

Community Rights and Benefit-Sharing Mechanisms for Traditional Knowledge Protection: A Comparative Legal Analysis and Development of the Community Benefit-Sharing Governance Framework

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ABSTRACT: Traditional knowledge and intangible cultural heritage constitute invaluable cultural resources that contribute to identity preservation, social cohesion, cultural continuity, and sustainable development. However, conventional intellectual property systems have demonstrated significant limitations in protecting traditional knowledge because such knowledge is collectively held, intergenerationally transmitted, and deeply embedded within cultural and social practices. As a result, concerns regarding cultural appropriation, biopiracy, unauthorized commercialization, and inequitable use of community knowledge have intensified worldwide. This article aims to examine community rights and benefit-sharing mechanisms for traditional knowledge protection through a comparative legal analysis and to develop an integrated governance framework applicable to contemporary cultural heritage protection.

This study employs a comparative legal analysis of six countries: Thailand, India, China, New Zealand, Australia, and Canada. Relevant legislation, policy documents, international instruments, and scholarly literature concerning traditional knowledge, indigenous knowledge, traditional cultural expressions, and intangible cultural heritage were systematically analyzed. The comparison focuses on seven analytical dimensions, including community rights recognition, ownership structures, traditional knowledge registries, prior informed consent, access and licensing mechanisms, benefit-sharing arrangements, and sustainable community development.

The findings reveal substantial differences in legal and governance approaches. India demonstrates a robust traditional knowledge registration system through the Traditional Knowledge Digital Library and biodiversity-related access-and-benefit-sharing mechanisms. China emphasizes state-led protection through specialized intangible cultural heritage legislation and national registration systems. New Zealand advances indigenous cultural stewardship through the principles of *kaitiakitanga* and the Wai 262 framework. Australia promotes Indigenous Cultural and Intellectual Property (ICIP) principles that emphasize ethical cultural governance and community consultation. Canada highlights collaborative governance and the integration of Indigenous Knowledge into public decision-making processes. In contrast, Thailand continues to face challenges arising from fragmented legal protections, limited recognition of community ownership, and the absence of a comprehensive benefit-sharing system.

The comparative analysis suggests that effective traditional knowledge protection requires a transition from fragmented intellectual property approaches toward integrated governance systems that recognize community rights, strengthen cultural participation, ensure prior informed consent, and establish equitable benefit-sharing mechanisms. The findings provide policy recommendations for legal reform, cultural governance, and sustainable development strategies, particularly for countries seeking to strengthen community-based cultural heritage protection.

This article develops the Community Benefit-Sharing Governance Framework (CBSG Framework), a novel conceptual model that integrates six interrelated components: community rights recognition, traditional knowledge registration, prior informed consent, licensing and access governance, equitable benefit-sharing, and sustainable community development. The framework contributes to the growing discourse on traditional knowledge governance by bridging intellectual property law, indigenous rights, cultural heritage protection, and sustainable development. It offers a comprehensive governance approach that can support cultural justice, community empowerment, and long-term preservation of traditional knowledge in the twenty-first century.

KEYWORDS: Traditional Knowledge; Community Rights; Benefit-Sharing; Indigenous Knowledge; Intangible Cultural Heritage; Comparative Legal Analysis; Cultural Governance; Sustainable Development.

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1. INTRODUCTION

Local wisdom refers to a body of knowledge developed through experience, observation, experimentation, adaptation, and intergenerational transmission within the specific social, cultural, and environmental contexts of local communities. Such knowledge includes herbal medicine, traditional agriculture, local cuisine, handicrafts, performing arts, folk music, rituals, beliefs, language, symbols, patterns, and social practices that are deeply connected to community identity (UNESCO, 2003; WIPO, 2017). Local wisdom is therefore not merely a cultural resource for preservation, but also an important foundation for the creative economy, cultural tourism, the health industry, the food industry, the fashion industry, and innovation rooted in traditional knowledge.

The increasing use of local wisdom in the modern economy has generated several significant problems, particularly the unauthorized commercial use of community knowledge, the patenting of inventions derived from traditional knowledge, the use of cultural patterns or symbols in fashion products, the exploitation of biological resources and herbal knowledge without benefit-sharing, and the commodification of community culture without the participation of the knowledge-holding communities in decision-making (Robinson, 2010; Dutfield, 2011; Oguamanam, 2018). These problems indicate that the protection of local wisdom can no longer be considered solely within the traditional framework of intellectual property. Rather, it must also be examined in relation to community rights, cultural justice, and benefit-sharing systems.

Traditional intellectual property laws, such as copyright law, patent law, trademark law, and geographical indication law, play an important role in protecting creative works, innovations, and commercial reputation. However, these systems have limitations when applied to local wisdom, because local wisdom is often collectively held by communities, lacks an identifiable individual creator, has no clear starting point, is transmitted across generations, and carries cultural meanings that go beyond economic value (Blakeney, 2015; Sunder, 2007). Intellectual property laws that emphasize individual ownership and limited terms of protection therefore cannot comprehensively protect community wisdom.

At the international level, the concept of protecting local wisdom has continuously developed through various legal and policy frameworks, such as the Convention on Biological Diversity, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization, the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage, the United Nations Declaration on the Rights of Indigenous Peoples, and the work of the World Intellectual Property Organization on Traditional Knowledge and Traditional Cultural Expressions (CBD, 2011; UNDRIP, 2007; UNESCO, 2003; WIPO, 2017). These frameworks share a common principle: the recognition of communities as holders, transmitters, and custodians of traditional knowledge.

An increasingly important issue is “benefit-sharing,” which means that users of local wisdom or related resources are required to share returns fairly with the communities that own such wisdom. These benefits may be monetary, such as compensation, royalties, or income from commercial use, or non-monetary, such as technology transfer, educational support, community capacity building, the establishment of cultural funds, and the promotion of intergenerational transmission of wisdom to future generations (Bavikatte & Robinson, 2011; Vermeulen, 2007).

Recent international developments further highlight the importance of this issue. In 2024, the World Intellectual Property Organization adopted the Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge, which requires patent applicants to disclose the origin of genetic resources or traditional knowledge associated with an invention (WIPO, 2024). Although this treaty does not resolve all problems concerning benefit-sharing, it represents an important step in the international intellectual property system by recognizing the connection between patents, genetic resources, and community wisdom.

Although the principle of benefit-sharing has gained increasing recognition at the international level, its implementation differs significantly from country to country. India has developed the Traditional Knowledge Digital Library to prevent the misappropriation of traditional knowledge through improper patenting and has enacted biodiversity legislation related to authorization and benefit-sharing (Chaturvedi, 2016; Dutfield, 2011). China has specific legislation on intangible cultural heritage that defines the roles of the state and inheritors of traditional knowledge (Zhang, 2013). New Zealand has developed a framework concerning Māori rights and cultural guardianship through the concept of *kaitiakitanga* and the Wai 262 claim (Te Puni Kōkiri, 2024). Australia has developed the concept of Indigenous Cultural and Intellectual Property to protect the cultural rights of Indigenous peoples (National Library of Australia, 2024). Canada, meanwhile, has developed approaches concerning Indigenous Knowledge and the participation of Indigenous peoples in governmental decision-making systems (Government of Canada, 2023).

Thailand, by contrast, continues to rely on several fragmented laws, including copyright law, patent law, plant variety protection law, geographical indication law, and the law on the promotion and preservation of intangible cultural heritage. Although these laws contribute to the protection of certain dimensions of local wisdom, they still do not comprehensively recognize community rights, licensing systems, and benefit-sharing mechanisms (Department of Intellectual Property, 2021; Santaveesuk et al., 2026).

Against this background, this article aims to comparatively analyze the legal systems and practices of six countries: Thailand, India, China, New Zealand, Australia, and Canada. The purpose is to identify legal and policy lessons for the protection of local wisdom. Its main objective is to develop the Community Benefit-Sharing Governance Framework, or CBSG Framework,

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as a governance framework that integrates community rights, traditional knowledge registration systems, prior informed consent, licensing, benefit-sharing, and sustainable community development.

This article presents the central argument that the protection of local wisdom in the twenty-first century must move beyond a prohibitive model of protection toward a creative governance system. In other words, protection should not merely prevent outsiders from misappropriating local wisdom; it must also create mechanisms that enable communities to participate, grant permission, set conditions, receive benefits, and use their wisdom as a foundation for sustainable development.

2. SCOPE AND ANALYTICAL APPROACH

This article is a conceptual scholarly study employing a comparative legal analysis to examine legal frameworks for the protection of community rights and benefit-sharing mechanisms concerning the utilization of local wisdom. The analysis encompasses legislation, policy documents, academic theories, and practical approaches adopted by countries with extensive experience in protecting Traditional Knowledge (TK), Traditional Cultural Expressions (TCEs), Indigenous Knowledge (IK), and Intangible Cultural Heritage (ICH) (Antons, 2017; WIPO, 2017).

The study covers six countries: Thailand, India, China, New Zealand, Australia, and Canada. The selection of these countries is based on three principal academic considerations.

First, these countries represent diverse models for protecting local wisdom. Thailand serves as a case study of a country possessing rich cultural heritage and traditional knowledge but lacking a comprehensive legal framework that effectively integrates community rights with benefit-sharing mechanisms. India represents a model characterized by the development of digital traditional knowledge databases and biodiversity governance mechanisms. China provides an example of a country with specialized legislation governing intangible cultural heritage. New Zealand demonstrates an approach founded on Māori rights and the concept of cultural guardianship. Australia represents a jurisdiction emphasizing Indigenous Cultural and Intellectual Property (ICIP), while Canada illustrates the development of legal and policy frameworks concerning Indigenous Knowledge and Indigenous participation in the governance of natural resources and cultural heritage (Chaturvedi, 2016; National Library of Australia, 2024; Te Puni Kōkiri, 2024; Zhang, 2013).

Second, these countries collectively represent both Asian legal systems and jurisdictions with extensive experience in recognizing Indigenous rights. This diversity enables meaningful comparisons among state-centered legal approaches, community rights-based models, traditional knowledge registration systems, and collaborative governance arrangements between governments and local communities (UNDRIP, 2007; Oguamanam, 2018).

Third, comparative analysis facilitates the synthesis of a new conceptual framework applicable to Thailand. Rather than replicating the legal model of any single country, this study extracts common legal principles and best practices to develop a community-centered governance framework for equitable benefit-sharing.

The comparative analysis is conducted across seven analytical dimensions: (1) recognition of community rights; (2) ownership or legal status of traditional knowledge holders; (3) traditional knowledge registration systems and databases; (4) mechanisms for Free, Prior and Informed Consent (FPIC); (5) licensing and access mechanisms for traditional knowledge; (6) benefit-sharing mechanisms; and (7) legal enforcement and sustainable community development.

These seven dimensions are intended to examine how different countries address the fundamental challenges associated with protecting local wisdom, including who owns traditional knowledge, who possesses the legal authority to authorize its use, what procedures govern access and utilization, how communities receive equitable benefits, and what roles governments play in recognizing, protecting, and promoting the fair use of traditional knowledge.

3. CONCEPTUAL FOUNDATIONS AND RELEVANT LEGAL FRAMEWORKS

The protection of local wisdom and benefit-sharing is grounded in several interrelated theoretical and legal frameworks, including traditional knowledge theory, community rights theory, the Access and Benefit-Sharing (ABS) framework, Indigenous rights theory, and the concept of cultural justice. These conceptual foundations enable comparative legal analysis to move beyond the examination of statutory provisions and provide a deeper understanding of the principles, values, and objectives underlying different national legal systems.

3.1 Traditional Knowledge

Traditional knowledge refers to the knowledge, skills, practices, and innovations developed by communities through accumulated experience and transmitted continuously across generations. Such knowledge may relate to natural resources, herbal medicine, plant varieties, rituals, languages, arts, music, handicrafts, and ways of life closely associated with specific ecological environments (WIPO, 2017). A defining characteristic of traditional knowledge is that it constitutes living knowledge that continuously evolves and adapts while remaining deeply embedded within the cultural context of the community.

Compared with conventional intellectual property, traditional knowledge possesses at least five distinctive characteristics. It is collectively owned by communities; transmitted across generations; lacks an identifiable individual creator; embodies cultural

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and spiritual significance; and often requires perpetual rather than time-limited protection (Blakeney, 2015; Dutfield, 2017). These characteristics explain why copyright and patent law cannot adequately protect traditional knowledge.

3.2 Community Rights

Community rights recognize that communities themselves may legitimately hold rights over their resources, knowledge, culture, and ways of life. Unlike individual rights, community rights are collective rights arising from the relationship between community members and their traditional knowledge, natural resources, and cultural landscapes (Oguamanam, 2018; Sunder, 2007).

Within the context of traditional knowledge, community rights encompass the authority of communities to preserve, utilize, control, transmit, authorize, or refuse the use of their knowledge. These rights extend beyond economic interests to include the protection of cultural identity, human dignity, and cultural continuity (UNDRIP, 2007). Consequently, the legal recognition of community rights constitutes the fundamental prerequisite for any effective benefit-sharing system. Without legal recognition of communities as legitimate rights holders, it becomes difficult to require third parties to obtain authorization or share benefits arising from the use of community knowledge. Accordingly, the proposed Community Benefit-Sharing Governance (CBSG) Framework begins with the formal recognition of community rights as its foundational principle.

3.3 Access and Benefit-Sharing (ABS)

The concept of Access and Benefit-Sharing (ABS) has become a central principle in contemporary environmental law and intellectual property law. The fundamental principle is that any person seeking access to genetic resources or associated traditional knowledge must comply with legally prescribed conditions and share the benefits derived from their utilization in a fair and equitable manner (CBD, 2011; Chiarolla, 2011).

The essential components of an ABS system include Free, Prior and Informed Consent (FPIC), Mutually Agreed Terms (MAT), clearly defined conditions governing access and utilization, monitoring of resource use, and equitable benefit-sharing arrangements (Bavikatte & Robinson, 2011; Vermeulen, 2007). These principles can be effectively applied to the protection of traditional knowledge, particularly where such knowledge is utilized in pharmaceutical, cosmetic, food, fashion, tourism, digital cultural industries, and artificial intelligence applications.

3.4 Indigenous Rights

Indigenous rights constitute an essential conceptual framework for analyzing the legal systems of New Zealand, Australia, and Canada, as these countries have extensive historical experience concerning Indigenous peoples' claims relating to land, natural resources, languages, culture, and traditional knowledge. Indigenous rights emphasize principles such as self-determination, cultural preservation, control over traditional knowledge, and participation in governmental decision-making processes (UNDRIP, 2007).

Within the context of protecting traditional knowledge, Indigenous rights expand legal analysis beyond property protection toward safeguarding cultural relationships, collective memory, identity, and historical justice. For example, New Zealand's Wai 262 claim concerns Māori authority over *mātauranga Māori* (Māori knowledge) and *taonga*, encompassing traditional knowledge, cultural expressions, plants, animals, and other resources of profound cultural significance (Te Puni Kōkiri, 2024).

3.5 Cultural Justice

Cultural justice proposes that the utilization of community culture within modern economic systems must respect the dignity, cultural significance, and rights of the communities concerned, rather than treating culture merely as an economic resource available for unrestricted commercial exploitation (Sunder, 2007; Vermeulen, 2007).

Cultural justice comprises at least four dimensions: recognition of communities as legitimate holders of traditional knowledge; fairness in access and authorization procedures; equitable benefit-sharing; and protection against the distortion or degradation of cultural values. Consequently, cultural justice serves as an important bridge connecting intellectual property law, community rights, and cultural policy.

4. COMPARATIVE LEGAL ANALYSIS FRAMEWORK

This article adopts a comparative legal analysis to examine the similarities and differences among the legal systems and practical approaches governing community rights and benefit-sharing mechanisms in six countries. Comparative legal analysis is particularly appropriate for this study because the protection of local wisdom does not lend itself to a single universal solution. Instead, legal approaches are shaped by each country's legal history, social structure, state–community relations, and underlying concepts of cultural rights (Antons, 2017; Oguamanam, 2018).

Rather than merely identifying the existence of particular laws in each jurisdiction, this study adopts a functional comparative approach. It examines the functions performed by legal rules and institutional mechanisms, the problems they seek to address, and the limitations they encounter. Such an approach facilitates the synthesis of legal and policy lessons that contribute to the development of the proposed Community Benefit-Sharing Governance (CBSG) Framework.

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4.1 Units of Analysis

The units of analysis in this study consist of national legal systems and policy frameworks relating to traditional knowledge, community rights, and benefit-sharing. Six countries are selected as comparative case studies, as summarized in Table 1.

Table 1. Comparative Units of Analysis

Country	Primary Focus of Analysis
Thailand	Intellectual property law, intangible cultural heritage legislation, and legal gaps concerning community rights
India	Traditional knowledge registration systems, biodiversity governance mechanisms, and benefit-sharing arrangements
China	Intangible cultural heritage legislation and the role of the state in protecting recognized inheritors of traditional knowledge
New Zealand	Māori rights, cultural guardianship (<i>kaitiakitanga</i>), and the protection of traditional knowledge
Australia	Indigenous Cultural and Intellectual Property (ICIP) and legal practices concerning Indigenous cultural rights
Canada	Indigenous Knowledge, Indigenous participation in governance, and collaborative governance mechanisms

4.2 Dimensions of Comparative Analysis

This study establishes seven analytical dimensions for the comparative examination of legal systems governing community rights and benefit-sharing. These dimensions are designed to facilitate a systematic evaluation of how different jurisdictions recognize, regulate, and protect traditional knowledge and the rights of local communities.

Table 2. Comparative Dimensions of Community Rights and Benefit-Sharing Systems

Comparative Dimension	Analytical Focus
Recognition of Community Rights	Whether the legal system formally recognizes communities as legitimate rights holders.
Ownership of Traditional Knowledge	Whether traditional knowledge is regarded as the property of individuals, the state, or communities.
Registration System	Whether a legally recognized traditional knowledge registry or database exists.
Prior Informed Consent	Whether the use of traditional knowledge requires the Free, Prior and Informed Consent (FPIC) of the knowledge-holding community.
Licensing Mechanisms	Whether legal mechanisms exist to establish conditions governing access to and utilization of traditional knowledge.
Benefit-Sharing Mechanisms	Whether the legal framework provides for monetary and/or non-monetary benefit-sharing arrangements.
Enforcement and Sustainability	Whether mechanisms exist for legal enforcement, monitoring compliance, and ensuring that benefits are returned to and contribute to the sustainable development of the originating communities.

4.3 Analytical Procedures

The comparative legal analysis was conducted through five sequential stages.

Stage One: Collection of legal instruments and policy documents relating to traditional knowledge, community rights, intellectual property, and benefit-sharing in each selected country.

Stage Two: Country-specific analysis to identify the legal framework, institutional structure, strengths, limitations, and key lessons derived from each jurisdiction.

Stage Three: Cross-country comparison based on the seven analytical dimensions established in this study in order to identify common patterns, structural differences, and distinctive governance approaches.

Stage Four: Synthesis of best practices from the comparative analysis to identify the essential components of the proposed Community Benefit-Sharing Governance (CBSG) Framework.

Stage Five: Development of the Community Benefit-Sharing Governance (CBSG) Framework, which constitutes the principal theoretical contribution and original knowledge generated by this study.

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4.4 Rationale for Employing Comparative Legal Analysis

Comparative legal analysis is adopted in this study for three principal reasons.

First, the protection of traditional knowledge is inherently a transnational issue. Traditional knowledge, cultural expressions, genetic resources, and their commercial utilization frequently transcend national boundaries and are therefore not confined to the jurisdiction of a single state. Consequently, meaningful legal analysis requires consideration of comparative experiences from multiple jurisdictions (WIPO, 2017).

Second, there is currently no universally accepted legal model for the protection of traditional knowledge. Individual countries have developed distinct legal and institutional mechanisms reflecting their respective historical, social, political, and cultural contexts. Comparative legal analysis therefore provides valuable insights into alternative policy options and governance models (Antons, 2017; Oguamanam, 2018).

Third, Thailand remains in a developmental stage with respect to legislation and public policy concerning the protection of traditional knowledge and community rights. Examining the experiences of jurisdictions with diverse legal traditions enables policymakers to design a legal framework that is appropriate to the Thai context without simply transplanting the legal system of any single country. Instead, Thailand can selectively adopt internationally recognized principles and best practices while ensuring compatibility with its own constitutional, legal, social, and cultural circumstances.

5. PRELIMINARY SYNTHESIS FRAMEWORK: FROM COMMUNITY RIGHTS TO BENEFIT-SHARING GOVERNANCE

Based on the conceptual foundations and analytical framework presented above, this article proposes a preliminary synthesis framework arguing that the protection of traditional knowledge should evolve from a property-based protection system toward a community-centered governance system. In other words, traditional knowledge should no longer be regarded merely as a form of property requiring ownership under conventional intellectual property regimes. Instead, it should be understood as a dynamic system of relationships linking communities, culture, natural resources, and sustainable development (Bavikatte & Robinson, 2011; Sunder, 2007).

Within this framework, community rights constitute the foundation of legal legitimacy; traditional knowledge registration systems function as mechanisms for identifying knowledge holders and preventing misappropriation; Free, Prior and Informed Consent (FPIC) safeguards the community's authority to make informed decisions regarding the use of its knowledge; licensing mechanisms establish the conditions governing access to and utilization of traditional knowledge; benefit-sharing mechanisms ensure fairness and equitable distribution of both monetary and non-monetary benefits; and sustainable community development represents the ultimate objective of the governance system.

This preliminary framework is consistent with the evolving direction of international law, which increasingly emphasizes the disclosure of the origin of genetic resources and associated traditional knowledge, as well as the meaningful participation of local and Indigenous communities in governing the utilization of their own knowledge systems (CBD, 2011; WIPO, 2024).

Accordingly, the proposed Community Benefit-Sharing Governance (CBSG) Framework extends beyond the traditional objective of preventing unauthorized appropriation. It seeks to establish an integrated governance model that recognizes communities as legitimate rights holders, promotes participatory decision-making, ensures equitable benefit-sharing, and supports the long-term conservation and sustainable utilization of traditional knowledge. In doing so, the framework contributes to both cultural justice and sustainable development while strengthening the legal protection of community-based knowledge in the twenty-first century.

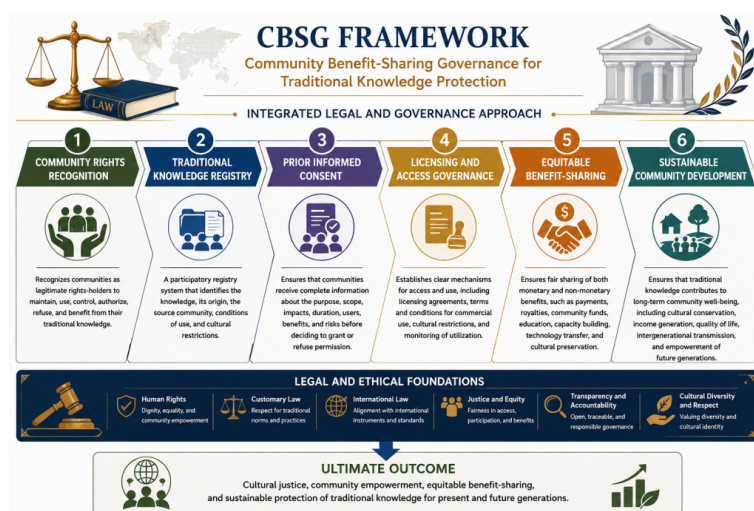


Figure 1. Preliminary Synthesis Framework of the Community Benefit-Sharing Governance (CBSG) Framework

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The preliminary synthesis framework presented above serves as the analytical foundation for examining the six selected countries in the following sections. The analysis assesses the strengths and weaknesses of each country's legal and governance framework and identifies the lessons that can contribute to the development of a comprehensive Community Benefit-Sharing Governance (CBSG) Framework.

6. ANALYSIS OF COMMUNITY RIGHTS AND FOREIGN BENEFIT-SHARING MECHANISMS

This section analyzes the legal systems and practical implementations of six countries: Thailand, India, China, New Zealand, Australia, and Canada. The analysis is conducted based on established comparative dimensions, including the recognition of community rights, ownership of traditional knowledge, registration systems, prior informed consent, access and licensing, benefit-sharing, and enforcement geared toward sustainable community development. The primary objective of this analysis is to identify strengths, weaknesses, and policy lessons that can inform the development of a Community Benefit-Sharing Governance Framework (CBSG Framework).

6.1 Fragmented Legal System and Limitations in Recognizing Community Rights: Thailand

Thailand possesses a diverse wealth of intangible cultural heritage and traditional knowledge, spanning traditional music, performing arts, handicrafts, culinary arts, herbal remedies, woven textiles, indigenous patterns, beliefs, rituals, and ecological knowledge. However, the Thai legal system remains fragmented; individual laws protect only specific dimensions of traditional knowledge, and there is still no dedicated statutory framework that explicitly recognizes community rights as the collective owners of this knowledge.

The domestic legislation relevant to traditional knowledge in Thailand includes:

- 1) The Copyright Act B.E. 2537 (1994)
- 2) The Patent Act B.E. 2522 (1979)
- 3) The Plant Variety Protection Act B.E. 2542 (1999)
- 4) The Protection of Geographical Indications Act B.E. 2546 (2003)
- 5) The Act on Promotion and Preservation of Intangible Cultural Heritage B.E. 2559 (2016)

While these laws play a crucial role in protecting creative works, inventions, indigenous plant varieties, indications of source, and certain forms of cultural heritage, they fall short of establishing a holistic system for community rights and benefit-sharing (Department of Intellectual Property, 2021; Santaveesuk et al., 2026).

A major limitation of Thai law is that conventional intellectual property regimes prioritize individual or corporate rights over the collective rights of communities. For instance, copyright law requires clearly identifiable creators. In contrast, much of traditional knowledge—such as folk songs, traditional performances, handicraft patterns, or communal rituals—is collective knowledge passed down through generations, making individual ownership impossible to assign (Blakeney, 2015; Dutfield, 2017).

Under patent law, the fundamental challenges are the strict criteria for novelty and inventive step, which do not align with traditional knowledge that has already been utilized and disseminated within communities. Consequently, indigenous herbal practices or communal biogenetic resource applications are often ineligible for patent protection. Conversely, external entities can exploit, adapt, patent, or commercially utilize this knowledge without ensuring fair benefit-sharing for the originating communities (Dutfield, 2011; Robinson, 2010).

The Plant Variety Protection Act B.E. 2542 (1999) is conceptually the closest Thai statute to a benefit-sharing framework, as it explicitly addresses local plant varieties and community-related biological utilization. However, its scope is strictly confined to botanical varieties, leaving out other cultural dimensions such as music, performing arts, crafts, or rituals (Santaveesuk et al., 2026).

Meanwhile, the Act on Promotion and Preservation of Intangible Cultural Heritage B.E. 2559 (2016) serves as a vital tool for safeguarding cultural legacy. Nonetheless, its primary mechanism is cultural preservation rather than rights-based protection. Listing an element on the intangible cultural heritage register does not grant the community direct intellectual property rights, nor does it establish a legally enforceable licensing or benefit-sharing mechanism.

Consequently, the situation in Thailand highlights "Three Governance Gaps":

- 1) A gap in the formal recognition of community rights.
- 2) A gap in legally enforceable registry systems.
- 3) A gap in equitable benefit-sharing mechanisms.

Despite having a robust cultural foundation, Thailand still lacks the governance framework necessary for communities to control, license, and fairly profit from their own traditional knowledge.

6.2 Traditional Knowledge Registries and Access and Benefit-Sharing (ABS) Mechanisms: India

India is widely recognized as a global benchmark for developing traditional knowledge protection frameworks, particularly regarding the prevention of misappropriation (biopiracy) and the integration of traditional knowledge with biodiversity governance.

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The country possesses extensive biological resources and associated traditional knowledge, most notably in Ayurveda, herbalism, traditional medicine, and indigenous therapeutic flora (Chaturvedi, 2016; Dutfield, 2011).

The catalyst for India's rigorous protection system came from high-profile international disputes, such as the patenting of turmeric for wound healing and neem extracts for agricultural applications. Viewed as classic examples of biopiracy, these incidents forced India to realize the urgent need for a comprehensive knowledge repository to serve as prior art evidence, ensuring that external entities could not claim such existing public domain knowledge as novel inventions (Dutfield, 2011; Robinson, 2010).

India's definitive tool is the Traditional Knowledge Digital Library (TKDL). This digital archive consolidates traditional knowledge from classical texts and vernacular medical systems, including Ayurveda, Siddha, Unani, and Yoga. The TKDL operates defensively by granting international patent offices access to verify that claimed inventions are actually preexisting traditional knowledge, thereby precluding the wrongful grant of patents (Chaturvedi, 2016; WIPO, 2017).

Complementing the TKDL is the Biological Diversity Act 2002, which governs access to biological resources and associated knowledge through the National Biodiversity Authority (NBA). Under this act, access by foreign individuals or entities requires prior approval and is contingent upon executing benefit-sharing agreements. This statute directly operationalizes the Access and Benefit-Sharing (ABS) principles of the Convention on Biological Diversity (CBD) and the Nagoya Protocol (CBD, 2011; Chaturvedi, 2016).

India's primary strength lies in creating a tangible, defensive registration system. The TKDL effectively mitigates the international misappropriation of traditional knowledge. However, certain limitations persist: the TKDL prioritizes defensive patent prevention rather than the active affirmation of positive community rights. Furthermore, the databases are largely institutionalized and curated by state authorities and experts rather than managed directly by the source communities (Dutfield, 2017; Oguamanam, 2018).

In terms of benefit-sharing, India features a more robust legal architecture than many nations. Yet, executing and distributing these benefits directly down to the local grassroots level remains operationally challenging. Multi-layered bureaucratic procedures often dilute the bargaining power of communities. Ultimately, India exemplifies a "Strong Registry and ABS Mechanism" model that still needs to fine-tune its "Community-led Governance" dimensions.

6.3 *Sui Generis* Intangible Cultural Heritage Law and State-Led Governance: China

China possesses a vast corpus of traditional knowledge and has enacted a *sui generis* legal regime specifically targeting intangible cultural heritage (ICH). The state codified the Intangible Cultural Heritage Law of the People's Republic of China (2011) to define the government's role in surveying, archiving, preserving, transmitting, and promoting ICH (Zhang, 2013).

The defining feature of the Chinese model is centralized, state-led governance. The government spearheads the inventorying of ICH across national, provincial, and local tiers, alongside formally certifying "representative inheritors." This system provides a clear structural blueprint that facilitates systematic state funding, professional training, and intergenerational knowledge transmission (Zhang, 2013). China's strength lies in this statutory institutionalization and formal registries, allowing the state to methodically manage cultural data while promoting heritage as a socio-economic asset.

However, the Chinese framework exhibits limits regarding the direct recognition of communities as primary rights holders. Because the legislative design centralizes authority within state organs, communities are often left with limited autonomy to control, authorize, or deny commercial access to their heritage. When inventorying and management are state-driven, questions arise regarding the actual decision-making power of the source communities and whether they receive an equitable share of commercial yields (Zhang, 2013; WIPO, 2017).

Regarding benefit-sharing, Chinese law excels at incentivizing and subsidizing certified inheritors, but it lacks the formalized, contract-based economic ABS frameworks seen in India. In short, China demonstrates "Robust State Protection and Inventorying" but remains constrained in "Community Rights and Economic Benefit-Sharing."

For the purpose of designing a CBSG framework, China serves as a crucial case study proving that dedicated legislation and heritage registries are necessary, but ultimately insufficient, if they lack provisions that empower communities with structural self-determination and fair economic returns.

6.4 Māori Rights, Cultural Guardianship, and the Wai 262 Claim: New Zealand

New Zealand offers a profound case study on indigenous rights and the integration of cultural guardianship, or *kaitiakitanga*, into the protection of traditional Māori knowledge (*mātauranga Māori*). This discourse centers heavily on the landmark Wai 262 claim before the Waitangi Tribunal, which addresses Māori sovereignty over their knowledge, culture, genetic resources, indigenous flora and fauna, artwork, and cultural expressions (Te Puni Kōkiri, 2024).

The Wai 262 claim deeply examines the intersection of indigenous rights, intellectual property, and cultural resource governance. It goes beyond the protection of specific artistic outputs or compartmentalized knowledge, tackling foundational questions: Who should control *mātauranga Māori*? Who holds authority over traditional arts, culture, *haka*, *waiata*, and *taonga* (treasures)? How should the state formally recognize the role of *iwi* (tribes) and *hapū* (sub-tribes) as the absolute guardians of this heritage? (Te Puni Kōkiri, 2024).

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New Zealand's distinct innovation is its conceptual leap past Western, market-driven intellectual property doctrines. Traditional knowledge and culture are not classified merely as alienable property; they are viewed as *taonga* sacred treasures intrinsically bound to ancestry, community, language, land, and identity. Ownership is therefore re-framed: it is not "ownership" in the proprietary sense, but a profound responsibility to steward, preserve, and transmit.

The principle of *kaitiakitanga* is highly valuable to the CBSG Framework because it demonstrates that traditional knowledge protection should look beyond exclusionary rights or monetization, focusing instead on the community's duty to steward knowledge for future generations. Consequently, access and benefit-sharing mechanisms should be rooted in cultural relationships rather than purely economic, transactional contracts.

Nonetheless, practical translation remains a challenge. Operationalizing *kaitiakitanga* and the findings of Wai 262 into all-encompassing, legally binding statutes is a protracted, evolving process. Navigating the alignment between state law, global intellectual property systems, and *tikanga Māori* (Māori customary law/protocols) remains highly complex (Te Puni Kōkiri, 2024).

Ultimately, New Zealand illustrates the "Cultural and Ethical Dimensions of Community Rights," reinforcing that communities are not passive beneficiaries, but active guardians, primary decision-makers, and the rightful arbiters of their heritage.

6.5 Indigenous Cultural and Intellectual Property (ICIP) and Copyright Limitations: Australia

Australia provides substantial experience regarding the protection of First Nations culture through the framework of Indigenous Cultural and Intellectual Property (ICIP). The ICIP framework was developed to articulate indigenous rights over traditional knowledge, cultural expressions, artwork, oral histories, iconography, rituals, music, dance, and ecological practices tied to land and environment (National Library of Australia, 2024).

The ICIP discourse is pivotal because it highlights the severe shortcomings of conventional copyright laws. Australian copyright law can protect individual, contemporary art or clearly attributable creations, but it completely fails to protect the collective, ancestral rights of indigenous communities over ancient stories, clan designs, rituals, or motifs. ICIP therefore serves as an ethical and operational matrix designed to fill these structural voids in statutory intellectual property law (National Library of Australia, 2024; Blakeney, 2015).

Australia's key success lies in the proliferation of highly structured ethical protocols and best practices adopted across institutional sectors, including museums, libraries, archives, universities, and cultural organizations. These frameworks ensure that the curation, dissemination, and utilization of indigenous cultural materials are executed with strict respect for cultural sensitivities and indigenous authority. The ICIP concept explicitly acknowledges that indigenous cultural heritage may require restricted access protocols, even when physically or digitally housed in public collections (National Library of Australia, 2024).

In the context of benefit-sharing, Australia lacks a unified, standalone statutory regime that codifies ICIP into hard law. However, widespread ICIP protocols have successfully created a normative, ethical standard. Users of indigenous culture are compelled to engage in meaningful consultation, secure proper consent, attribute sources properly, and share benefits through customized, culturally appropriate arrangements. This is a vital lesson for the CBSG Framework: benefit-sharing does not solely depend on hard legislation; it can be institutionalized through professional standards, contractual agreements, organizational codes of practice, and shared cultural ethics.

The primary limitation in Australia is that ICIP compliance remains largely voluntary and policy-driven rather than legally enforceable by the communities themselves. Enforcement can be fragile, particularly against international commercial exploitation or within emerging digital landscapes and Artificial Intelligence (AI) deployment.

Thus, Australia represents a model with a "Robust Ethical and Procedural Framework for Cultural Rights," paired with gaps in binding, statutory benefit-sharing mechanisms.

6.6 Indigenous Knowledge and Co-Governance in State Decision-Making: Canada

Canada offers vital insights into the formal integration of Indigenous Knowledge (IK) into state regulatory and decision-making processes, particularly regarding infrastructure development, environmental impact assessments, and natural resource management. The federal government enacted the Indigenous Knowledge Policy Framework for Project Reviews and Regulatory Decisions to mandate that federal agencies systematically integrate Indigenous Knowledge alongside Western scientific data within regulatory reviews (Government of Canada, 2023).

Crucially, the Canadian framework recognizes Indigenous Knowledge as an independent, fully valid epistemology that stands equal to Western science, demanding equal respect in public governance. The framework explicitly validates that indigenous peoples are not obligated to disclose their knowledge publicly; they retain the absolute right to demand confidentiality or restrict information to specific, mutually agreed-upon purposes (Government of Canada, 2023).

For the development of a CBSG Framework, Canada offers three critical lessons:

1. Traditional knowledge must be treated as an authoritative system of understanding with inherent value, not merely as supplementary data.

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2. The use of traditional knowledge must strictly respect confidentiality, proprietary boundaries, and community-imposed conditions.
3. Sound governance must be anchored in state-community co-management rather than unilateral state determination.

However, Canada's model faces limitations regarding commercial or economic benefit-sharing. Because the federal IK policy framework is tailored toward impact assessments and public regulatory decisions, it does not explicitly provide a statutory system for royalties or commercial profit-sharing from derivative uses (Government of Canada, 2023). Therefore, Canada serves as an exemplary model for "Co-Governance and Respect for Indigenous Epistemology," but it does not represent a complete blueprint for commercial or economic benefit-sharing.

For Thailand, the primary takeaway from Canada is that protecting local wisdom must go beyond archiving registries or enforcing non-infringement prohibitions. Instead, governance frameworks must actively empower community knowledge to play a defining role in public decision-making ranging from natural resource management and sustainable tourism to cultural policy design and the creative economy.

7. CROSS-COUNTRY COMPARISON

Figure 2. synthesizes the comparative analysis of community rights systems and benefit-sharing mechanisms across the six selected countries based on the primary analytical dimensions.

Governance Elements	Thailand	India	China	New Zealand	Australia	Canada	Key Governance Characteristics
 Recognition of Community Rights	△	✓	✓	★	✓	★	Level and clarity of legal recognition of communities as rights-holders in traditional knowledge.
 Registry / Database System	△	★	★	△	△	△	Existence and effectiveness of registration or documentation systems for traditional knowledge and cultural heritage.
 Prior Informed Consent (PIC) and Licensing	✗	✓	△	★	✓	★	Requirement of PIC and licensing systems tailored to community-based traditional knowledge.
 Benefit-Sharing Mechanisms	△	★	△	△	△	△	Existence of fair and equitable benefit-sharing mechanisms with communities.
Overall Assessment (Average)	△ Limited	★ Strong	△ Moderate	✓ Strong	△ Moderate	✓ Strong	Overall maturity of community-based governance for traditional knowledge protection.

Legend: ★ Strong / Comprehensive ✓ Established / Well-developed △ Partial / Emerging ✗ Not Established / Absent

Note: The assessment is based on legal frameworks, policy documents, and academic literature as of the latest available data (2024).

Interpretation

- India demonstrates the most comprehensive system, particularly in registry and benefit-sharing, supported by the Traditional Knowledge Digital Library (TKDL) and the Biological Diversity Act.
- China has established a strong registration system and *sui generis* legislation; however, governance remains state-centred with limited community autonomy.
- New Zealand and Canada show the strongest performance in community rights recognition and PIC, grounded in Indigenous rights, co-governance, and the principles of self-determination.
- Australia relies on ethical frameworks and institutional protocols, but statutory benefit-sharing mechanisms remain limited.
- Thailand remains in an early stage, with fragmented laws and the absence of a comprehensive *sui generis* framework and community-based benefit-sharing system.

Implications for the CBSG Framework

The comparative analysis indicates that effective protection of traditional knowledge requires an integrated governance approach that:

- 1 Recognizes community rights as a foundation.
- 2 Establishes reliable registries with community control.
- 3 Ensures prior informed consent tailored to cultural contexts.
- 4 Provides fair and equitable benefit-sharing mechanisms.
- 5 Promotes sustainable community development and cultural continuity.

Abbreviations: PIC = Prior Informed Consent; TKDL = Traditional Knowledge Digital Library; ABS = Access and Benefit-Sharing; ICIP = Indigenous Cultural and Intellectual Property; ICH = Intangible Cultural Heritage.

Figure 2. Comparative Governance Analysis of Community Rights and Benefit-Sharing Mechanisms Across Six Countries

Key Observations from the Comparative Analysis

The comparative matrix demonstrates that no single country possesses a fully comprehensive or flawless model across all analytical dimensions. India shows significant strengths in defensive registration and formal Access and Benefit-Sharing (ABS) mechanisms, yet its system remains constrained by top-down bureaucratic structures that may limit grassroots community autonomy.

China has developed a highly structured *sui generis* legislative regime and comprehensive inventory systems. However, its model remains predominantly state-led rather than community-driven.

New Zealand places strong emphasis on Indigenous self-determination and cultural guardianship through the principle of *kaitiakitanga*. Nevertheless, the full translation of these customary principles into comprehensive statutory law remains an ongoing and complex process.

Australia has pioneered robust ethical protocols under the framework of Indigenous Cultural and Intellectual Property (ICIP). However, its enforcement mechanisms still rely largely on voluntary compliance, institutional policies, and private contractual arrangements rather than a unified statutory mandate.

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Canada offers an innovative co-governance model in public decision-making, particularly through the recognition of Indigenous Knowledge in regulatory and project review processes. However, it does not position economic benefit-sharing as its primary operational focus.

Thailand, meanwhile, possesses a rich and diverse cultural foundation. However, it still lacks an integrated legal mechanism capable of bringing together community rights, structured licensing systems, and equitable benefit-sharing into a coherent framework.

Consequently, the development of the Community Benefit-Sharing Governance Framework (CBSG Framework) should not simply replicate the model of any single country. Rather, it should strategically synthesize the institutional strengths of different jurisdictions, including India's robust registration and database systems, China's *sui generis* legislative architecture, New Zealand's philosophy of cultural custodianship and guardianship, Australia's ICIP ethical protocols and practice standards, Canada's co-governance and regulatory inclusion principles, and Thailand's own localized socio-cultural context.

8. COMPARATIVE SYNTHESIS: LESSONS FROM SIX COUNTRIES

The country-by-country analysis demonstrates that there is no single, one-size-fits-all model for traditional knowledge protection and benefit-sharing. Each nation has developed specific mechanisms tailored to its distinct historical, legal, and cultural contexts, as well as the unique dynamics between the state and local communities. Nevertheless, five cross-cutting global trends can be synthesized from their collective experiences:

First, countries with robust protection frameworks invariably recognize the status of communities or indigenous peoples as core stakeholders. Although the degree of formal recognition varies with New Zealand, Canada, and Australia prioritizing inherent indigenous rights, while India and China utilize state intervention as the primary mechanism for managing traditional knowledge (UNDRIP, 2007; Te Puni Kōkiri, 2024; Government of Canada, 2023).

Second, registry systems and databases serve as critical instruments to prevent the misappropriation of traditional knowledge. The case of India demonstrates that the Traditional Knowledge Digital Library (TKDL) can effectively serve as prior art evidence to preclude the wrongful patenting of traditional knowledge by external entities (Dutfield, 2011; Chaturvedi, 2016).

Third, Prior Informed Consent (PIC) mechanisms are central to the equitable utilization of traditional knowledge. This principle is intrinsically linked to the Access and Benefit-Sharing (ABS) concepts codified under the Convention on Biological Diversity and the Nagoya Protocol (CBD, 2011).

Fourth, benefit-sharing must encompass a balanced mix of both monetary and non-monetary returns. This includes royalties, community development funds, educational support, institutional capacity building, financial subsidies for heritage inheritors, and cultural preservation initiatives (Bavikatte & Robinson, 2011; Vermeylen, 2007).

Fifth, traditional knowledge protection must be explicitly linked to sustainable community development rather than merely imposing passive prohibitions or non-infringement measures. It must empower communities to leverage their heritage as a viable foundation for generating income, maintaining cultural identity, and facilitating intergenerational knowledge transmission.

Table 3: Synthesis of Country Strengths for CBSG Framework Development

Country	Systemic Strengths	Policy Lessons for the CBSG Framework
Thailand	Rich, diverse cultural heritage and multiple laws addressing specific asset dimensions.	Must integrate currently fragmented statutes into a unified system governing community rights and benefit-sharing.
India	Established the TKDL and a formalized ABS regime for biogenetic resources.	Robust registry systems provide highly effective defensive protection against biopiracy and wrongful patenting.
China	Enacted <i>sui generis</i> legislation backed by a comprehensive, multi-tiered ICH registration system.	Dedicated specialized laws and defined state administrative roles ensure systematic and structured cultural protection.

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Country	Systemic Strengths	Policy Lessons for the CBSG Framework
New Zealand	Grounded in the deeply institutionalized concept of <i>kaitiakitanga</i> (guardianship) and the Wai 262 claim.	Source communities must act as primary cultural guardians and absolute arbiters of the terms of knowledge utilization.
Australia	Formulated the comprehensive ICIP framework and rigorous cultural-ethical codes of practice.	Operational frameworks must establish clear, high-level standards for consultation, authorization, and respect for cultural restrictions.
Canada	Formally mandates the integration of Indigenous Knowledge into public regulatory decision-making.	Communal knowledge systems must hold an authoritative status in public governance rather than serving as mere supplementary data.

9. DEVELOPMENT OF THE COMMUNITY BENEFIT-SHARING GOVERNANCE FRAMEWORK (CBSG FRAMEWORK)

Based on the comparative synthesis, this article proposes the Community Benefit-Sharing Governance Framework (CBSG Framework) as a conceptual architecture for the equitable and sustainable protection of traditional knowledge. This framework operates on the premise that effective traditional knowledge protection requires a systematic integration of community rights, registration systems, prior informed consent, access licensing, benefit-sharing, and sustainable community development into a single, cohesive ecosystem.

9.1 Component 1: Recognition of Community Rights

The formal recognition of community rights serves as the foundational bedrock of the entire governance architecture. If communities are not legally recognized as primary rights holders, they cannot effectively demand prior authorization, active participation, or equitable benefit-sharing. Community rights in this context must encompass the collective right to preserve, use, control, authorize, deny, and directly derive economic and social benefits from their own traditional knowledge (Oguamanam, 2018; UNDRIP, 2007).

9.2 Component 2: Traditional Knowledge Registry Systems

Registry systems serve as vital administrative tools to identify specific elements of traditional knowledge, their geographic origins, their source communities, terms of acceptable use, and associated cultural restrictions. Registries should not function merely as top-down, state-centric inventories. Instead, they must be co-managed by the communities themselves, who retain the right to determine data inputs, levels of public disclosure, and conditions of access. As demonstrated by India, such registries act as powerful defensive mechanisms against external intellectual property misappropriation (Dutfield, 2011).

9.3 Component 3: Prior Informed Consent (PIC)

The utilization of traditional knowledge by external entities must be strictly contingent upon the principle of Prior Informed Consent (PIC). This dictates that communities must receive exhaustive, transparent, and comprehensible disclosures regarding the purpose, scope, commercial or non-commercial impacts, duration, and identity of the user, as well as the anticipated benefits and potential risks, before making a collective decision to authorize or deny access to their traditional knowledge (CBD, 2011).

9.4 Component 4: Licensing Governance

Access to and licensing of traditional knowledge must be managed through clear, legally binding mechanisms. These include formal licensing agreements, mutually agreed terms (MAT), defined commercial usage boundaries, explicit prohibitions against cultural distortion or derogatory exploitation, and robust post-authorization monitoring systems. Strong licensing governance strikes a vital balance between enabling creative or commercial applications of traditional knowledge and safeguarding the rights and dignity of the originating community.

9.5 Component 5: Equitable Benefit-Sharing

Equitable benefit-sharing is the core operational engine of the CBSG Framework, ensuring that the utilization of traditional knowledge does not degenerate into unilateral economic exploitation. Returns must encompass a balanced mix of both monetary and non-monetary forms, including upfront financial compensation, milestone payments, ongoing royalties, cultural heritage trust funds, educational endowments, technology transfer, professional training, and the co-development of community learning centers (Bavikatte & Robinson, 2011; Vermeulen, 2007).

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9.6 Component 6: Sustainable Community Development

The ultimate goal of this governance framework extends far beyond simple financial disbursements; it aims to position traditional knowledge as the primary catalyst for long-term, sustainable community development. This involves leveraging cultural assets to preserve heritage, generate sustainable local income, enhance overall quality of life, secure ancestral knowledge transmission, and build the leadership capacity of younger generations within the community.

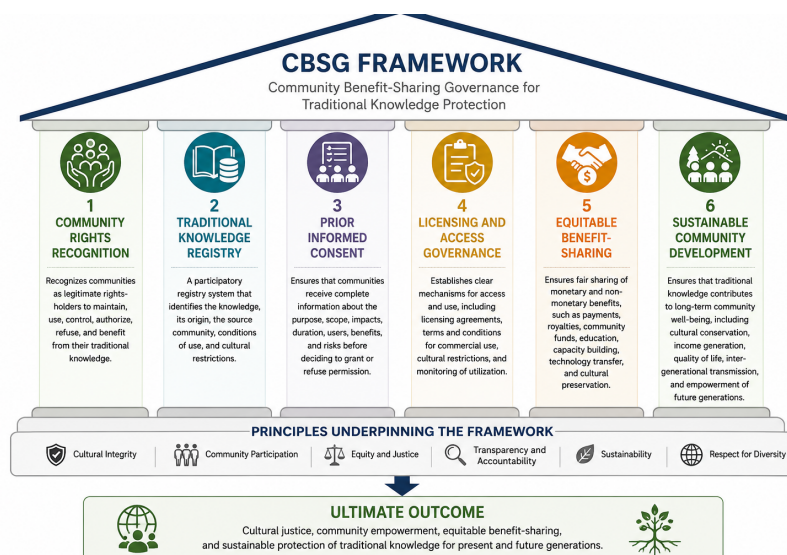


Figure 2. Community Benefit-Sharing Governance Framework (CBSG Framework)

10. THEORETICAL PROPOSITIONS OF THE CBSG FRAMEWORK

To provide scholarly and academic clarity, this article presents five core theoretical propositions for the CBSG Framework:

- 1) Proposition 1: The formal recognition of community rights is the fundamental prerequisite for traditional knowledge protection. If a legal framework fails to recognize the community as a distinct rights-holder, subsequent licensing systems and benefit-sharing regimes will lack a foundational basis of legitimacy.
- 2) Proposition 2: A structured traditional knowledge registry system significantly mitigates the risks of cultural misappropriation, wrongful patenting, and the unauthorized use of traditional knowledge without proper source attribution.
- 3) Proposition 3: Prior Informed Consent (PIC) serves as the definitive mechanism that transforms communities from passive subjects of commercial exploitation into primary decision-makers.
- 4) Proposition 4: Well-governed access and licensing regimes establish an essential equilibrium between safeguarding traditional knowledge and fostering creative, sustainable utilization.
- 5) Proposition 5: Equitable benefit-sharing achieves true meaning only when the derived returns are reinvested to support long-term community development and sustainable cultural preservation.

11. CONCEPTUAL DISCUSSION

The comparative analysis demonstrates that jurisdictions worldwide are increasingly shifting away from individualized intellectual property paradigms toward models centered on collective rights and cultural governance. While conventional intellectual property laws remain important, they cannot comprehensively accommodate traditional knowledge. This limitation exists because traditional knowledge is intrinsically collective, deeply embedded with cultural meaning, and inherently tied to community identity (Blakeney, 2015; Dutfield, 2017).

Crucially, the protection of traditional knowledge must not be viewed merely as a mechanism for non-infringement or passive safeguarding. Instead, it should be designed as a governance framework that empowers communities to utilize their heritage to shape their own futures.

The international cases analyzed offer distinct operational lessons:

- 1) India demonstrates the defensive capability of structured registry systems.
- 2) China highlights the efficacy of dedicated, *sui generis* legislation.
- 3) New Zealand illustrates the profound depth of cultural guardianship.
- 4) Australia underscores the impact of robust ethical and professional standards.
- 5) Canada highlights the vital importance of state-community co-governance.

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For Thailand, the primary lesson is that having multiple relevant laws is insufficient if those statutes remain disconnected from one another. The state must move past purely symbolic recognitions of its Intangible Cultural Heritage (ICH) registries. Registration must be formally linked to enforceable community rights, clear licensing governance, and equitable benefit-sharing mechanisms.

Furthermore, Thailand must prioritize traditional knowledge protection within the digital and creative economies. Elements such as traditional textile patterns, folk music, herbal remedies, local culinary arts, and performing arts are increasingly susceptible to global commercial exploitation. Without appropriate governance mechanisms, originating communities risk losing their rightful economic income, intellectual rights, and autonomous control over their own cultural narratives.

12. POLICY RECOMMENDATIONS FOR THAILAND

Based on the preceding analysis, this article outlines six strategic policy recommendations for Thailand:

12.1 Enact *Sui Generis* Legislation on Community Rights and Traditional Knowledge

Thailand should consider drafting a dedicated, *sui generis* statute that explicitly recognizes community rights over traditional knowledge and intangible cultural heritage. This law should clearly define legal scopes, communal ownership, access licensing mechanisms, and benefit-sharing frameworks.

12.2 Develop a Legally Enforceable Traditional Knowledge Registry System

The national registry system must be legally binding and specify the originating community, the category of knowledge, acceptable scopes of use, cultural restrictions, and predefined licensing terms. This structure will serve as a defensive tool against intellectual misappropriation and wrongful claims.

12.3 Mandate the Principle of Prior Informed Consent (PIC)

Any commercial utilization of traditional knowledge must be strictly contingent upon obtaining Prior Informed Consent from the originating community. Communities must be fully informed of the exact purpose, commercial benefits, potential risks, and scope of use before granting access.

12.4 Formulate Standardized Traditional Knowledge Licensing Agreements The state should develop standardized licensing templates tailored for businesses interacting with traditional knowledge. These templates should span diverse sectors, including fashion, culinary arts, herbal industries, tourism, music, digital media, and Artificial Intelligence (AI).

12.5 Establish a Cultural Benefit-Sharing Fund A defined portion of revenues generated from the commercial use of traditional knowledge should be channeled into a dedicated community or cultural fund. These resources must be used to support local preservation, education, knowledge transmission, and community capacity building.

12.6 Promote Co-Governance Among State, Community, and Private Sectors The state should avoid acting as a paternalistic controller of traditional knowledge. Instead, it must serve as a facilitator and regulator of equity, ensuring that communities are granted direct agency in policy formulation, access determination, and benefit allocation.

13. NOVEL CONTRIBUTIONS OF THE ARTICLE

This article offers four distinct contributions to the academic literature:

1. **A Paradigm Shift in Protection:** It introduces a conceptual shift from viewing traditional knowledge merely as alienable intellectual property to managing it as a holistic system of community governance.
2. **A Synthesized Global Analysis:** It offers a comprehensive synthesis of lessons from six distinct nations, demonstrating that while no single ideal model exists, each country provides valuable component parts that can form a unified framework.
3. **The Conceptualization of the CBSG Framework:** It develops the integrated CBSG Framework, which connects community rights, registration systems, informed consent, access licensing, benefit-sharing, and sustainable development.
4. **Actionable Policy Mapping:** It provides a concrete policy roadmap for Thailand to build an integrated legal framework that harmonizes traditional knowledge with the creative economy and cultural equity.

14. CONCLUSION

Traditional knowledge represents a vital cultural legacy, an economic asset, and a cornerstone of sustainable community development. However, conventional intellectual property regimes remain structurally inadequate for protecting knowledge systems that are inherently collective. The comparative analysis of six nations demonstrates that effective protection requires an integrated approach that connects community rights, registry databases, informed consent, access licensing, benefit-sharing, and community development.

The CBSG Framework proposed in this article offers a conceptual matrix designed to elevate traditional knowledge protection from fragmented legal remedies to an integrated governance system. Under this framework, communities are no longer

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treated merely as passive subjects of state protection, but as active rights-holders, managers, licensors, and primary beneficiaries of their own intellectual legacy.

For Thailand, future legislative and policy design must focus on establishing explicit community rights, developing legally binding registries, institutionalizing consent and licensing mechanisms, and ensuring that benefit-sharing directly feeds back into sustainable local development. By implementing these measures, Thailand's traditional knowledge will transition from a legacy to be passively preserved into a dynamic, equitable force driving economic, social, and cultural prosperity in the 21st century.

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