

iv. The role of databases and registers in the legal protection of TKS...

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The Role of Databases and Registers in the Legal Protection of TKS

Rationale for Documenting and Registering TKS

1. Preventing Misappropriation

- Historically, TKS or indigenous medical formulations have been patented by external entities claiming “novelty” in jurisdictions unfamiliar with such knowledge.
- Detailed digital or physical registers deter such bio-piracy by providing **publicly accessible prior art**, invalidating false novelty claims.

2. Strengthening Community Autonomy

- Official registers can affirm community ownership or custodianship of TKS.
- Enhances bargaining power for Access and Benefit-Sharing (ABS) negotiations under frameworks like the Convention on Biological Diversity (CBD) and the Nagoya Protocol.

3. Cultural Preservation

- Documenting local techniques, remedy recipes, genealogies, and rituals ensures **intergenerational continuity**, especially if young generations are drifting away from oral traditions.
- Serves as a repository to revitalize or adapt TKS to contemporary contexts.

4. Policy and Research Support

- Government agencies, NGOs, and researchers can reference TKS databases to identify potential leads for drug discovery or agro-innovation, while respecting prior rights and obtaining prior informed consent.

Key Types of Registers and Databases

1. People’s Biodiversity Registers (PBRs)

- Local-level documentation of community biodiversity uses, traditional ecological knowledge, species distribution, cultural significance.
- Mandated under India’s Biological Diversity Act, often maintained by **Biodiversity Management Committees (BMCs)** at village or municipal levels.

2. National Databases (TKDL, National Knowledge Portals)

- Larger scale, systematically curated repositories focusing on codified or non-codified traditions, bridging local data with patent offices or legal authorities.

3. International Knowledge Portals

- Some countries are exploring cross-border or regional databases (e.g., African Regional Intellectual Property Organization’s initiatives) to streamline TKS protection and synergy.

Traditional Knowledge Digital Library (TKDL)

Genesis and Objectives

1. Motivation

- Prompted by high-profile bio-piracy cases (e.g., patents on turmeric’s wound-healing, neem-based fungicidal properties), the Government of India sought a robust, **searchable digital repository** to establish prior art.
- Acknowledges that many patent examiners abroad could not read Sanskrit, Hindi, Tamil, or other Indian languages in which classical medicinal treatises or manuscripts were written.

2. Collaboration and Scope

- TKDL is jointly executed by the **Council of Scientific and Industrial Research (CSIR)** and the **Ministry of AYUSH**, with input from various scholars of Ayurveda, Unani, Siddha, Yoga, Naturopathy.
- The database systematically classifies thousands of traditional formulations from Indian medicinal texts (Charaka Samhita, Sushruta Samhita, etc.) into **multiple languages**, using a structured, patent-compatible

format (Traditional Knowledge Resource Classification or TKRC).

3. Structure

- *Ontology-based indexing*: Mapped to the **International Patent Classification (IPC)** system, bridging semantic gaps between Ayurvedic terminologies and patent classification codes.
- Contains data on formulations, plants used, pathological indications, dosages, references to classical texts, ensuring easy cross-reference for examiners.

Function as a Defensive Tool

1. Prior Art Evidence

- Patent examiners worldwide can access TKDL under non-disclosure agreements, verifying if claimed “novel” processes or compositions already exist in Indian traditional medical systems.
- This helps in rejecting spurious patents—thereby preventing the privatization of centuries-old knowledge.

2. Curtailing Biopiracy

- With the TKDL accessible, suspicious or overlapping applications can be flagged early, saving time and resources.
- Reduces the need for expensive litigation, as examiners themselves can swiftly see prior art citations in a recognized official database.

3. Global Impact

- The Indian model inspired discussions at WIPO and other forums about adopting similar defensive systems for other countries with rich TKS.
- Some developing countries are examining an “international TKS registry” approach akin to the TKDL model to protect indigenous knowledge.

TKDL and Collaboration with WIPO

WIPO’s Role in TKS Protection

1. Global Policy Platform

- WIPO has been a leading intergovernmental organization shaping norms and best practices on intellectual property, including issues of traditional knowledge and cultural expressions.
- WIPO’s **Intergovernmental Committee (IGC)** on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore addresses policy gaps, aiming to develop international legal instruments that safeguard TKS.

2. WIPO TK Documentation Toolkit

- Provides guidelines for documenting TKS in a culturally respectful manner, avoiding unwanted disclosure of sacred or secret knowledge.
- Emphasizes balanced approaches that do not inadvertently convert TKS into the “public domain” if communities do not desire that path.

The TKDL-WIPO Relationship

1. Access Agreements

- WIPO facilitated cooperation between India’s TKDL authorities and various patent offices (Europe, US, Canada, Australia, Japan).
- The arrangement ensures that patent examiners can perform “prior art searches” on TKDL’s corpus, respecting confidentiality protocols.

2. Promoting Best Practices for Defensive IP

- WIPO recognizes TKDL as a model defensive database, frequently cited as an exemplary mechanism in global discussions.
- Encourages other countries to develop analogous digitized repositories (with the necessary language/classification bridging).

3. Limitations and Next Steps

- The WIPO framework is non-binding. Nations have sovereignty over how deeply they integrate TKS into IP or intangible heritage legislation.
- Future expansions or upgrades to TKDL might incorporate subnational or lesser-known tribal knowledge,

bridging the gap between local oral traditions and formal patent documentation systems.

Broader Implications for TKS Protection

Enhanced IP Examination Processes

1. Reduced Wrongful Patents

- By systematically analyzing TKS sources, patent offices reduce the grant of dubious patents, addressing concerns of indigenous groups about exploitation or appropriation.
- Encourages genuine innovation rather than repackaging of existing knowledge.

2. Stronger Defensive Mechanisms

- Combined with **Traditional Knowledge Resource Classification (TKRC)** or other specialized taxonomies, ensures examiners can swiftly identify relevant prior art.
- Minimizes language barriers, bridging classical texts to patent jargon.

Empowering Indigenous and Local Communities

1. Validation of Knowledge

- Formal indexing in a high-profile library affirms the scientific and cultural significance of local remedies.
- Could foster recognition, leading to interest in **benefit-sharing** if commercial R&D uses those documented formulas or references them in part.

2. Concerns over Consent and Confidentiality

- Some communities worry about overexposure, if previously secret or sacred knowledge gets documented in centralized databases accessible by non-local parties.
- Necessitates robust stakeholder consultations, clarity on what aspects remain restricted.

Contribution to National Economy and Healthcare

1. Promoting Ayurveda, Siddha, Unani

- Government initiatives to brand Indian systems of medicine globally can highlight the authenticity guaranteed by a well-documented TKS knowledge base.
- Potential for expanding exports of AYUSH products, standardized herbal medicines, or medical tourism.

2. R&D Catalysis

- Researchers (pharmaceutical, nutraceutical, biotech) can systematically search TKS leads, accelerating the discovery of novel drug candidates or clinically validated products.
- Possibly spurring patentable incremental innovations around formulation improvements or synergy analyses.

Conclusion

Databases and registers (like the **Traditional Knowledge Digital Library, TKDL**) have become critical tools for **defensive** intellectual property strategies, **bio-piracy** prevention, and **cultural preservation**. By compiling codified or partially codified knowledge (from Ayurveda, Unani, Siddha, Yoga) in a structured, patent-searchable format, India has **raised global awareness** of TKS and secured a formidable mechanism to **invalidate wrongful patents** claiming novelty on age-old remedies.

This success exemplifies how synergy between **national authorities** (e.g., the Indian Patent Office, National Biodiversity Authority) and **international IP frameworks** (particularly WIPO) can effectively safeguard intangible cultural assets. Beyond legal defenses, the TKDL fosters **community recognition**, catalyzes **biomedical R&D**, and ensures that the **shared heritage of TKS** remains accessible and protected against misappropriation. As global interest in traditional medicine and biodiversity-based innovations grows, the TKDL model stands as a template for other nations seeking to preserve and honor their intangible cultural heritage.