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

iv. The role of databases and registers in the legal protection of TKS – Traditional Knowledge Digital Library (TKDL) through World Intellectual Property Organisation (WIPO)

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.