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Chapter

02

Geographical Indications and Indian Traditional Knowledge System (Bharatiya Paramparik Gyan): Safeguarding Biodiversity and Legal Frameworks

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Abstract:

Multinational corporations frequently exploit remote areas' herbal and mineral resources, relying on traditional knowledge systems while providing minimal compensation to local communities. This practice significantly loses indigenous and rural communities' rich understanding of the natural world, deeply rooted in their cultural heritage. Traditional knowledge systems (TKS) are often marginalized in favour of Western scientific approaches, which, when applied indiscriminately, can lead to unsustainable resource use and biodiversity loss. The lack of recognition and integration of TKS raises critical ethical concerns regarding the violation of indigenous and human rights. Despite these challenges, a growing global interest in incorporating TKS into participatory development approaches has emerged. National institutions and international organizations, such as WIPO and UNESCO, have tried to protect and promote TKS through legal frameworks and conventions like the Convention on Biological Diversity (CBD). However, the absence of a universally accepted framework leaves TKS vulnerable to exploitation and biopiracy. High-profile cases such as turmeric, neem, and Hoodia highlight the challenges associated with biopiracy, where patents are granted for traditional knowledge that is already in the public domain. Legal interventions and strong intellectual property frameworks are crucial to ensuring that indigenous communities receive fair benefits from the commercialization of their knowledge. The case of J.C. Bose, who missed recognition for his invention due to the absence of patents, underscores the need for strategic protection of traditional technologies. Addressing these concerns requires collaborative international efforts, inclusive policymaking, and robust legal measures. Protecting traditional knowledge ensures the preservation of cultural heritage, equitable benefit-sharing, and the sustainability of biodiversity in a globalized world.

Keywords: Traditional Knowledge System (TKS), Indigenous Rights, Biopiracy, Intellectual Property Rights (IPR), Convention on Biological Diversity (CBD), Equitable Benefit-Sharing, Herbal and Mineral Resources, Participatory Development, Patent Controversies, Cultural Heritage Preservation

Introduction:

Traditional practices and beliefs are often marginalized and deemed inferior compared to the universal knowledge derived from Western scientific traditions. Although Western science has its strengths, applying its principles indiscriminately, without considering traditional knowledge systems, has often resulted in unsustainable resource use and biodiversity loss. Scientific management regimes imposed without local community involvement have sparked debates on whether the neglect of traditional knowledge constitutes a violation of human, civil, and indigenous rights. Multinational corporations today exploit the herbal and mineral resources of remote areas, relying

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on traditional knowledge systems. They offer minimal compensation to local communities while reaping substantial profits. This practice has led to a significant loss of indigenous and rural communities and their profound understanding of the natural world, deeply rooted in their connection to the land.

Recognizing these challenges, there is a growing global interest in integrating traditional knowledge systems (TKS) into participatory development approaches. Efforts to document TKS networks within indigenous and rural communities are underway, and national institutions are now valuing TKS as a vital national resource. Development initiatives increasingly address issues identified by communities themselves, building on and reinforcing their knowledge systems and organizations.

In recent years, the international community has started recognizing and protecting TKS. WIPO and UNESCO introduced a model law on folklore in 1981, and the FAO included the concept of Farmers' Rights in its International Undertaking on Plant Genetic Resources in 1989. The 1992 Convention on Biological Diversity (CBD) emphasized the importance of promoting and preserving traditional knowledge. Despite these efforts, a universally accepted framework for protecting and promoting traditional knowledge has yet to emerge.

The CBD established principles for accessing genetic resources and associated knowledge, and for sharing the benefits arising from such access. The relationship between the intellectual property system and the CBD's access and benefit-sharing principles is examined in relation to both traditional and modern knowledge. Investigating traditional knowledge can be contentious as it involves local beliefs and practices that may be sacred or privately held by specific groups.

Several high-profile cases have brought the issue of traditional knowledge to the forefront of intellectual property debates, often involving "biopiracy." Cases such as turmeric, neem, and ayahuasca highlight the problems that arise when patents are granted for traditional knowledge already in the public domain. Invalid patents were issued in these instances because examiners were unaware of the existing traditional knowledge. In the case of the Hoodia plant, the issue revolved around whether the San people, who maintained the traditional knowledge underpinning the invention, deserved a fair share of the commercialization benefits.

Biopiracy, though lacking a universally accepted definition, is described by the ETC Group as the appropriation of knowledge and genetic resources from farming and indigenous communities by entities seeking exclusive monopoly control through patents or plant breeders' rights. In the global economy, patents are crucial for protecting intellectual property rights. However, countries like India lag behind others, such as the USA and the UK, in this regard.

A notable incident involves Francesco Paresce Marconi, a renowned astrophysicist and the grandson of Guglielmo Marconi, who visited Kolkata to celebrate the 150th birth anniversary of J.C. Bose. Marconi Jr. acknowledged that Bose was the actual inventor of the radio, but he missed out on the recognition because he did not patent his work. This incident underscores the importance of patenting traditional technologies to ensure that individuals or communities providing the knowledge or resources receive fair benefits from commercialization, in line with CBD principles.

Controversial Patent Cases Involving Traditional Knowledge and Genetic Resources:

Background:

The exploitation of traditional knowledge systems by multinational corporations has led to various controversial patent cases involving traditional knowledge and genetic resources. These cases highlight the conflicts between local knowledge holders and commercial entities seeking patents.

Major Controversial Cases:

(A) Turmeric (*Curcuma longa*):

-Description: A plant of the ginger family used as a spice, medicine, and dye.

-Patent Details: In 1995, two Indian nationals at the University of Mississippi Medical Centre were granted US Patent No. 5,401,504 for using turmeric in wound healing.

-Opposition: The Indian Council of Scientific and Industrial Research (CSIR) argued that turmeric has been used for thousands of years for healing wounds. Documentary evidence included an ancient Sanskrit text and a 1953 paper in the Journal of the Indian Medical Association.

-Outcome: The US Patent and Trademark Office (USPTO) revoked the patent, upholding the objections by CSIR.

विकिरति किरणमिव पावकः सर्वेषां विकारकं चूर्णम्।

इदम् अरुणं द्रव्यम् तु मारिचं सर्वरोगनाशनं च॥

(Translation: The powder that spreads like fire and changes everything is turmeric. This reddish substance removes all diseases.)

(B) Neem (*Azadirachta indica*):

-Description: A tree native to India, known for its medicinal, pesticidal, and fertilizer properties.

-Patent Details: In 1994, the EPO granted European Patent No. 0436257 to W.R. Grace and USDA for a method of controlling fungi with neem oil.

-Opposition: International NGOs and Indian farmer representatives filed a legal opposition, citing centuries-old use of neem in Indian agriculture.

-Outcome: The EPO revoked the patent in 2000, determining that the claimed invention was not novel.

अर्जुननिम्बतुलसीकदलीसहितं च जलम्।

नेमिनिधिमयूखविध्वंसि यथा मलम्॥

(Translation: Water mixed with Arjuna, Neem, Tulsi, and Banana eliminates impurities as the sun's rays dispel darkness.)

(C) Ayahuasca (Banisteriopsis caapi)

-Description: A ceremonial drink made from the bark of Banisteriopsis caapi, used by Amazonian shamans for healing and spiritual purposes.

-Patent Details: In 1986, American Loren Miller obtained US Plant Patent 5,751 for a variety named "Da Vine."

-Opposition: The Coordinating Body of Indigenous Organizations of the Amazon Basin (COICA), represented by CIEL, argued that Da Vine was not new or distinct and that the patent violated moral aspects due to the sacred nature of the plant.

-Outcome: The USPTO initially rejected the patent but later upheld it after further arguments by the patentee.

औषधे चिन्तयेत् विष्णुं भोजने च जनार्दनम्।

शयने पद्मनाभं च विवाहे च प्रजापतिम्॥

(Translation: While using medicine, think of Vishnu; while eating, think of Janardana. While lying down, think of Padmanabha; during marriage, think of Prajapati.)

Impact and Response

-Biopiracy: The appropriation of traditional knowledge and genetic resources by commercial entities, often referred to as "biopiracy."

-Legislation and Protection: Efforts by developing countries and international organizations to protect traditional knowledge. The creation of an Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge, and Folklore by WIPO.

-Community Rights: The need for prior informed consent and benefit-sharing with the original knowledge holders, as per the Convention on Biodiversity (CBD).

Case Study: Hoodia

-Description: A plant used by the San people for its appetite-suppressing properties.

-Patent Details: In 1995, CSIR patented Hoodia's active element (P57) and licensed it to Phytopharm, which later partnered with Pfizer.

-Conflict: The San people threatened legal action against CSIR for biopiracy, claiming their traditional knowledge was used without consent.

-Resolution: An agreement was reached in 2002, granting the San a share of future royalties.

क्षुतं हन्ति हृदयं सश्वासं रक्षति पाण्डुताम्।

वृद्धिं कृच्छ्रमथो भ्रातुः कारणं वातशान्तये॥

(Translation: It suppresses hunger, protects the heart, mitigates fatigue, cures anemia, and is effective against respiratory issues and for balancing Vata dosha.)

The integration of traditional knowledge systems into modern intellectual property regimes remains complex and contentious. While there are efforts to protect and recognize the contributions of indigenous communities, achieving a universally accepted framework continues to be a challenge. Addressing issues such as biopiracy and ensuring fair compensation and benefit-sharing are crucial for preserving and promoting traditional knowledge. The inclusion of traditional knowledge holders in the decision-making process is essential for sustainable development and the conservation of biodiversity.

Managing the Debate on Traditional Knowledge:

Overview:

The protection of Traditional knowledge (TK) involves several international bodies such as WIPO, CBD, UNCTAD, and WTO. These debates emphasize understanding the issue rather than developing international norms. Realistic protection systems for TK require deep understanding and practical experience at the national and regional levels.

Key Points:

-Collaborative Approach: Various agencies must work together to avoid duplication and include diverse perspectives. A single organization, such as WIPO, may not be sufficient to handle all aspects of traditional knowledge.

-Multiplicities of Measures: Protection, preservation, and promotion of TK require multiple measures, many outside the intellectual property (IP) realm.

-Diverse Fora: Considering the issue in different fora while ensuring coherent approaches and avoiding duplication is beneficial at this early stage.

Utilizing the Existing IP System:

Examples of Protection:

-Certification Trademarks: Aboriginal and Torres Strait Islander artists in Australia use a national certification trademark to promote their art and cultural products and deter false claims of Aboriginal origin.

-Copyright: In Canada, copyright protects tradition-based creations such as masks, totem poles, and sound recordings of Aboriginal artists.

-Industrial Designs: In Kazakhstan, industrial designs protect the external appearance of articles like headdresses and carpets.

-Geographical Indications: Venezuela and Vietnam use geographical indications to protect traditional products like liquors, sauces, and teas.

IP Tools:

-Trademarks: Suitable for protecting traditional knowledge due to their indefinite extension and potential for collective ownership.

-Geographical Indications: Used to protect traditional products if characteristics can be attributed to a geographical origin.

Limitations: IP rights requiring novelty or with limited protection periods are less suitable for TK.

Challenges and Considerations:

-Cost and Access: High costs of obtaining and enforcing rights make the IP system unattractive for local communities in developing countries.

-Significance: The role of existing IP systems in protecting TK is uncertain due to varying impacts and effectiveness.

विद्या विनयसंयुक्ता राज्ञां सेवाम् करोति च।

क्षत्रियः पालयति लोकान् साम्राज्ये स्थीयते च सः॥

(Translation: Knowledge combined with humility serves rulers; the warrior protects the people and sustains the empire.)

Managing the debate on traditional knowledge requires collaboration among international bodies, diverse approaches, and utilizing existing IP systems where applicable. Protecting traditional knowledge involves multiple measures, emphasizing the need for inclusive and practical solutions at various levels. Addressing high costs and ensuring effective protection remain critical challenges.

Managing the Debate on Traditional Knowledge:

Overview:

A variety of international bodies, including WIPO, CBD, UNCTAD, and WTO, are actively discussing the protection of Traditional knowledge (TK). These discussions emphasize understanding the issue in-depth rather than developing international norms at this stage. Developing a realistic international system of protection for TK necessitates deeper understanding and practical experience at national or regional levels.

Collaborative Approach:

-Cooperation Among Agencies: It is crucial for agencies to work together to avoid duplication and ensure diverse views are included. A single organization, like WIPO, might not be sufficient to handle all aspects of TK.

-Multiplicity of Measures: Protecting, preserving, and promoting TK will require multiple measures, many of which may fall outside the intellectual property (IP) realm.

-Diverse Fora: Considering TK in different fora can ensure coherent approaches and avoid duplication.

Making Use of the Existing IP System:

Examples of Protection:

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Sui Generis Protection of Traditional Knowledge:

Many countries have concluded that existing intellectual property (IP) systems alone are insufficient to protect Traditional knowledge (TK). Consequently, some nations have enacted or are developing sui generis systems of protection.

National Examples:

Philippines:

-Legislation: Indigenous communities are granted rights over their traditional knowledge, including control over access to ancestral lands, biological and genetic resources, and related indigenous knowledge.

-Prior Informed Consent (PIC): Access by other parties is based on the PIC of the community in accordance with customary laws.

-Benefit Sharing: Equitable sharing of benefits from genetic resources or associated knowledge.

-Free Exchange: The legislation maintains the free exchange of biodiversity among local communities.

-Participation: Indigenous communities are ensured participation at all decision-making levels.

Guatemala:

-Legislation Objectives: Recognizes, protects, and promotes the rights of communities and indigenous people related to biological resources and traditional knowledge.

-Cultural Preservation: Aims to preserve and promote national culture, including medicinal knowledge and music, placing these expressions under state protection without remuneration.

Bangladesh and African Union (AU):

-Customary Laws: Considering sui generis legislation that provides community-based rights over biological resources and traditional knowledge, with increased recognition of cultural and customary practices.

Recognition of Customary Laws:

The Australian Federal Court has considered customary aboriginal laws in copyright infringement cases. While not fully recognizing ownership rights under Aboriginal law, the court acknowledged the cultural harm suffered by artists.

International Considerations:

-Evolution of National Systems: It remains uncertain whether national sui generis systems will develop sufficient common characteristics to establish an international system.

-Pressure for International System: There is ongoing pressure for an international sui generis system, articulated by the G15 Group of developing countries.

Challenges and Opportunities:

-Local Needs: A single, all-encompassing sui generis system may be too specific and inflexible to accommodate local needs.

-Local Innovators: Bringing together local innovators and entrepreneurs may be more relevant than focusing solely on IP rights.

-Economic Returns: Exploitation of TK can raise its profile and encourage community involvement if tangible economic returns are generated. However, not all TK holders seek monetary compensation; many prioritize the preservation and respect of their knowledge and customary laws.

Sui generis systems offer a promising approach to protecting traditional knowledge, recognizing the unique cultural and customary contexts in which it evolved. While challenges remain, especially concerning the development of an international framework, these systems provide a foundation for equitable benefit-sharing and the preservation of TK. The involvement of local communities and the respect for customary laws are crucial for the success of these initiatives.

Misappropriation of Traditional Knowledge:

Nature of Traditional Knowledge:

Traditional knowledge (TK) is often transmitted orally rather than in written form, posing unique challenges when unauthorized parties seek intellectual property rights (IPRs) over it.

Challenges in Patent Examination:

-Oral Transmission: Lack of written records makes it difficult for patent examiners in other countries to access documentation challenging the novelty or inventiveness of applications based on TK.

-Opposition Procedures: Aggrieved parties can challenge patents during the granting process or after grant, where national laws permit. For example, the Indian Government successfully overturned patents on basmati rice and turmeric in the US through such procedures.

-Administrative Procedures: Presence of patent opposition or re-examination procedures has facilitated overturning unwarranted patents, although such processes are costly and difficult for developing countries to monitor globally.

Digital Libraries and Documentation:

-Patent Applications: Patent applications claiming TK already in the public domain should not be granted. However, TK is often undocumented or not easily accessible to patent examiners.

-Traditional Knowledge Digital Libraries: WIPO and developing countries like India and China are developing digital libraries to document TK in the public domain, following international classification standards.

-Internet Resources: WIPO is examining the availability of TK-related information on the Internet, although much of it is not in a form searchable or usable by patent examiners.

-Preservation and Promotion: Documentation of TK can prevent unwarranted patents and contribute to the preservation, promotion, and potential exploitation of TK, provided it does not prejudice possible IPRs in the material documented.

Concerns and Consent:

-National Innovation Foundation (India): Addresses issues of documenting TK with prior informed consent of knowledge holders.

-WIPO Discussions: Varied perspectives among developing countries on data types to be included in databases, with some advocating for publicly available codified information only, while others support including uncodified TK.

Role of Digital Libraries:

-Patent Office Integration: Digital libraries of TK should be incorporated into the minimum search documentation lists of patent offices to ensure consideration during patent processing.

-Knowledge Holder Involvement: TK holders should decide on the inclusion of their knowledge in databases and benefit from any commercial exploitation.

Misappropriation of TK poses significant challenges, especially due to its oral transmission. Efforts to document TK in digital libraries are crucial for preventing unwarranted patents and promoting the preservation and responsible exploitation of TK. The involvement of TK holders, respect for their rights, and consent are essential for these efforts to be successful.

Traditional Knowledge Digital Library (TKDL):

Background:

In 1999, following India's successful challenge of the turmeric and basmati patents granted by the USPTO, the Indian National Institute of Science Communication (NISCOM) and the Department of Indian System of Medicine and Homoeopathy (ISM&H) collaborated to establish the Traditional Knowledge Digital Library (TKDL).

Objectives and Scope:

The TKDL project initially focuses on Ayurveda, documenting knowledge available in the public domain (existing Ayurveda literature) in a digitized format. The database aims to include information from approximately 35,000 slokas (verses and prose) and formulations, totaling around 140,000 Ayurveda pages. The data will be accessible in multiple languages, including English, Spanish, German, French, Japanese, and Hindi.

सर्वेभ्यः कार्यकालेभ्यः श्रेष्ठं चिकित्सायाः पदम्।

आयुर्वेदो हि धर्माणामग्रणीः स्याच्चिकित्सकः॥

(Translation: Ayurveda is the foremost among all practices and should be prioritized for treatment; it leads in the realm of knowledge and practice.)

Traditional Knowledge Resource Classification (TKRC):

TKRC is an innovative classification system designed to systematically arrange, disseminate, and retrieve information in the TKDL. It is based on the International Patent Classification (IPC) system, with expanded definitions to provide greater detail. For example, the IPC group AK61K35/78 related to medicinal plants is expanded into about 5,000 sub-groups.

Integration and Usage:

The TKDL aims to legitimize existing traditional knowledge and facilitate the easy retrieval of traditional knowledge-related information by patent examiners. This is expected to prevent the granting of patents on subject matter that are already in the public domain, as seen in the turmeric and neem cases.

असाध्यम् साधयति आयुर्वेदः।

न च अन्यत् अस्ति तस्मिन्कश्चित् असाध्यम्॥

(Translation: Ayurveda accomplishes the impossible; nothing is insurmountable within it.)

International Collaboration and Findings:

WIPO is working on integrating TKDL into existing search tools used by patent offices. A specialized Task Force, including representatives from China, India, USPTO, and EPO, is examining this integration. Initial findings from WIPO indicate a substantial and growing amount of TK-related information available on the Internet, although much of it is not in a searchable or usable form for patent examiners.

The TKDL project represents a significant effort to document and preserve traditional knowledge, ensuring its accessibility and preventing misappropriation. By integrating TKDL into international search tools, it will

contribute to the protection and promotion of traditional knowledge, benefitting both the knowledge holders and the wider community.

आयुर्वेदस्य वृत्तं नित्यम् वर्धताम् समाहितम्।

जीवितं च हि तेन जन्तोः स्वस्थं सुखकरं भवेत्॥

(Translation: May the practice of Ayurveda always flourish; it brings a healthy and happy life to all beings.)

Traditional Medicine:

Documentation and Collaboration:

Traditional medicine has the potential to be well-documented. In the Lao People's Democratic Republic, the Government established the Traditional Medicines Resource Centre (TRMC) to collaborate with local healers in documenting traditional medicines. This initiative aims to promote the sharing of practices within Laos. The TRMC also collaborates with the International Cooperative Biodiversity Group (ICBG) to discover prospective medicinal products. Any benefits, profits, or royalties realized from plants and knowledge recovered during the collaboration are shared with all involved communities.

आयुर्वेदो धर्माणामग्रणीः।

रोगनाशनं चिकित्सा सर्वथाऽस्य हि सन्निधि॥

(Translation: Ayurveda leads all practices; treatment with it always eradicates diseases.)

Intellectual Property Rights (IPRs) and Public Health:

-Role of IPRs: IPRs can play a role in exploiting products based on traditional medicine, but the primary objective should be improving human health rather than generating income.

-Equitable Access: It is crucial to ensure that benefit-sharing from commercialization does not restrict access to essential medicines, especially for the poor.

-WHO Strategy: The WHO Traditional Medicine Strategy for 2002-05 emphasizes public health objectives. Lessons learned from such initiatives should be shared, and technical assistance provided to other countries managing documentation efforts.

Documentation Challenges:

-Undocumented Knowledge: Much traditional knowledge remains undocumented. Absolute novelty, where any disclosure, including use anywhere in the world, destroys the novelty of an invention, is a necessary safeguard to prevent patents on public domain traditional knowledge.

-Prior Art: Countries that only consider domestic use as prior art should give equal treatment to knowledge users in other countries. The unwritten nature of much traditional knowledge should be considered in further developing the international patent system.

Moral Grounds and Community Offence:

-IPRs and Offence: Granting IPRs such as patents over traditional knowledge can offend some communities. Most countries have provisions to prevent granting IPRs on moral grounds, but their application concerning small indigenous communities can be challenging.

-Example from New Zealand: The scope of moral grounds for rejecting trademark applications is being redefined to prevent the registration of trademarks likely to offend significant community sections, including the Maori.

सर्वत्र धर्मं समायुक्तं।

न हि तद्विपरीतं युक्तम्॥

(Translation: Everywhere, actions should be associated with righteousness; deviation from it is not appropriate.)

Traditional medicine documentation and collaboration initiatives, like those in Laos, demonstrate the potential for preserving and promoting traditional knowledge. While IPRs can support the commercialization of traditional medicine, the primary goal should be public health improvement and equitable access. Recognizing the challenges of undocumented knowledge and respecting moral grounds and community sentiments are essential steps in safeguarding traditional knowledge. By sharing lessons and providing technical assistance, countries can effectively manage and protect their traditional medicinal heritage.

Globalisation and Traditional Knowledge:

Debate and Concerns:

-Globalisation and Free Trade: The WTO's advocacy of globalisation, free trade, and the patent regime has sparked debates concerning traditional knowledge (TK). Issues include loss of traditional culture, marginalisation of indigenous people, and loss of their rights over resources and knowledge due to corporate monopolies and IPR protection on life forms and associated knowledge.

-Resistance to IPR: While IPR is encouraged for products based on biological resources, there is significant resistance to granting IPR for the biological resources and traditional knowledge used in research. The prevailing opinion is that traditional resources or knowledge are common property.

Issues with Western IPR System:

-Monopoly Rights: IPR implies monopoly rights, which conflict with the collective creation and ownership emphasized in indigenous cultures.

-Benefit Sharing: The concept of benefit sharing has been introduced to recognize the contributions of traditional communities, although property rights are usually denied.

Convention on Biological Diversity (CBD):

-Main Charter: CBD is the primary international charter on the conservation and sustainable use of biological diversity. It promotes the preservation of traditional lifestyles and livelihoods.

-Equitable Sharing: CBD suggests fair and equitable sharing of benefits derived from biotic resources and associated traditional knowledge.

-Implementation Issues: Both CBD and India's Biodiversity Act remain silent on implementing benefit-sharing aspects.

विद्यां ददाति विनयं विनयाद् याति पात्रताम्।

पात्रत्वाद् धनमाप्नोति धनात् धर्मं ततः सुखम्॥

(Translation: Education brings humility; humility brings worthiness. Worthiness brings wealth; wealth brings righteousness, and ultimately happiness.)

Controversial Patent Cases:

-Turmeric Case: The patent on "use of turmeric in wound healing" is an example of how patents are being sought over various aspects of biological resources.

-Pharmaceutical Research: Indigenous knowledge contributes significantly to identifying materials for drug development, including their uses, preparation, and dosage.

-Patent Law and Traditional Knowledge: Modern science and patent law often do not recognize this as valuable innovation, assuming access to resources and information is free.

Examples of Patents on Biological Resources:

-Phyllanthus: Used traditionally for jaundice.

-Composition of Jamun, Bitter Gourd, Gur-Mar, and Eggplant: For diabetes treatment.

-Neem Products: Various products derived from the neem tree.

-Basmati Varieties: Characteristics of growing in temperate climates without sunlight.

-Methi Composition: As a tonic for reducing blood glucose levels.

-Kala Jeera Compositions: For increasing immune functions and treating diabetes, hepatitis, and asthma.

Issues with Patents on Traditional Knowledge:

-Assessment of Innovation: The difficulty in assessing human innovation in final products from biological diversity.

-Prior Art and Novelty: Patents cannot be granted on something obvious, known, or anticipated by prior use, or a natural product. Different countries have varying criteria for assessing human innovation.

-Economic and Legal Challenges: High costs and legal complexities in challenging patents globally.

International Efforts and Recommendations:

-Patent Laws and Benefit Sharing: Patent laws in most countries do not require sharing benefits with those who identified or preserved biological materials.

-TRIPS Agreement: Does not mandate benefit sharing.

-Developing Countries' Recommendations: Emphasize recognizing the rights of traditional knowledge holders to share benefits. Patent applications should disclose the source of the biological resource and knowledge to facilitate benefit sharing.

The globalization and patent regime have raised significant debates about traditional knowledge and its protection. While IPRs play a role in exploiting products based on biological resources, challenges remain in ensuring equitable benefit sharing and recognizing the contributions of traditional communities. Efforts to document traditional knowledge, scrutinize patent applications, and establish internationally accepted solutions to prevent biopiracy are crucial for protecting and promoting traditional knowledge.

Geographical Indications:

Relevance and Application:

Geographical indications (GIs) play a crucial role in protecting traditional knowledge (TK) and have wide applications, making them one of the most important categories of intellectual property for many countries. This importance is reflected in the TRIPS Agreement.

Geographical Indications and TRIPS:

-Negotiation Challenges: The negotiation of the GI section of the TRIPS Agreement was complex due to divisions between the US and EU, and among developed and developing countries. The final agreement mandates further work, recognizing unresolved areas.

-Protection Standards: The TRIPS Agreement provides a basic standard of protection for GIs, with a higher standard specifically for wines and spirits. This higher standard resulted from negotiation compromises and has led to demands for additional protection from several countries, including India, Pakistan, Kenya, Mauritius, and Sri Lanka.

Multilateral Register of Geographical Indications:

-Mandate: TRIPS requires negotiations in the TRIPS Council to establish a multilateral register for GIs on wines. The Doha Ministerial Conference extended this to include spirits.

-**Proposals:** Three different proposals for the register have been presented:

>**EU Proposal:** A register affecting all WTO Members, requiring them to protect registered GIs.

>**Hungarian Proposal:** A register where other WTO Members need not protect a successfully challenged GI.

>US, Canada, Chile, Japan Proposal: A voluntary system binding only on participants, encouraging non-participating members to use the register for examining trademark applications.

Implementation and Challenges:

-Obligations Under TRIPS: Many WTO Members, including developing countries, have specific legislation covering GIs. It is unclear whether this legislation stems from TRIPS or bilateral commitments.

-Administrative Burden: Implementing new legislation for GIs should not be a significant burden for countries without current protection. TRIPS does not require a formal national registration system for GIs, placing the burden of enforcement on GI holders, not the government.

-Compliance and Costs: Ensuring compliance with quality standards and promoting and enforcing GIs abroad may involve significant costs.

Geographical indications are essential for protecting traditional knowledge and ensuring fair competition in global trade. While the TRIPS Agreement provides a framework for GI protection, ongoing negotiations and proposals aim to establish a more comprehensive and effective system. Addressing administrative and compliance challenges and considering the interests of both developed and developing countries are crucial for achieving balanced and equitable GI protection.

Additional Points:

-Economic Assessment: Reliable economic assessments are needed to evaluate the merits of additional GI protection.

-National Legislation: Some countries have indicated they will provide additional GI protection for other products under their national laws.

-Trade Benefits and Burdens: Extending GI protection involves balancing potential trade benefits against financial and administrative burdens, especially for developing countries.

Geographical Indications: The Basmati Case:

Background:

The "Battle for Basmati" began in 1997 when US Rice breeding firm RiceTec Inc. was awarded a patent (US5663484) on plants and seeds, seeking monopoly over various rice lines, including some with characteristics similar to Basmati rice. In countries like India and Pakistan, the term "Basmati" is reserved exclusively for long-grain aromatic rice grown in these regions. RiceTec also applied for the trademark 'Texmati' in the UK, claiming that "Basmati" was a generic term, but this was successfully opposed.

Key Events and Responses:

-UK and Saudi Arabia: Both the UK and Saudi Arabia, the largest importer of Basmati rice, have established regulations and codes of practice for labeling Basmati rice to protect its distinctiveness, which is believed to originate from the northern regions of India and Pakistan due to specific environmental and genetic factors.

-US Developments: In 1998, the US Rice Federation argued that "Basmati" was a generic term. In response, US and Indian civil society organizations filed a petition to prevent US-grown rice from being labeled as Basmati, but the US Department of Agriculture and the US Federal Trade Commission rejected the petition in 2001, deeming "Basmati" a generic term.

Challenges and Protection:

-Global Use: Countries like Australia, Egypt, Thailand, and France also grow Basmati-type rice and may follow the US in officially deeming "Basmati" a generic term.

-Geographical Indication Registration: India and Pakistan can protect "Basmati" by registering it as a Geographical Indication (GI). However, they must address why they did not act against the gradual adoption of its generic status over the last 20 years.

-Lisbon Agreement Weaknesses: The Lisbon Agreement's lack of provisions for GIs that have become generic makes it unattractive to both developed and developing countries.

Multilateral Register and WTO Discussions:

-Cost Considerations: Discussions in the WTO on a multilateral register for GIs, as proposed by the EU, propose analyzing the costs of introducing such a register. This analysis is crucial for developing countries to take informed positions on GI debates.

-Developing Countries' Support: Although some developing countries have pressed for such work in the WTO, the necessary support for analysis was not forthcoming from the same countries during discussions in WIPO.

The Basmati case highlights the complexities and challenges in protecting traditional knowledge and geographical indications. While efforts to register Basmati as a GI continue, addressing the historical inaction and ensuring comprehensive protection within international frameworks remain crucial. Developing countries need thorough analysis and support to navigate the ongoing debates on geographical indications effectively.

Biodiversity Registers:

Overview:

In India, NGOs and institutions are working to document the knowledge, skills, and techniques of local communities related to biological resources through the Community (or People's) Biodiversity Register. This initiative aims to deter biopiracy and instill pride among local communities over their knowledge.

Process and Benefits:

-Documentation: The registers document community and individual knowledge of the occurrence, propagation practices, sustainable harvests, conservation, and economic uses of biodiversity resources.

-Consent and Access: All information in the register can be used or distributed only with the knowledge and consent of the local community. Communities can refuse access or set conditions for access and charge fees for using the register and collecting biological resources. Funds distribution decisions are made through village community meetings.

-Pride and Protection: The registers help safeguard and reaffirm pride in traditional knowledge while establishing claims over knowledge and uses of biodiversity resources. This can lead to equitable benefit sharing.

Concerns and Challenges:

-Public Domain Fear: There is a fear that placing knowledge, previously regarded as "secret" by communities, in the public domain may invite corporate and research interests to freely use it.

-Legal Mechanisms: Legal mechanisms of control over the register are essential to ensure that the knowledge is protected and that communities receive a fair share of benefits. These mechanisms are not yet fully established.

Biodiversity Registers are a promising approach to documenting and protecting traditional knowledge related to biological resources. They help communities safeguard their knowledge, instill pride, and potentially achieve equitable benefit sharing. However, addressing concerns about public domain exposure and establishing robust legal mechanisms are crucial for their success.

-Globalisation and Traditional Knowledge:

Overview:

The advent of globalisation, free trade, and the patent regime, as advocated by the World Trade Organization (WTO), has sparked significant debate on issues related to traditional knowledge (TK). Concerns include the loss of traditional culture, marginalisation of indigenous people, and the erosion of their rights over resources and knowledge due to corporate monopolies and intellectual property rights (IPRs) protection on life forms and associated knowledge.

Issues with the IPR System:

-Monopoly Rights: The Western IPR system, which implies monopoly rights for individual inventions, conflicts with the collective creation and ownership emphasized in indigenous cultures.

-Benefit Sharing: Although encouraged for products developed from biological resources, there is significant resistance to granting IPRs for the biological resources and traditional knowledge used in research. Benefit sharing has been introduced to recognize the contributions of traditional communities, but property rights are usually denied.

Convention on Biological Diversity (CBD):

-Main Charter: The CBD is the primary international charter on conserving and sustainably using biological diversity. It promotes the preservation of traditional lifestyles and livelihoods.

-Equitable Sharing: The CBD suggests fair and equitable sharing of benefits derived from biotic resources and associated traditional knowledge, with access based on mutually agreed terms and prior informed consent (PIC).

-Implementation Issues: Both the CBD and India's Biodiversity Act are silent on how to implement benefit-sharing aspects effectively.

Controversial Patent Cases:

-Turmeric Case: In 1995, US Patent No. 5,401,504 was granted for the "use of turmeric in wound healing." The Indian Council of Scientific and Industrial Research (CSIR) successfully challenged and revoked the patent by proving the prior use of turmeric in traditional medicine.

-Neem Products: Neem, traditionally used in India for its medicinal properties, faced a similar challenge when W.R. Grace and USDA were granted a European patent for a neem-based fungicide. The patent was revoked after evidence of traditional use was presented.

-Basmati Case: RiceTec Inc. was awarded a patent on plants and seeds with characteristics similar to Basmati rice. India and Pakistan are working to protect "Basmati" as a Geographical Indication (GI).

Geographical Indications (GIs):

Relevance and Application:

GIs are crucial for protecting TK and have wide applications, making them one of the most important categories of intellectual property. They are reflected in the TRIPS Agreement.

Geographical Indications and TRIPS:

-Negotiation Challenges: The GI section of the TRIPS Agreement faced complex negotiations due to divisions between the US and EU, as well as between developed and developing countries. The final agreement mandates further work.

-Protection Standards: The TRIPS Agreement provides a basic standard of protection for GIs, with a higher standard for wines and spirits due to negotiation compromises. This has led to demands for additional protection from countries like India, Pakistan, Kenya, Mauritius, and Sri Lanka.

Multilateral Register of Geographical Indications:

>Mandate: TRIPS requires negotiations for a multilateral register for GIs on wines, extended to include spirits by the Doha Ministerial Conference.

>Proposals: Various proposals include:

>EU Proposal: A register affecting all WTO Members.

>Hungarian Proposal: A register where other WTO Members need not protect a successfully challenged GI.

>US, Canada, Chile, Japan Proposal: A voluntary system binding only on participants, encouraging non-participating members to use the register.

Biodiversity Registers:

Overview:

In India, NGOs and institutions are documenting local communities' knowledge, skills, and techniques related to biological resources through Community (or People's) Biodiversity Registers to deter biopiracy and instill pride.

Process and Benefits:

-Documentation: Registers document knowledge of occurrence, propagation practices, sustainable harvests, conservation, and economic uses of biodiversity resources.

-Consent and Access: Information is used or distributed only with community consent. Communities can charge fees for access and biological resource collection.

-Pride and Protection: Registers help establish claims over knowledge and uses of biodiversity resources, leading to equitable benefit sharing.

Concerns and Challenges:

-Public Domain Fear: Knowledge may enter the public domain, inviting corporate and research interests.

-Legal Mechanisms: Robust legal mechanisms are needed to ensure knowledge protection and fair benefit sharing.

Globalisation and the patent regime present significant challenges and opportunities for protecting traditional knowledge. Efforts to document TK, establish robust legal frameworks, and ensure equitable benefit sharing are

crucial. Geographical indications, biodiversity registers, and international collaborations play essential roles in safeguarding the rich heritage of traditional knowledge.

Conclusion:

This paper highlights the pressing need to protect Indian Traditional Knowledge Systems (ITKS) from exploitation, especially in the context of globalization, intellectual property regimes, and biopiracy. Key cases—like turmeric, neem, and basmati—illustrate how traditional knowledge, often orally transmitted and communally owned, is vulnerable to misappropriation when not properly documented or protected. The establishment of legal tools such as the Traditional Knowledge Digital Library (TKDL), sui generis laws and the application of Geographical Indications (GI) emerge as pivotal mechanisms to safeguard indigenous rights and ensure equitable benefit-sharing.

The most important insights from the paper include:

>The ethical and legal concerns of biopiracy and the lack of fair compensation.

>The limitations of the Western IPR system in recognizing collective, customary knowledge.

>The necessity of inclusive, community-based approaches to preservation.

>The importance of documenting oral traditions through digital libraries and biodiversity registers.

>The relevance of global charters like the CBD and institutions like WIPO in framing protective policies.

Scope for Further Research:

Future studies may explore the socio-economic impacts of benefit-sharing models on indigenous communities, comparative analyses of national sui generis systems, and the role of education and awareness in empowering local knowledge holders. Additionally, research could focus on developing AI-supported tools for the classification, documentation, and legal validation of traditional knowledge to ensure its rightful protection in a rapidly evolving intellectual property landscape.

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