

Protection and Promotion of Traditional Knowledge of Marginalised Communities: A Legal Perspective

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Abstract: Marginalised rural communities, particularly in tropical countries such as those within Southeast Asia, are often aware of the use of indigenous herbs and agricultural products but concomitantly oblivious as to the means of protection and promotion of using their traditional knowledge. It is estimated that around 1,500 plant species have been widely used for traditional medicines in Southeast Asia. The paper will commence with a discussion of the meaning of “traditional knowledge”, adopting a utilitarian perspective. The paper focuses on the countries of Southeast Asia and provides a legal analysis of the protection of traditional knowledge provided under international treaties, namely: Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS); International Convention for the Protection of New Varieties of Plants (UPOV), International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA); and the Convention on Biological Diversity (CBD). To date, the World Intellectual Property Organization (WIPO) has been unable to agree on the contents of an international legal instrument relating to intellectual property rights over genetic resources, traditional knowledge, and traditional culture. The legislative responses of the 11 nations of Southeast Asia are analysed. Much of the focus of international treaties is on protecting plant breeders’ rights over farmers’ rights, and this imbalance should be addressed. Governments should be proactive and amend their patent legislation to require patent applicants to declare their use of indigenous resources and knowledge. Examples of the development and promotion of traditional knowledge are briefly described.

Keywords: Legal systems, Traditional knowledge, Intellectual property, Marginalised communities, Southeast Asia, farmers’ rights

1. Introduction

Marginalised rural communities, particularly in tropical countries such as those in Southeast Asia, are often aware of the use of indigenous herbs and agricultural products but are oblivious as to how to protect and promote their traditional knowledge. In the Forward to the 2nd edition of ASEAN Herbal & Medicinal Plants, the Secretary-General of ASEAN estimated that around 1,500 plant species have been used for traditional medicines. With reliable support, the people in the region could benefit from utilising herbal and medicinal plants to improve their livelihood and support healthcare (p. iii) (Sukmajaya et al., 2017).

The Southeast Asian nations are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor Leste (East Timor), and Vietnam. All except Timor Leste are members of the Association of Southeast Asian Nations (ASEAN). Timor Leste was granted observer status in November 2022 (ASEAN, 2022). Timor Leste gained independence in 2002, but has yet to develop its corpus of Intellectual Property (IP) law. As a result, WIPO statistics show that there have been no patent or trademark registrations in the country, although there have been registrations by residents abroad (WIPO, 2023d).

1.1 Definition of Traditional Knowledge

There are a variety of definitions of traditional knowledge (TK). A utilitarian definition developed by Balick (2007) considers traditional knowledge as

[the] body of information and set of skills developed by a group of people over time [and] in a constant state of change. As each generation matures, skills perceived as immediately useful are gained, while others with a lower perception of immediate value may be lost. Thus the body of traditional knowledge is never static but rather dynamic in its shape and substance (p 280).

This definition subsumes the terms indigenous knowledge (IK), traditional knowledge (TK) and local knowledge (LK) identified by (Onyanacha, 2022). However, the utilitarian definition is more useful, and the (United Nations Permanent Forum on Indigenous Issues, 2019) considers that traditional knowledge is “the knowledge, innovations and practices of indigenous peoples [d]eveloped from experience gained over the centuries and adapted to the local culture and environment”. This paper uses traditional knowledge in the broadest sense.

1.2 Geographical Indications

As defined in the *Agreement on Trade-related Aspects of International Property Rights (TRIPS)*, “Geographical indications are, for the purposes of this Agreement, indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin.” (art 22.1). The key to understanding the purpose of Geographical indications (GIs) is embodied in the notions of a special tie between the origin and the product, as claimed for drinks such as Darjeeling tea and Champagne, as well as cheeses, for example, Parmigiano Reggiano, and many other products.

2. International Treaty Protection for Traditional Knowledge

2.1 World Intellectual Property Organization (WIPO)

The World Intellectual Property Organization (WIPO) is a self-funding special agency of the United Nations (WIPO, 2023c). All 11 Southeast Asian Nations are Parties to the WIPO Convention (WIPO, 2023b). In 2001 the WIPO General Assembly established the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC, or IGC-GRTKF). Since then, the IGC has tried to agree on the best way to recognise Traditional Knowledge and cultural expressions (Heilprin, 2022).

In July 2022, the WIPOs General Assembly decided that no later than 2024, the preparation of a draft international instrument on the protection of genetic resources and traditional knowledge and the associated discussions must be completed (Heilprin, 2022). “Proposals to require patent applicants to declare their use of indigenous resources and knowledge, among other measures, have been languishing in a WIPO committee for decades” (para 3).

WIPO established the Geneva Act of the Lisbon Agreement (2015) to provide an international GI registration system. Cambodia and Lao PDR are the only Southeast Asian nations that are party to the Geneva Act (WIPO, 2023a). Kampot Pepper from Cambodia was the first product registered as a Geographical Indication (GI) under the Geneva Act (WIPO, 2021).

2.2 Agreement on Trade-Related Aspects of International Property Rights (TRIPS)

In order to accede to membership of the World Trade Organization (WTO), members and potential members must also accede to the *Agreement on Trade-related Aspects of International Property Rights (TRIPS)* (2017) (art 1.1). Whilst not explicitly referring to traditional knowledge, TRIPS covers two related topics that have a significant impact, namely geographical indications and patents.

TRIPS requires Members of the WTO to provide legal means to protect goods “where a given quality, reputation or other characteristics of the good is essentially attributable to its geographical origin” (TRIPS, art 22.1). In short, they are required to protect the geographical indication of goods. This area is worthy of exploration to protect TK, as knowledge and expression are often tied through culture to a particular area.

Members must ensure patents are “available for any inventions, whether products or processes, in all fields of technology, provided they are new, involve an inventive step and are capable of industrial application (TRIPS, art 27.1). They are, however, able to:

exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect ordre public or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law (TRIPS, art 27.2).

Nevertheless, “Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof” (TRIPS, art 27.3(b)). A *sui generis* system (literally “of its own kind”) refers to the ability of a Member to establish their own system rather than using the patent system, many adopting UPOV (below) based legislation or both patent and plant protection.

All Southeast Asian nations are members of the WTO, and thus parties to TRIPS, except Timor Leste, which has Observer status (WTO, 2022).

2.3 International Convention for the Protection of New Varieties of Plants (UPOV)

The aim of the *International Convention for the Protection of New Varieties of Plants (UPOV)* is to grant breeder’s rights to those who have developed a plant variety that is new, distinct, uniform, and stable (UPOV, art 5(1)). All

that is required is for the applicant to comply with the law of the Contracting Party where the application has been lodged and the required fees paid (UPOV, art 5(2)). The right is to be granted for a fixed period of no less than 20 years except for trees and vines, where the period is no less than 25 years (UPOV, art 19). The Contracting Parties must be members of the International Union for the Protection of New Varieties of Plants (UPOV, art 23). It is clear that the aim of the Convention is to protect “professional” plant breeders and not holders of traditional knowledge.

Singapore and Vietnam are members of UPOV (UPOV, 2022a), whilst Brunei Darussalam, Cambodia, Indonesia, Laos PDR, Malaysia, Myanmar, Philippines, and Thailand have observer status (UPOV, 2022b).

2.4 International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

The *International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)* “seeks the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security” (ITGRFA, art 1.1). Notably, the Contracting Parties must recognise Farmers’ Rights, including:

- protection of traditional knowledge relevant to plant genetic resources for food and agriculture;
- the right to equitably participate in sharing benefits arising from the utilisation of plant genetic resources for food and agriculture; and
- the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture (art 9.2).

In addition, the Treaty requires “the Contracting Parties recognise the sovereign rights of States over their own plant genetic resources for food and agriculture, including that the authority to determine access to those resources rests with national governments and is subject to national legislation” (ITGRFA, art 10.1). Annex 1 lists the plant genetic resources for food and agriculture covered by the Treaty.

Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar and the Philippines are Contracting Parties to the Treaty; Thailand is a signatory but has not ratified the Treaty; Singapore, Timor Leste, and Vietnam are not signatories (FAO, 2023).

2.5 Convention on Biological Diversity

The objectives of the Convention on Biological Diversity are:

the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding (art 1).

Unlike the other international treaties discussed above, the *Convention* refers explicitly to traditional knowledge:

Subject to its national legislation [each Contracting party shall] respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices (art 8(j)).

All eleven countries are Parties to the *Convention* (CBD, 2023).

The *Nagoya Protocol* requires the Contracting Parties to

take legislative, administrative or policy measures, as appropriate, with the aim of ensuring that benefits arising from the utilisation of genetic resources that are held by indigenous and local communities, in accordance with domestic legislation regarding the established rights of these indigenous and local communities over these genetic resources, are shared in a fair and equitable way with the communities concerned, based on mutually agreed terms (art 5(1)).

Only Cambodia, Indonesia, Laos PDR, Philippines, Malaysia, Myanmar and Vietnam are parties to the Protocol (CBD, 2023).

3. Initiatives of the Association of Southeast Asian Nations

The aim of the *ASEAN Framework Agreement on Intellectual Property Cooperation* is to strengthen their cooperation in IP (art 1(1) and “promote cooperation in the field of intellectual property among government agencies as well as among the private sectors and professional bodies of ASEAN” (art 1(2)).

In 2000 ASEAN issued the *ASEAN Declaration on Cultural Heritage*. Their definition of cultural heritage includes “indigenous knowledge systems and practices” (art 1). Further

ASEAN Member Countries recognise that traditional knowledge systems and practices, including designs, technology and oral literature, are collectively owned by their local community of origin. ASEAN Member Countries shall ensure that traditional communities have access, protection and rights of ownership to their own heritage. ASEAN shall cooperate for the enactment of international laws on intellectual property to recognise indigenous populations and traditional groups as the legitimate owners of their own cultural heritage (art 9).

In addition, every person has the right to enjoy the benefits of modern scientific and economic progress and their applications (art 11).

Resources published and or developed by the ASEAN Secretariat include:

- ASEAN Intellectual Property Rights Enforcement Handbook (de Beer, 2021)
- Guidelines on Protection of Geographical Indications in ASEAN Member States (ASEAN, 2019)
- Geographical Indications in the ASEAN Region (ARISE+, 2019)
- Traditional Knowledge Digital Library of ASEAN Centre for Biodiversity – a database “crafted on the codified traditional knowledge, particularly about medicinal plants and formulations”. (ASEAN Centre for Biodiversity, 2019)
- Handbook on IP Commercialisation - Strategies for Managing IPRs and Maximising Value (ASEAN Secretariat, 2019)
- Comparative Study on Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions (GRKTCE) (Janke et al., 2020)

Details of plant treaties to which the Southeast Member States are currently contracting parties are provided in Table 1.

Table 1: Southeast Asian Member States Membership of International Plant Treaties (as of 30 April 2023)

Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Timor Leste	Vietnam
<i>World Intellectual Property Convention</i>										
X	X	X	X	X	X	X	X	X	X	X
<i>Geneva Act of the Lisbon Agreement on Appellations of Origin and Geographical Indications</i>										
	X		X							
<i>Agreement on Trade-related Aspects of International Property Rights (TRIPS)</i>										
X	X	X	X	X	X	X	X	X	obs	X
International Convention for the Protection of New Varieties of Plants (UPOV)										
obs	obs	obs	obs	obs	obs	obs	X	obs		X
International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)										
X	X	X	X	X	X	X		sig		

Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Timor Leste	Vietnam
Convention on Biodiversity										
X	X	X	X	X	X	X	X	X	X	X
Nagoya Protocol of Convention on Biodiversity										
	X	X	X	X	X					X

Source: The authors. X = contracting party; obs = observer; sig = signatory only

4. Legislative Protection of Traditional Knowledge Within the Southeast Asian Nations

Each of the Southeast Asian nations has used its own approach to protecting traditional knowledge. Some have enacted omnibus legislation, whilst others have developed a whole suite of legislation. The analysis has been undertaken country by country in alphabetical order and focuses on traditional knowledge (*sensu amplo*) only. Where similar approaches have been adopted, only the details of the first country using that approach are described in detail. Because of space limitations, subsidiary laws and regulations are not discussed.

4.1 Patent Protection

For an invention to be patentable in **Brunei Darussalam**, it must be new, involve an inventive step and be capable of industrial application (Patents Order, 2011 s 13(1)). An invention is “capable of industrial application if it can be made or used in any kind of industry, including agriculture” (s 16(1)). A medical treatment invention for humans or animals is considered incapable of industrial application and hence not patentable (s 16(2)). However, the product is patentable for other applications, provided it is capable of industrial application (s 16(3)). Similar provisions apply in the *Patent Act* of **Singapore** (s 16).

In **Cambodia**, the *Law on Patents* prohibits the patentability of medical treatments (art 4(iii)), plants and animals other than micro-organisms (art v), and plant varieties (vi). Pharmaceutical products are unpatentable until 1 January 2033 under the Law on Amendments to the Law on Patents 2017 (art 136). The **Indonesian Law on Patents** (art 9) has similar patent prohibitions as Cambodia, except that there is no reference to pharmaceutical products. Under the *Law on Intellectual Property (Amended)* of the Lao PDR, medical treatments (art 21(3)) and plants and animals (art 21(4)) are not eligible for registration. The **Malaysian Patents Act** also denies patentability to plants and animals (s 13(b)) and medical treatments (s 13(d)) but allows the patentability of products used in medical treatments (s 13(d)). **Myanmar** also denies patentability to medical treatments, plants and animals under the *Patents Law* (s 14(A)). The **Philippines’** patentability requirements are regulated by the *Intellectual Property Code of the Philippines* (s 22) and are the same as those of the **Malaysian Patents Act**. In **Thailand**, as well as naturally occurring organisms (s 9.1) and medical treatments (s 9(4), the compounding of a drug to fill a doctor’s prescription (s 36(3)) is not patentable under the *Patent Act*.

Patents in **Vietnam** are regulated by the *Law on Intellectual Property* as amended by the *Law amending the Law on Intellectual Property*. Again, plants, animals and medical treatments are non-patentable (art 59).

4.2 Plant Varieties Protection

Plant breeders are given protection in **Brunei Darussalam** under the *Plant Varieties Protection Order*. Restricted farmers’ rights are protected (s 30). The *Law on Seed Management and Plant Breeders Rights* of **Cambodia** is similar concerning the protection of farmers’ rights. **Indonesia’s Law on Plant Variety Protection** is also similar except for one crucial proviso: local varieties owned by the community are under the control of the Government (art 7(1)), as are their regulation (art 7(4)). The **Lao PDR Law on Intellectual Property** has similar plant breeder protections (pt IV). However, it exempts acts done privately and for non-commercial purposes, experimental purposes, and breeding of other varieties (art 86). **Malaysia** has enacted the *Protection of New Plant Varieties Act* to protect plant breeders’ rights while protecting farmers’ rights (s 31). **Myanmar** approached the development of plant varieties in two directions.

On the one hand, the *New Plant Variety Protection Law* protects plant breeders' rights whilst protecting farmers' rights and the *Seed Law (as amended)* to develop the quality of the existing seed stock. The Philippine Plant Variety Protection Act regulates plant varieties protection in the Philippines and includes limited protection of farmers' rights (s 43(d)). In **Singapore**, the *Plant Varieties Protection Act* only includes limited protection of farmers' rights (s 31(2)). **Vietnam** protects plant breeders' rights under the relevant provisions of the *Law on Intellectual Property as amended* (art 157-art 197). At the same time, the *Seed Ordinance* seeks to develop the seed industry as "plant genetic resources are a national property which is managed by the State" (art 101).

Thailand provides the most comprehensive rights for domestic users under the *Plant Varieties Protection Act*. In particular, it allows for the registration of a plant variety that only grows in a particular locality and has not been registered as a new plant variety (s 42). It can be registered by a community that can share in the profits so generated (s 49). In addition, the Act established a *Plant Varieties Protection Fund* to provide funds "for the purposes of assisting and subsidising activities related to the plant varieties conservation, research and development" (s 54).

4.3 Promotion of Traditional Medicine

Both **Myanmar** with the *Myanmar Traditional Medicine Council Law* and **Thailand** with the *Protection and Promotion of Traditional Thai Medicinal Intelligence Act* legislated to control, protect and promote traditional medicine.

4.4 Geographical Indication Protection

GIs can be registered in **Brunei Darussalam** under Trade Mark legislation. It can be "a mark distinguishing the goods or services of members of an association which is the proprietor of that mark from those of other undertakings" (s 50). Alternatively, it can be "a mark indicating that the goods or services in connection with which it is used are certified by the proprietor of that mark in respect of origin, material, mode of manufacture of goods or performance of services, quality, accuracy or other characteristics" (s 52). A similar definition is included in the *Trademark Law of Myanmar* (s 2(o)), which covers GIs. The **Philippines** regulates GIs under the Trademark provisions of the *Intellectual Property Code of the Philippines* (pt III). A GI is not defined. Instead, a collective mark is to be used. It is "any visible sign designated as such in the application for registration and capable of distinguishing the origin or any other common characteristic, including the quality of goods or services of different enterprises which use the sign under the control of the registered owner of the collective mark" (s 121.2).

Cambodia uses specific GI legislation – *Law on Geographical Indications*. In **Indonesia**, GIs are regulated under the *Law Regarding Trademarks and Geographical Indications*. **Lao PDR** protects GIs under the *Law on Intellectual Property* (pt III). **Malaysia** has enacted specific GI legislation – the *Geographical Indications Act*. **Singapore** enacted the *Geographical Indications Act* to cover GIs. In **Thailand**, GIs are protected under the *Protection of Geographical Indications Act*. **Vietnam** regulates GIs under the GI provisions of the *Law on Intellectual Property* (art 79-art 83).

5. Practical Examples of Community Engagement

This section provides brief examples of community engagement to protect and commercialise traditional knowledge (*sensu amplo*) in the agricultural sector.

5.1 Commercialising Traditional Products

- *Plai Oil for Pain Relief* - Walailak University worked with the local community and the subdistrict hospital to identify traditional herbal remedies, prepare guidelines for their use and develop a product for commercialisation (Walailak University, 2021a; Walailak University, 2021b).

5.2 Developing Geographical Indications

- *Khao Khiriwong Mangosteens* – Walailak University worked with the local community to register the mangosteens by defining their unique characteristics and growing conditions (Walailak University Prepares, 2020).
- *Development of Legal Framework in Cambodia* - Agence Française de Développement (AFD) assisted in the administration and development of GIs (AFD, 2019b)
- *Developing the Bolaven Plateau Coffee Industry in Lao PDR* - AFD has supported the Bolaven coffee industry, including its GI registration since 1998 (AFD, 2019a).

5.3 Developing and Commercialising New Products

- *Van Yen Cinnamon (Vietnam) and Mak Mao Berry Juice (Thailand)* - AFD assisted with promotional activities to take advantage of their GI registration (AFD, 2019b).

6. Discussion and Recommendations

There is a tendency within the Southeast Asian nations to protect plant breeders' rights using the UPOV Convention model whilst providing less protection to traditional knowledge and farmers' rights. Whilst some nations provided little or no protection, Myanmar, Thailand and Vietnam developed a more balanced legal framework. This imbalance should be addressed by legislation similar to Thailand's *Plant Varieties Protection Act* and the *Seed Laws* of Myanmar and Vietnam. Whilst ASEAN has undertaken work on recording medicinal herbs, a monumental task remains.

Southeast Asian economies are actively developing GIs, with Thailand particularly encouraging and marketing its GI products. Trademarks are a necessary but not sufficient method for registering GIs. GIs should not just link a product to a region, as is the case with trademarks. They should also relate to the unique properties required to define the quality of the product. It is considered that this inadequacy should be addressed by Brunei Darussalam, Myanmar and the Philippines by amending their legislation to cover GIs as a particular type of IP, as is the case in the other economies. Currently, only Cambodia and Lao PDR are parties to the Geneva Act of the Lisbon Agreement established by WIPO to provide an international GI registration system. Whilst ASEAN has its own GI registration, it could investigate whether there are benefits in its members becoming parties to the Geneva Act. The downside is the small number of parties requiring members to register their products to individual non-members as required.

Research undertaken by the authors indicates that some Universities may be undertaking research that is potentially based on earlier traditional knowledge without acknowledging the source. Governments should be proactive and amend their patent legislation to require patent applicants to declare their use of indigenous resources and knowledge while WIPO negotiations to that end continue.

A suitable IP legislative framework only is only a part of the solution. The suite of legislation must provide coverage for both the protection and the promotion and commercialisation of traditional knowledge. In addition, there must be a suite of legislation and codes of practice addressing items such as good manufacturing practices (GMP), product safety, advertising codes of practice and trade practices.

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