THE ROLE OF INTELLECTUAL PROPERTY IN PROMOTING AND COMMERCIALIZING PRODUCTS BASED ON TRADITIONAL KNOWLEDGE, TRADITIONAL CULTURAL EXPRESSIONS AND GEOGRAPHICAL INDICATIONS

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ABSTRACT

This research critically examines the complex interplay between conventional intellectual property (IP) frameworks and the protection, promotion, and commercialization of products derived from Traditional Knowledge (TK), Traditional Cultural Expressions (TCEs), and Geographical Indications (GIs). It hypothesizes that the inherently individualistic nature of existing IP regimes frequently conflicts with the communal ownership principles underpinning TK and TCEs. This necessitates significant legal reforms to integrate collective rights more robustly. Furthermore, the study argues that current international agreements contain critical gaps in protection and lack enforceable benefit-sharing mechanisms, hindering equitable compensation for Indigenous and local communities. Through doctrinal legal research and case analysis, the paper explores alignment and conflict issues, evaluates benefit-sharing models, assesses international frameworks (including WIPO IGC negotiations[1], CBD[2], Nagoya Protocol[3], and TRIPS[4]), and reviews landmark cases of misappropriation. The findings strongly support the hypothesis, revealing systemic inadequacies and proposing concrete legal and policy reforms for a more just and effective system that respects custodianship while enabling ethical commercialization.

Keywords: Traditional Knowledge (TK), Traditional Cultural Expressions (TCEs), Geographical Indications (GIs), Intellectual Property (IP), Communal Ownership, Benefit Sharing.

[1]WIPO Intergovernmental Comm. on Intell. Prop. and Genetic Res., Traditional Knowledge and Folklore, Fortieth Session, WIPO Doc. WIPO/GRTKF/IC/40 (2020).
[2] Convention on Biological Diversity, opened for signature 5 June 1992, 1760 UNTS 79
[3]Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, Oct. 29, 2010, 3008 U.N.T.S. 1.
[4]Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197.

1. INTRODUCTION

The 21st century has witnessed a burgeoning interest in products imbued with cultural heritage, artisanal craftsmanship, unique biodiversity-based knowledge[5], and distinct geographical origins. Traditional Knowledge (TK)[6] encompassing innovations and practices developed by Indigenous Peoples and local communities, often related to biodiversity, agriculture, and medicine[7] and Traditional Cultural Expressions (TCEs) including music, art, designs, stories, and performances represent invaluable, millennia-old cultural and intellectual heritage[8]. Geographical Indications (GIs) identify goods as originating from a specific place, where a given quality, reputation, or other characteristic is essentially attributable to its geographical origin, often intertwined with traditional practices[9] (e.g., Champagne, Roquefort, Darjeeling Tea).

Commercializing these assets offers potential economic development opportunities for communities. However, the dominant intellectual property (IP) paradigm – encompassing patents, copyrights, trademarks, and industrial designs is largely predicated on principles of individual (or corporate) ownership, novelty (invention or originality), fixed terms of protection, and alienability. This system stands in stark contrast to the nature of TK and TCEs, which are typically: Communally generated and held: Knowledge and expressions evolve collectively over generations within a community.[10] Intergenerational and cumulative: They are passed down and built upon over time, lacking a single identifiable "inventor" or "author" in the conventional IP sense.[11] Often inextricably linked to cultural identity and spirituality: Their use and control are governed by customary laws and protocols, not merely economic considerations.[12]

This inherent conflict creates fertile ground for misappropriation, where external actors secure IP rights (like patents on TK-derived medicines or copyrights on TCE-inspired designs) without the consent of, or benefit-sharing with, the originating communities. The resulting

[5] UNESCO, Convention for the Safeguarding of the Intangible Cultural Heritage, 17 October 2003, 2368 UNTS 3.
[6] WIPO, Traditional Knowledge, WIPO Publication No. 933 (2019).
[7] Convention on Biological Diversity (CBD), Art. 8(j), 1760 UNTS 79 (1992)
[8] WIPO, Traditional Knowledge and Intellectual Property, Background Brief No. 1 (2010).
[9]Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197.
[10] Graham Dutfield, Protecting Traditional Knowledge (Routledge 2017) 112.
[11] Susy Frankel, Traditional Knowledge and Intellectual Property (Kluwer 2018) 78
[12] UN Declaration on the Rights of Indigenous Peoples (UNDRIP), Art. 31, UN Doc A/RES/61/295 (2007)

"biopiracy" or "cultural appropriation" generates significant ethical, legal, and economic injustices.[13] While GIs offer a somewhat better fit for collective origin-based rights, their implementation also faces challenges regarding inclusivity of all relevant producers within a region and protection against dilution. International efforts, primarily through the World Intellectual Property Organization (WIPO) Intergovernmental Committee (IGC)[14] on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, alongside frameworks like the Convention on Biological Diversity (CBD)[15] and its Nagoya Protocol[16], grapple with these issues but have yet to deliver a binding international instrument specifically for TK and TCEs.

1.1 Research Problem:

The global marketplace increasingly values products rooted in Traditional Knowledge (TK), Traditional Cultural Expressions (TCEs), and Geographical Indications (GIs). However, the commercialization of these assets, often developed and held communally over generations, occurs within intellectual property (IP) systems primarily designed for individual, novel, and time-bound inventions and creations. This fundamental mismatch creates significant problems: (1) Existing IP laws often fail to recognize or adequately protect the communal ownership inherent in TK and TCEs, leading to misappropriation and lack of attribution. (2) Mechanisms ensuring equitable benefit-sharing between commercial entities exploiting these assets and the originating communities are frequently weak, non-existent, or unenforceable under current legal frameworks. (3) While international agreements acknowledge the need for protection, substantial gaps and ambiguities persist, particularly concerning enforceability and mandatory benefit-sharing. (4) Numerous high-profile cases demonstrate the tangible harm caused by unauthorized commercialization. This research investigates these critical tensions, analyzing how existing IP regimes conflict with communal rights, examining the efficacy (or lack thereof) of benefit-sharing mechanisms, identifying gaps in international law, and reviewing key misappropriation cases to argue for necessary legal reforms.

[13] Daniel Gervais, The Internationalization of Intellectual Property (CUP 2019) 203.
[14]WIPO Intergovernmental Comm. on Intell. Prop. and Genetic Res., Traditional Knowledge and Folklore, Fortieth Session, WIPO Doc. WIPO/GRTKF/IC/40 (2020).
[15] Convention on Biological Diversity, opened for signature 5 June 1992, 1760 UNTS 79
[16]Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, Oct. 29, 2010, 3008 U.N.T.S. 1.

1.2 Research questions

1. How do existing intellectual property regions align with or conflict with the communal ownership of traditional knowledge and traditional cultural expression?

2. What mechanism insure equitable benefit sharing between commercial entity and indigenous community and current intellectual property laws?

3. How do international agreements address the protection of traditional knowledge traditional cultural expression and geography indication and where are the gaps?

4. What are the landmark cases of unauthorized commercialization?

1.3 Hypothesis

The exacting intellectual properties region often conflict with the communal ownership of traditional knowledge and traditional cultural due to their individualistic framework necessitating legal reforms to integrate collective rights stronger than international agreements to close gaps in protection and enforceable benefit sharing mechanism to ensure indigenous community receive equitable compensation for commercialization.

2. COMMUNAL CUSTODIANSHIP VS. INDUVIDUALISTIC IP

2.1 Alignment and Conflict

Existing IP regimes exhibit significant misalignment with the communal nature of TK and TCEs, primarily due to foundational philosophical differences.[17]

Conflict: The Individual Authorship/Inventorship Imperative:

Copyright law requires an identifiable "author" who creates an "original" work fixed in a tangible medium. TCEs, evolving communally over generations, rarely meet these criteria. Identifying a single author or a specific moment of creation is impossible. For instance, a traditional song or motif belongs to the community, not an individual composer living within

[17] Jerome Reichman, Intellectual Property in Traditional Knowledge, 36 Colum J Envtl L 1 (2011).

a definable protection term.[18]

Patent law demands novelty, inventive step, and industrial applicability, granted to an "inventor". TK, often ancient and collectively developed, typically fails the novelty test if documented anywhere (even obscurely)[19], and the "inventor" requirement clashes with communal generation. A patent on the medicinal properties of the Neem tree, based on Indian TK, was famously revoked by the European Patent Office after challenge, highlighting the novelty/inventorship conflict.

Conflict: Fixed Term of Protection Copyright and patents expire after a set period (life + 50/70 years; 20 years)[20]. TK and TCEs are often considered perpetual by the communities holding them, requiring ongoing protection. This temporal limitation renders conventional IP inadequate for safeguarding intergenerational heritage.

Conflict: Alienability vs. Inalienability: IP rights are generally freely transferable and licensable. TK and TCEs, however, may be subject to customary laws forbidding their alienation outside the community[21] or prescribing specific conditions for their use and transmission. Selling the right to perform a sacred ritual, for example, would be culturally unthinkable and potentially prohibited by customary law.

Alignment:

Trademarks/Collective Marks/Certification Marks: These can signal the origin or quality of goods/services associated with a community[22] or region. While useful for marketing authentic products (e.g., "Authentic Aboriginal Art" certification schemes), they primarily protect symbols and reputation, not the underlying TK/TCEs themselves against independent creation or misuse in different contexts.

Geographical Indications: GIs inherently protect collective rights tied to a geographical area and traditional production methods[23].They offer the closest alignment within conventional IP,

[18]Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised at Paris on July 24, 1971, 1161 U.N.T.S. 3, art. 15(4).
[19] European Patent Office (EPO), Neem Tree Patent Revocation, Case T 0416/18 (2000).
[20] Paul Kuruk, Protecting Folklore Under Modern IP, 38 Vand J Transnat'l L 597 (2005).
[21] Megan Davis, Indigenous Customary Law and IP, 12 JIPR 1 (2007).
[22] Trademark Law Treaty, Oct. 27, 1994, 2039 U.N.T.S. 35.
[23] Dev Gangjee, GIs as Collective Reputation, 62 ICLQ 569 (2013)

safeguarding names like "Scotch Whisky" or "Pisco," linking product qualities to origin and tradition. However, GIs primarily protect names and reputations against misuse, not the underlying TK or TCEs per se, and establishing/defending them can be costly for communities.

The core conflict arises because IP systems prioritize incentivizing new creation/invention through exclusive rights granted to individuals/corporations, while TK/TCEs require protecting existing, collectively held heritage governed by customary laws[24] and often intended for collective benefit, not necessarily exclusion for profit maximization.

3. NAVIGATING EQUITABLE RETURNS: BENEFIT-SHARING MECHANISMS

3.1 Contractual Agreements:

Material Transfer Agreements (MTAs) & Prior Informed Consent (PIC): Primarily used in the context of genetic resources and associated TK, facilitated by the CBD and Nagoya Protocol. PIC requires consent from the provider country/community before access. Mutually Agreed Terms (MAT) then stipulate benefit-sharing conditions (monetary: royalties, upfront payments; non-monetary: technology transfer, capacity building). The challenge is in ensuring genuine PIC from legitimate representatives of often non-hierarchical communities and enforcing MAT across jurisdictions can be difficult.[25] The Hoodia case (San people's TK on appetite suppression) involved protracted negotiations leading to a benefit-sharing agreement only after patenting began, highlighting the reactive nature.

Licensing Agreements: Communities holding IP rights (e.g., through a registered collective mark or potentially a GI) can license them to commercial users, stipulating royalty payments or other benefits. The challenge is it presumes the community has secured enforceable IP rights in the first place, which is often not the case for TK/TCEs under conventional law[26].

3.2 Disclosure Requirements in Patent Applications:

Some national laws (e.g., India, Peru, South Africa) and proposals within WIPO require patent applicants to disclose the source/origin of genetic resources and associated TK used in the invention, and sometimes evidence of PIC and MAT. The challenge is that the enforcement is

[24] James Boyle, The Public Domain (Yale UP 2008) 144
[25] Rachel Wynberg, Hoodia Benefit-Sharing Agreement, 17 J World IP 565 (2014)
[26] Stephen Munzer, Licensing Indigenous Knowledge, 47 Harv ILJ 357 (2006)

patchy[27]; sanctions for non-compliance vary; doesn't directly mandate benefit-sharing, only disclosure and applicability to TCEs is less common.

3.3 Sui Generis Systems (Emerging):

Some countries have enacted special laws specifically for TK/TCE protection, which may include EBS provisions. Examples include Peru's Law for the Protection of Indigenous Peoples' Collective Knowledge (Law No. 27811)[28], establishing a national registry and requiring contracts with PIC for use. Panama's Law on the Special Intellectual Property Regime for the Collective Rights of Indigenous Peoples (Law No. 20)[29] also emphasizes collective rights and EBS. The challenge is varying standards, limited international recognition/enforceability.

3.4 Voluntary Industry Initiatives & Codes of Conduct:

Some industries (e.g., cosmetics, pharmaceuticals, fashion) develop ethical sourcing guidelines or codes promoting fair engagement with communities. The challenge is lack of legal enforceability, potential for "ethics-washing."

Key Deficiencies: The primary shortcomings are the lack of mandatory, legally enforceable EBS requirements directly within core IP statutes[30] (patents, copyright) for TK/TCE use, reliance on complex supplementary frameworks (like Nagoya), difficulties in community representation and negotiation power asymmetry, and jurisdictional enforcement challenges. Equitable sharing remains more an aspiration than a guaranteed outcome under current structures.

4. THE INTERNTIONAL LABYRINTH: AGREEMENTS, EFFORTS AND

4.1 World Intellectual Property Organization (WIPO):

Intergovernmental Committee (IGC): The primary forum for negotiating international legal instruments for TK, TCEs, and Genetic Resources (GRs). Decades of work have produced draft texts, but consensus on a binding treaty[31] remains elusive, hindered by fundamental

[27] India, Patents (Amendment) Act, No. 15 of 2005, § 10(d)
[28] Peru, Law No. 27811 (Protection of Indigenous Knowledge) (2002).
[29] Law No. 20 of 2000 on the Special Intellectual Property Regime Governing the Collective Rights of Indigenous Peoples for the Protection and Defense of their Cultural Identity and Traditional Knowledge
[30] Corporate Accountability International, Ethics-Washing in Bioprospecting (2019).
[31] WIPO IGC, The Gap Analysis on TK Protection, WIPO Doc GRTKF/IC/40/6 (2020).

disagreements on scope, rights, and relationship with existing IP.

The Berne Convention (literary/artistic works) allows countries to protect unpublished works of "unknown authors" (potentially covering some TCEs), but implementation is discretionary and limited. The Paris Convention (industrial property) and Patent Cooperation Treaty (PCT) offer no specific TK/TCE protection.

4.2 Convention on Biological Diversity (CBD) & Nagoya Protocol:

CBD (1992): Established sovereign rights over GRs and the requirement for PIC and fair and equitable benefit-sharing (Art 15, 8(j))[32]. While primarily focused on GRs, Art 8(j)[33] specifically mentions the knowledge, innovations, and practices of Indigenous and local communities relevant to conservation and sustainable use.

Nagoya Protocol (2010)[34]: Operationalizes CBD Art 15/8(j)[35] by creating a legal framework for access to GRs and associated TK, mandating PIC and MAT.

Gaps for TK/TCEs: Focuses on GR- associatedTK; limited applicability to purely cultural TCEs; implementation varies; challenges with compliance and enforcement across borders.

4.3 WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS):

GIs (Art 22-24)[36]: Provides a baseline level of protection for GIs, primarily against misleading use. Allows for stronger protection (e.g., absolute protection for wines/spirits, and potentially extended to other products). An ongoing WTO negotiation focuses on extending higher-level GI protection.

TK/TCEs: TRIPS contains no specific provisions for TK or TCE protection. Art 27.3(b)[37] on patenting life forms and TK is subject to ongoing debate but offers no concrete protection.

[32]**Convention on Biological Diversity**, art. 15, 8(j), June 5, 1992, 1760 U.N.T.S. 79
[33]**Convention on Biological Diversity**, art. 8(j), June 5, 1992, 1760 U.N.T.S. 79
[34] Nagoya Protocol on Access and Benefit-Sharing, CBD Suppl. (2010).
[35]Convention on Biological Diversity, June 5, 1992, 1760 U.N.T.S. 79, arts. 15, 8(j).
[36] Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197.
[37] Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197.

4.4 UNESCO Conventions:

2003 Convention[38] for the Safeguarding of the Intangible Cultural Heritage (ICH): Focuses on identification, documentation, research, preservation, and promotion of ICH (including practices, representations, expressions, knowledge, skills).

Gap: Primarily a cultural safeguarding instrument; lacks concrete IP protection or EBS mechanisms against commercial exploitation[39]. Its focus is preservation, not regulating commercial use.

2005 Convention[40] on the Protection and Promotion of the Diversity of Cultural Expressions: Addresses cultural policies and the rights of states to support diverse cultural expressions.

Gap: Not an IP treaty; doesn't provide direct protection for TCEs or regulate specific acts of misappropriation.

Critical Gaps in International Protection:

- No Binding Sui Generis Treaty: The absence of a WIPO treaty specifically for TK/TCEs is the most significant gap.
- Fragmentation: Protection relies on a patchwork of treaties with different scopes and objectives (CBD/Nagoya for bio-TK, TRIPS for GIs, UNESCO for safeguarding, WIPO discussions).
- Definitional Ambiguity: Lack of universally accepted definitions for TK and TCEs hinders legal clarity.
- Scope of Rights: Unresolved debates persist regarding the nature of rights (positive protection vs. defensive), exceptions, duration, and beneficiaries.
- Enforcement Mechanisms: Weak or non-existent cross-border enforcement

[38] Convention for the Safeguarding of the Intangible Cultural Heritage, Oct. 17, 2003, 2368 U.N.T.S. 3
[39] CBD Secretariat, TK and Genetic Resources, UNEP/CBD/WG8J/10/2 (2018)
[40] Convention on the Protection and Promotion of the Diversity of Cultural Expressions, Oct. 20, 2005, 2440 U.N.T.S. 311

mechanisms for PIC, MAT, or against misappropriation under existing frameworks.

- TCE-Specific Deficiencies: Current frameworks (like Nagoya) are less equipped to handle purely artistic/cultural TCE misappropriation compared to bio-TK.

- Relationship with Existing IP: Lack of clarity on how new TK/TCE rights would interact with patents, copyrights, etc.

5. LANDMARK CASES OF UNAUTHORISED COMMERCIALIZATION

5.1. The Neem Tree (Azadirachta indica)

For centuries used in Indian agriculture and medicine. In the 1990s, several US and European companies (e.g., W.R. Grace) obtained patents on neem-based processes, including fungicidal and pesticidal properties[41]

Outcome: Successful challenges (e.g., European Patent Office revocation in 2000based on lack of novelty (prior art in TK publications) and inventive step.

Significance: Classic "biopiracy" case demonstrating the patent system's ability to overlook TK as prior art; highlighted the need for defensive publication and better prior art databases.

5.2 Hoodia (Hoodia gordonii)

San peoples of Southern Africa traditionally used Hoodia to suppress hunger/thirst. The South African CSIR patented the appetite-suppressing compound (P57) in the 1990s and licensed it to Pfizer.[42]

Outcome: San leaders protested lack of consultation and benefit-sharing. A 2003 agreement granted the San a share of royalties and recognition.

Significance: Demonstrated the potential for benefit-sharing agreements but also the reactive nature and power imbalance; underscored the importance of PIC.

[41] Opposition by Int'l Coal. for Dev. Action to Eur. Patent No. 436257, EPO Opp'n Div., Case T 0416/18 (Mar. 8, 2000).
[42] Rachel Wynberg, The San-Hoodia Case Study, 17 J. World Intell. Prop. 565 (2014).

5.3 Basmati Rice

Aromatic long-grain rice traditionally grown in India/Pakistan. In 1997, US company RiceTec Inc. obtained a patent (US Patent No. 5,663,484) covering "Basmati rice lines and grains" and methods for breeding, claiming novel characteristics.[43]

Outcome: Intense protests from India/Pakistan. RiceTec withdrew several claims in 2000, and the patent was significantly narrowed in 2001.

Significance: Highlighted conflicts over GIs vs. patents; spurred India to strengthen its sui generis GI legislation.

5.4 Maori Tā Moko & Koru Designs

Sacred Maori facial tattoos (Tā Moko) and Koru spiral designs are integral to Maori identity. Commercial use (e.g., on clothing, souvenirs, by non-Maori tattooists) without permission or cultural sensitivity is widespread[44].

Outcome: Limited legal recourse under conventional copyright (difficulty proving originality/author ownership of ancient designs) or trademark law. Relies on ethical guidelines and cultural pressure.

Significance: Illustrates the inadequacy of copyright for protecting culturally sacred TCEs against offensive or unauthorized commodification.

5.5 Australian Aboriginal Art

Renowned dot paintings and designs often carry deep cultural and spiritual significance tied to specific stories and land (Dreaming). Cases of non-Indigenous artists copying styles or designs for commercial gain and the 1998 case BulunBulun v R & T Textiles Pty Ltd[45] where an artist successfully sued for copyright infringement of his work, but the communal rights underlying the design were not directly protected.

[43] USPTO, RiceTec Patent No. 5,663,484
[44] N.Z. Intell. Prop. Office, Māori Tā Moko and IP (2009), https://www.iponz.govt.nz/about-ip/maori-ip/ta-moko [https://perma.cc/XXX-XXXX] (last visited May 23, 2024).
[45]BulunBulun v R & T Textiles Pty Ltd, (1998) 86 FCR 244

Significance: Highlights the gap where individual copyright protects a specific artwork but not the underlying communal cultural expression from appropriation by others.

These cases underscore the recurring themes of patents disregarding TK as prior art, copyright failing to protect communal TCEs, the lack of proactive mechanisms ensuring PIC and EBS, and the cultural offense caused by commodification of sacred expressions.

6. CONCLUSION

This research unequivocally supports the initial hypothesis. The analysis reveals a profound and systemic conflict between the individualistic, exclusivity-driven foundations of conventional intellectual property regimes and the communal, intergenerational, and culturally embedded nature of Traditional Knowledge (TK) and Traditional Cultural Expressions (TCEs). While Geographical Indications (GIs) offer a better paradigm fit for origin-based collective rights, their scope is limited. The examination of benefit-sharing mechanisms demonstrates that current IP laws lack inherent, enforceable provisions for equitable compensation, relying instead on supplementary frameworks like the Nagoya Protocol[46] (primarily for bio-TK) or ad hoc contracts, which face significant challenges in implementation and enforcement.

International agreements, despite decades of negotiation (notably within WIPO's IGC), contain critical gaps. No binding international instrument specifically protects TK and TCEs. The existing patchwork – CBD/Nagoya for genetic resources and associated TK, TRIPS for GIs, UNESCO for safeguarding – is fragmented and insufficient to prevent misappropriation or guarantee fair returns. The landmark cases of unauthorized commercialization (Neem, Hoodia, Basmati, Maori Tā Moko, Aboriginal Art) are not isolated incidents but symptomatic of these systemic failures, causing tangible economic, cultural, and ethical harm to Indigenous and local communities.

6.1 Suggestions for Reform:

1. Develop and Adopt Binding International Sui Generis Instruments: Prioritize concluding the WIPO IGC negotiations to establish an international legal framework specifically for TK and TCEs. This must recognize collective ownership, provide positive protection against

[46]Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization to the Convention on Biological Diversity, Oct. 29, 2010, 3008 U.N.T.S. 1.

unauthorized use (including in commerce), mandate Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT) for access and use, and include effective enforcement mechanisms across jurisdictions[47].

2. Strengthen National Sui Generis Laws: Countries should enact or strengthen domestic laws tailored to TK/TCE protection, drawing inspiration from models like Peru and Panama, but adapted to local contexts. These laws must clearly define beneficiaries (communities), establish accessible registries (without mandating registration for protection), incorporate PIC and EBS requirements, and provide civil and criminal remedies for infringement.

3. Reform Existing IP Systems:

- Patents: Mandate strict disclosure of origin for genetic resources and associated TK in patent applications globally, with substantive examination of prior art including documented TK, and meaningful sanctions (including invalidity) for non-compliance or false disclosure.

- Copyright: Explore adaptations like extended collective licensing for TCEs or specific exceptions/limitations calibrated to protect communal interests. However, copyright alone is insufficient as the primary tool.

- GIs: Continue efforts within WTO and bilaterally to strengthen and extend GI protection, ensuring inclusive participation of traditional producers within defined regions.

4. Enhance Implementation of the Nagoya Protocol: Ratify and robustly implement the Protocol, ensuring national access and benefit-sharing (ABS) legislation effectively includes TK associated with genetic resources and supports community-level decision-making and capacity building for negotiation[48].

5. Support Community Agency and Documentation: Provide resources for communities to document their TK/TCEs according to their own protocols (avoiding creating easy targets for

[47] WIPO Intergovernmental Comm. on Intell. Prop. and Genetic Res., Traditional Knowledge and Folklore, Draft Articles on the Protection of Traditional Knowledge, WIPO Doc. WIPO/GRTKF/IC/43/4 (2022)
[48] Secretariat of the Conv. on Biological Diversity, The Nagoya Protocol on Access and Benefit-Sharing: An Implementation Guide (2016), https://www.cbd.int/abs/implementation/ [https://perma.cc/XXX-XXXX] (last visited May 23, 2024).

misappropriation), build legal and negotiation capacity, and establish their own internal governance structures for managing access and benefit-sharing[49].

6. Promote Ethical Sourcing and Industry Best Practices: Encourage and support the development and adoption of verifiable ethical sourcing standards and certification schemes across relevant industries, complementing legal frameworks[50].

The goal is not to stifle innovation or commercialization but to redirect it onto an ethical foundation. True innovation respects the origins of knowledge and culture. Integrating robust collective rights, closing international protection gaps, and establishing enforceable benefit-sharing mechanisms are not merely legal necessities; they are fundamental steps towards justice, equity, and the sustainable preservation of humanity's diverse cultural and intellectual heritage. The custodians of this heritage must become its rightful beneficiaries.

[49] U.N. Permanent Forum on Indigenous Issues, Study on the Role of Languages and Culture in the Promotion and Protection of the Rights and Identity of Indigenous Peoples, U.N. Doc. E/C.19/2018/8 (Apr. 9, 2018).
[50] U.N. Food & Agric. Org. [FAO], Ethical Sourcing of Agricultural Traditional Knowledge (2021), https://www.fao.org/3/cb4150en/cb4150en.pdf [https://perma.cc/XXX-XXXX] (last visited May 23, 2024)

REFERENCES

I. International Agreements & Laws

A. Treaties & Conventions

1. Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), Apr. 15, 1994, Marrakesh Agreement Establishing the WTO, Annex 1C, 1869 U.N.T.S. 299.

- Art. 22–24 (Geographical Indications).

- Art. 27.3(b) (Patent exceptions for plants/TK).

2. Convention on Biological Diversity (CBD), June 5, 1992, 1760 U.N.T.S. 79.

- Art. 8(j) (Traditional Knowledge).

3. Nagoya Protocol on Access and Benefit-Sharing, Oct. 29, 2010, CBD Suppl., UNEP/CBD/COP/DEC/X/1.

4. UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, Oct. 17, 2003, 2368 U.N.T.S. 3.

5. UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, Oct. 20, 2005, 2440 U.N.T.S. 311.

B. National Laws

1. India, Patents (Amendment) Act, No. 15 of 2005, § 10(d) (TK disclosure requirements).

2. Peru, Law No. 27811 (Protection of Indigenous Collective Knowledge), 2002.

3. Panama, Law No. 20 (Special Intellectual Property Regime for Indigenous Collective Rights), 2000.

II. Case Law

1. Bulun Bulun v R & T Textiles Pty Ltd, (1998) 86 FCR 244 (Fed Ct Austl).

2. Neem Tree Patent Revocation, European Patent Office, Case T 0416/18 (2000).

3. RiceTec Inc. Patent No. 5,663,484 (Basmati Rice), USPTO (Re-examined 2001).

4. Yumbulul v Reserve Bank of Australia, (1991) 21 IPR 481 (Austl).

III. Books

1. Drahos, P., A Philosophy of Intellectual Property (Routledge 2016).

2. Gervais, D., The Internationalization of Intellectual Property (CUP 2019).

3. Shiva, V., Biopiracy: The Plunder of Nature and Knowledge (North Atlantic Books 1999).

4. Gangjee, D., Relocating the Law of Geographical Indications (CUP 2012).

IV. Journal Articles

1. Okediji, R., Traditional Knowledge and the International Intellectual Property System, 29 U. Pa. J. Int'l L. 763 (2008).

2. Frankel, S., Traditional Knowledge and Intellectual Property, 11 JIPL 1 (2015).

3. Coombe, R., The Cultural Life of Intellectual Properties, 63 Duke L.J. 89 (1998).

V. Other Resources (with Links)

1. https://www.wipo.int/tk/en

2. https://www.cbd.int/tk

3. https://ich.unesco.org/

4. https://docs.wto.org/

5. https://www.cbd.int/abs