by

³⁸ Traditional Knowledge Digital Library (TKDL), Gov't of India, <https://www.tkdil.res.in/tkdil/langdefault/common/outcomemain.asp?GL=Eng> (last visited Feb. 24, 2026).

³⁹Pant, Ruchi, Protecting and Promoting Traditional Knowledge in India: What Role for Geographical Indications? IIED Working Paper, IIED, London (2015), available at <https://www.iied.org/16576iied> (last visited Aug. 20, 2024).

⁴⁰ *Kota Doria* is traditionally rooted in villages in and around Kota, in the State of Rajasthan, India. The word 'Dori' if translated from Hindi to English means threads. Due to its distinct nature and traditional culture, it was registered under Geographical Indications of Goods (Registration and Protection) Act, 1999 on 04 October 2010 obtaining Geographical indication No. 191.

Department for Promotion of Industry and Internal Trade (DPIIT). It shows the increasing number of registrations under geographical indications. The total number of products registered under as GI is equal to 643 as of financial year 2024.⁴¹ It is evident with the current trends that increased awareness in context of more registration of products under protection of GI is being identified as one of the popular methods of protection under national IP regime. GI protects specific products that originate from a particular geographical region. Also, having GI registration ensures that the unique qualities of these products are not exploited by others. In conclusion, currently in wake of many mis-appropriation cases, conserving India's cultural heritage is supreme task. By promoting a global approach to intellectual property rights and fostering awareness and education, combating cultural appropriation and ensure that the rich tapestry of Indian culture continues to be celebrated and respected worldwide.

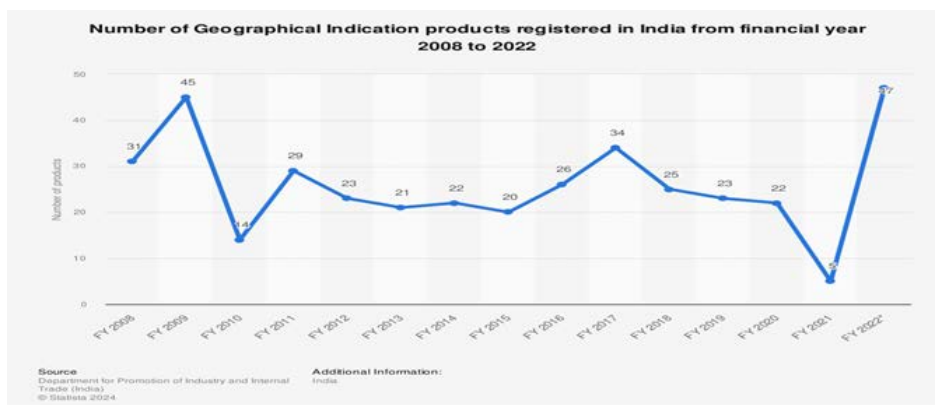


Figure 1: Source: Department for Promotion of Industry and Internal Trade (India), Number of Geographical Indication products registered in India from financial year 2008 to 2022. Statista, <https://www-statista-com-christuniversity.knimbus.com/statistics/1117604/>

On the basis of the extensive discussions of this paper, some suggestions have been formulated to ensure protection of traditional knowledge and folklore. Suggestions are as follows:

⁴¹ Report by Office of Controller General of Patents, Designs & Trademarks, Department for Promotion of Industry and Internal Trade, Government of India, available at <https://ipindia.gov.in/registered-gls.htm> (last visited Aug. 20, 2024).

- **Education and Awareness:** Increased awareness and education are also crucial in addressing the issues of cultural appropriation. By raising awareness about the issue, a more respectful and understanding global community can be fostered. Awareness programs can educate individuals to learn about foreign cultures and appreciate their legacies. Moreover, collaboration between governments, cultural institutions, and non-governmental organizations (NGO) can help to protect cultural heritage and prevent appropriation.
- **Sui Generis Protection:** At policy level it must be considered to implement a *sui generis* system of protection that is custom-made to the explicit needs of traditional knowledge, rather than solely counting on classical IP rights like patents or copyrights.
- **Enforcement Mechanisms:** One very useful idea would be establishment of dedicated dispute resolution platforms to handle disputes related to misappropriation traditional knowledge. Also, not only separate courts or tribunals will be useful but it must be efficient as well so as to ensure timely and effective enforcement of IP rights.
- **International Cooperation:** It is high time that all intergovernmental committees and international organizations must work on harmonization of international IP laws to implement a global policy on protection of traditional knowledge across different jurisdictions.
- **Benefit-Sharing Agreements:** It is a universal truth in today's date there is concoction of cross-cultural identities and practices. Businesses can get their inspirations from different cultures and communities and this could be a successful business model. Hence, there is need to Promote the use of benefit-sharing agreements to ensure that communities receive fair compensation for the use of their traditional knowledge.
- **Use of Digital Technology:** It is discussed in this article that defensive protection in form of TKDL is one of the important means to deal with cultural appropriations. Such model of digital library can help in not only protecting the traditional knowledge based on bio-diversity, but also to protect traditional cultural expressions. Secure Digital Repositories and Blockchain Technology could be used for securing all traditional knowledge in digital formats.