

Traditional Knowledge and Intellectual Property Protection: Challenges and Opportunities in Thailand

คุณปัญญาท่องถินและการคุ้มครองทรัพย์สินทางปัญญา: โอกาสและความท้าทายของประเทศไทย

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Abstract

Traditional knowledge (TK) in Thailand is developed, maintained, and passed down from generation to generation. Unquestionably, TK contributes significantly to a nation's identity, health care, culture, food security, environment, and development. Numerous indigenous communities in Thailand depend heavily on TK for their livelihoods and identities. As a result, the misappropriation of TK can have a negative impact on their interests and rights. Currently, there is no law protecting TK in Thailand. Inequitable exploitation of TK for commercial or industrial purposes can therefore jeopardise the rights of TK holders, specifically

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indigenous people, and local communities. Existing intellectual property (IP) rights, particularly geographical indications (GIs), plant variety rights, and trade secrets, can be utilised to protect TK. However, each of the available IP protection regimes has both benefits and drawbacks. The statutory granting criteria of each regime are insufficient to cover all types of TK. Therefore, both advantages and disadvantages should be carefully considered when selecting an appropriate protection mechanism. However, TK that does not meet the requirements established by the laws will not be protected. This demonstrates that Thailand's TK cannot be adequately protected using only existing IP regimes. There are certain restrictions and loopholes in the current legal system that allow for the misappropriation of TK. To increase the effectiveness of the protection of TK in Thailand, the adoption of a *sui generis* system for TK protection should be strongly reconsidered. Furthermore, regional cooperation among the ASEAN members in this area should be strengthened.

Keywords: Traditional Knowledge, Intellectual Property, Local Community

บทคัดย่อ

ภูมิปัญญาท้องถิ่นในประเทศไทยได้รับการพัฒนา รักษา และส่งต่อจากรุ่นสู่รุ่น ซึ่งภูมิปัญญาท้องถิ่นเหล่านี้ล้วนแล้วแต่มีความสำคัญต่อการพัฒนาประเทศไทยฯ ด้าน ไม่ว่าจะเป็นด้านการสร้างเอกสารกฎหมาย สุขอนามัยและการรักษาโรค วัฒนธรรม ความมั่นคงด้านอาหาร และสิ่งแวดล้อม ภูมิปัญญาได้รับความนิยมและท้องถิ่นจำนวนมากในประเทศไทยต่างก็ใช้และพัฒนาภูมิปัญญาท้องถิ่นเหล่านี้ในการดำเนินการชีวิตและรักษาอัตลักษณ์ของตนให้คงอยู่ ดังนั้น การที่ภูมิปัญญาท้องถิ่นเหล่านี้ถูกนำไปใช้ประโยชน์ในเชิงพาณิชย์โดยมิได้รับอนุญาตอย่างถูกต้องย่อมส่งผลเสียต่อชุมชนพื้นเมืองและท้องถิ่นเหล่านี้เป็นอย่างมาก โดยในปัจจุบันประเทศไทยยังไม่มีกฎหมายเฉพาะที่ตราขึ้นเพื่อคุ้มครองภูมิปัญญาท้องถิ่นแต่อย่างใด มีเพียงการใช้กฎหมายทรัพย์สินทางปัญญา โดยเฉพาะอย่างยิ่งกฎหมายคุ้มครองสิ่งบ่งชี้ทางภูมิศาสตร์ กฎหมายการคุ้มครองพันธุ์พืช และกฎหมายความลับทางการค้าในการคุ้มครองภูมิปัญญา ท้องถิ่นบางประเภท อย่างไรก็ตามการคุ้มครองทรัพย์สินทางปัญญาในแต่ละประเภทต่างก็มีทั้งข้อดีและข้อเสีย นอกจากนี้ก็มีการใช้กฎหมายในการคุ้มครองในแต่ละประเภทที่กฎหมายกำหนดนั้นไม่เพียงพอที่จะคุ้มครองภูมิปัญญาท้องถิ่นในทุกๆ รูปแบบ ดังนั้นในการเลือกใช้ประเภทของทรัพย์สินทางปัญญาที่เหมาะสมเพื่อคุ้มครองภูมิปัญญาท้องถิ่นจึงควรพิจารณาทั้งข้อดีและข้อเสียอย่างระเอียดถี่ถ้วน อย่างไรก็ตามกฎหมายปฎิเสธไม่ได้ว่าบังคับกฎหมายภูมิปัญญาท้องถิ่นบางประเภทที่ขาดคุณลักษณะบางประการที่กฎหมายกำหนดไว้ไม่อาจได้รับการคุ้มครองภายใต้ระบบกฎหมายทรัพย์สินทางปัญญาที่มีอยู่ในปัจจุบันได้ สิ่งเหล่านี้จึงแสดงให้เห็นว่าการคุ้มครองภูมิปัญญาท้องถิ่นโดยการใช้กฎหมายทรัพย์สินทางปัญญาที่มีอยู่เพียงอย่างเดียววนั้นยังคงไม่เพียงพอ ทั้งนี้เนื่องจากกฎหมายทรัพย์สินทางปัญญาบังคับมีข้อจำกัดและซองโหวตบางประการที่ไม่สอดคล้องกับคุณลักษณะเฉพาะของภูมิปัญญาท้องถิ่น ดังนั้นเพื่อเป็นการเพิ่มประสิทธิภาพในคุ้มครองภูมิปัญญาท้องถิ่นในประเทศไทยให้ดียิ่งขึ้น การตรากฎหมายเฉพาะเพื่อคุ้มครองภูมิปัญญาท้องถิ่นควรได้รับการพิจารณาอีกครั้งหนึ่ง นอกจากนี้ ยังควรเสริมสร้างความร่วมมือระดับภูมิภาคระหว่างสมาชิกประเทศไทยในด้านนี้ให้มากขึ้นอีกด้วย

คำสำคัญ: ภูมิปัญญาท้องถิ่น, ทรัพย์สินทางปัญญา, ชุมชนท้องถิ่น

1. Introduction

Thailand is rich in traditional knowledge (TK) that is developed, sustained, and passed down from generation to generation. It is undeniable that TK contributes significantly to a country's identity, health care, culture, food security, environment, and development.¹ Many indigenous communities in Thailand rely heavily on TK for livelihood and identity. As a result, misappropriation of TK can severely prejudice their interests and rights. There is currently no specific law in Thailand protecting TK. Therefore, inequitable exploitation of TK for commercial or industrial purposes can prejudice the rights of TK holders, particularly indigenous people and local communities. More than ten years ago, there was a social and political movement in Thailand to protect TK and recognise the rights of local communities.² There has been an effort to establish a *sui generis* system for the protection of TK by drafting “The Thai Traditional Knowledge Protection Act B.E...” The primary objectives of this proposed law are to prevent the misuse of TK and to prevent outsiders from commercialising it without compensating indigenous people fairly and adequately. However, this process has not yet been developed appropriately due to a variety of challenges, including the fact that TK is very complicated and relates to a wide range of subjects and government agencies.³ In addition, there is still ambiguity in a number of areas, including the definition and scope of protection for TK, as well as its ownership.

Notwithstanding, existing intellectual property (IP) rights have been used as a mechanism to protect TK. For instance, patent and geographical indication (GI) protection may be used to protect TK based innovations that can satisfy the granting criteria provided by laws.⁴ However, each existing IP regime contains both advantages and disadvantages. Furthermore, these laws are not specifically enacted for the purpose of protecting TK. Some forms of TK, especially knowledge that has a long history and is frequently passed down orally cannot be protected by IP systems. Moreover, in some cases, IP regimes are being used

¹ V.K. Gupta, “Protecting India’s Traditional Knowledge”<http://www.wipo.int/wipo_magazine/en/2011/03/article_0002.html> accessed 30 May 2020.

² Sirakarn Meeklam, “Protection of Traditional Knowledge Associated with Plant Genetic Resources: A Comparative Study of Thai Law and Indian Law” (Master’s Thesis, Thammsat University 2914) 78.

³ Ibid., 78-80.

⁴ WIPO, “Traditional Knowledge”, <https://www.wipo.int/tk/en/tk/>, accessed 15 June 2022.

as a tool for legitimate exploitation of developing countries' TK and indigenous resources. TK holders claimed that the current IP regimes was designed by Western countries for Western countries.⁵ Consequently, some argued that using the conventional IP regimes may not be suitable and sufficient to protect TK. To protect TK for the utmost benefits of indigenous communities, an appropriate and effective measure is needed to be developed. As a result, the purpose of this article is to clarify whether the existing protection of TK under conventional IP regimes is sufficient, determine the most suitable IP regimes to protect TK, and investigate the challenges and opportunities in protecting TK in Thailand under these conventional IP regimes.

2. The General Concept of TK

Although the term “traditional knowledge” is frequently used, its precise definition is rarely provided.⁶ According to WIPO, TK is defined as “knowledge, know-how, skills, and practices that are developed, sustained, and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity.”⁷ In other words, it is a knowledge system that has been continuously developed based on the experience of local people and other circumstances such as culture and environment of the local community.⁸ Therefore, it can be said that TK is the knowledge, practices, and innovations that have been passed down from generation to generation and are part of the traditions or heritage of Indigenous communities. Moreover, TK is considered “an inherent factor of cultural identification of its holders”.⁹ TK has become more

⁵ Daniel J. Gervais, “Intellectual Property, Traditional Knowledge and Genetic Resources: A Challenge to the International Intellectual Property System” (International Conference on Intellectual Property, the Internet Electric Commerce and Traditional Knowledge Organized by WIPO and the National Intellectual Property Association of Bulgaria, Boyana Government ResidenceSofia, May 29 to 31, 2001, 4.

⁶ J. Mugabe, P. Kameri-Mbote and D. Mutta, “Traditional Knowledge, Genetic Resources and Intellectual Property Protection: Towards a New International Regime” (2005) IELRC Working Paper, 2, <http://www.ielrc.org/content/w0105.pdf> Working Paper, accessed 15 May 2022.

⁷ WIPO (n 4).

⁸ Rauna Kuokkanen, “Indigenous Knowledge”

http://www.globalautonomy.ca/global1/glossary_pop.jsp?id=CO.0056 accessed 12 May 2022.

⁹ Intergovernmental Committee on Intellectual Property and Genetic Resources, “Traditional Knowledge and Folklore Elements of a *Sui Generis* System for the Protection of Traditional

recognised as a valuable asset for both developed and developing countries that are rich in biodiversity and have their own unique culture and knowledge.¹⁰ Regional economic integration such as ASEAN, African Union, and the European Union also gave much emphasis on the promotion of TK protection. For instance, ASEAN consists of the member states that are sources of TK. Therefore, ASEAN recognised the need to enhance regional cooperation to protect TK in all the member states. This can be seen from the ASEAN Economic Community (AEC) Blueprint 2025 and the ASEAN Intellectual Property Rights Action Plan 2015-2025 which clearly states the enhancement of regional mechanisms to promote asset creation and commercialisation through TK as one of the ASEAN strategic goals in the IP sectors.¹¹

Concerning the existence of TK, it may not be developed in expressly systematic procedures.¹² Some TK has been passed down through speech from one generation to the next.¹³ TK can also be in form of expressions of folklore.¹⁴ WIPO defines folklore as inter-generational and communal creative processes that reflect and identify a community's history, cultural and social identity, and values. This includes verbal expressions, such as folk tales, folk poetry, and riddles, signs, words, symbols, and indications; musical expressions, such as folk songs and instrumental music; and actions, such as folk dances and plays.¹⁵ It is typically expressed through non-technological means and passed down from one generation to the next in a community through memory, word of mouth, or visual

Knowledge" (2002) WIPO/GRTKF/IC/4/8, 19, www.wipo.int/edocs/.../tk/.../wipo_grtkf_ic_3_8.doc, accessed 15 May 2022.

¹⁰ UNCTAD, "Ongoing Loss of Traditional Knowledge Calls for Urgent Action, Says UNCTAD" <<https://unctad.org/press-material/ongoing-loss-traditional-knowledge-calls-urgent-action-says-unctad>> accessed 25 May 2022.

¹¹ ASEAN, "the ASEAN Intellectual Property Rights Action Plan 2016-2025", [https://www.aseanip.org/Portals/0/ASEAN%20IPR%20ACTION%20PLAN%202016-2025%20\(for%20public%20use\).pdf?ver=2017-12-05-095916-273](https://www.aseanip.org/Portals/0/ASEAN%20IPR%20ACTION%20PLAN%202016-2025%20(for%20public%20use).pdf?ver=2017-12-05-095916-273), 2.

¹² Ibid.

¹³ WIPO (n 4).

¹⁴ Ibid.

¹⁵ WIPO, *World Intellectual Property Organization (WIPO), Intellectual Property and Traditional Cultural Expressions/Folklore, a series of Booklets dealing with intellectual property and genetic resources, traditional knowledge and traditional cultural expressions/folklore Booklet n°1* (WIPO Publication 2003) 5.

means.¹⁶ Furthermore, folklore is considered an important element of a country's history and culture. It is especially important for developing countries, which see folklore as a way for people to express themselves and their social identity.¹⁷ Therefore, the need for protection of expression of folklore is more strongly perceived in developing countries.

Additionally, some TK is closely related with genetic resources.¹⁸ This includes any part of an animal, plant, or microorganism that is useful or valuable, such as herbs used in medical treatment, microorganisms used in food preservation, etc.¹⁹ Most genetic resources and related TK usually originate in developing countries with high biodiversity.²⁰ Moreover, due to its increased commercial value in international trade, developing countries have been facing with misappropriation of genetic resources, also known as "bio-piracy".²¹ This clearly demonstrates the economic value of TK.²²

Concerning the ownership of TK, it is debatable who owns the TK. Some countries claimed that since TK is transmitted from generation to generation, determining the rightful owner can be difficult.²³ Meanwhile, some countries asserted that similar to some forms of IP rights such as Geographical Indications (GIs), TK can be collectively owned by a community.²⁴ A specific piece of TK, on the other hand, can be owned by a member of a community.²⁵

¹⁶ Ibid.

¹⁷ WIPO (n 4).

¹⁸ WIPO, *Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Culture Expressions* (WIPO Publication 2020) 18.

¹⁹ Ibid.

²⁰ The Greens/EFA, "Genetic Resources and Biopiracy", <https://www.greens-efa.eu/en/article/news/genetic-resources-and-biopiracy>, accessed 20 May 2022.

²¹ Sakkapan Chitchong, "Legal Policy Discussions on TRIPs Agreement and the Protection of Traditional Knowledge in Developing Countries" The Intellectual Property and International Trade Forum, 288.

²² Joseph M. Wekundah, "Why Protect Traditional Knowledge" (African Technology Policy Studies Network Biotechnology Trust Africa Special Paper Series No. 44, 2012) 10.

²³ Tshimanga Kongolo, *Unsettled International Intellectual Property Issues* (Kluwer Law International B.V. 2008) 39.

²⁴ Ibid.

²⁵ Ibid.

3. International Frameworks for the Protection of TK

Although there are numerous international treaties concerning IP rights, none of them specifically address the issue of TK. However, the Convention on Biodiversity (CBD) and Trade Related Aspects of Intellectual Property Rights (TRIPs) can be considered as the existing international instruments that have been implemented to protect TK. Furthermore, the establishment of the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (ICG) can help facilitate negotiations among the WIPO member states to explore an appropriate measure to enhance the protection of TK internationally.

3.1 The Convention on Biodiversity (CBD)

The CBD was adopted in 1992 and is regarded as the most significant international convention concerning biodiversity. As of now, there are 196 contracting states. Its major objective is to protect the world's biodiversity and ensure sustainable use of biological diversity.²⁶ According to Article 8(j) of the CBD²⁷, the CBD encourages the parties to implement national legislation to protect TK. The CBD explicitly acknowledges the role of TK and requires the parties to guarantee their protection. There are three essential objectives related to TK as follows. Firstly, the parties to the Convention are required to respect, preserve, and maintain the TK that is relevant for the conservation and sustainable use of biological diversity. Secondly, the parties are required to promote the wider application of such knowledge with the approval and involvement of its holders. Lastly, the parties are required to ensure the equitable sharing of the benefits from the utilisation of such TK with the

²⁶ Stas Burgiel, "Convention on Biological Diversity: A Progress Report", <http://www.scidev.net/en/policy-briefs/convention-on-biological-diversity-a-progress-report-1.html>, accessed 23 May 2022.

²⁷ Article 8(j) of the CBD

"Each contracting Party shall, as far as possible and as appropriate:
Subject to national legislation, 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 utilization of such knowledge innovations and practices."

indigenous communities concerned. Furthermore, there is an essential principle concerning TK protection known as the “prior informed consent” doctrine. Article 15 of the CBD states that, “access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources.” Moreover, Article 8(j) of the CBD also provides a clear basis for this doctrine by stating that TK of indigenous and local communities shall be used with “the approval and involvement of the holders of such knowledge, innovations and practices”.

Thus, according to the CBD, the parties contain their sovereignty over their natural resources in order to govern access to TK on the basis of prior informed consent and the equitable sharing of the benefits derived from the use of TK.²⁸ However, in some countries, particularly developing and least developed countries that are rich in biodiversity, their TK has been exploited and developed to be highly-priced inventions by developed countries without their consent or their sharing of the benefits derived from such products.²⁹ This situation is known as “bio-piracy” which refers to “the ways that corporations from the developed world claim ownership of, free ride on, or otherwise take unfair advantage of, the genetic resources and traditional knowledge and technologies of developing countries”³⁰. Concerning this issue, the protection of TK has long been debated between developed and developing countries due to the different points of view. From a developed country’s perspective, TK is in the public domain and “bio-piracy” cannot occur.³¹ From another point of view, developing countries argued that the current IP system, particularly patents can lead to bio-piracy and unsustainable uses of biodiversity.³²

²⁹ Craig D. Jacoby and Charles Weiss, “Recognizing Property Rights in Traditional Biocultural Contribution” (1997) 16 STAN. ENVTL. L.J. 75, 75-81.

³⁰ Graham Dutfield, “Identification of Outstanding ABS Issues: Access to GR and IPR. What is biopiracy? International Expert Workshop on Access to Genetic Resources and Benefit Sharing, 1, <http://staff.unila.ac.id/priyambodo/files/2017/04/Biopiracy.pdf>, accessed 28 June 2022.

³¹ Rosa Giannina and Alvarez Nunez, “Intellectual Property and the Protection of Traditional Knowledge, Genetic Resources and Folklore: The Peruvian Experience” (2008) 12 Max Planck UNYB 487, 490.

³² Ibid.

3.2 Trade Related Aspects of Intellectual Property rights (TRIPs)

When the world had become more concerned about strengthening IP protection to promote technological development and economic growth, the TRIPs agreement was adopted and used as an important tool in efforts to harmonise IP laws at the international level. TRIPs provide global minimum standards in IP rights, namely copyright and related rights, trademarks, patents, industrial designs, geographical indications, plant variety rights, trade secrets, and layout-designs of integrated circuits, that all WTO members are obliged to implement in their national laws.³³

Concerning TK protection, TRIPs does not actually mention TK.³⁴ However, it can be claimed that TRIPs added new dimensions to the debate on IP rights in TK.³⁵ According to Article 1 of TRIPs, it provides some flexibility for the contracting states to implement the provisions in the agreement by stating that “[m]embers may, but shall not be obliged to, implement in their domestic law more extensive protection than is required by [the] Agreement, provided that such protection does not contravene the provisions of [the] Agreement.” This means that despite the absence of any mention of TK, the member states can invoke this provision to enact specific legislation governing TK protection.³⁶ Thus, although TRIPs does not specifically provide protection for TK, it does allow for the establishment of alternative non-conventional IP regimes to protect TK.

3.3 The establishment of the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (ICG)

The IGC was founded in 2000. It is a forum where WIPO member states discuss IP issues related to access to genetic resources and benefit-sharing, as

³³ David L. Blenkhorn, *Competitive Intelligence and Global Business* (Greenwood Publishing Group 2005) 137.

³⁴ IISD, “The TRIPS Agreement and Biological Diversity” (IISD Trade and Development Brief No.8 of Series, 2003).

³⁵ John Mugabe, “Intellectual Property Protection and Traditional Knowledge: An Exploration in International Policy Disclosure”,

https://www.wipo.int/edocs/mdocs/tk/en/wipo_unhchr_ip_pnl_98/wipo_unhchr_ip_pnl_98_4.pdf?fbclid=IwAR2hOdwy08yeU4l-fhbbOECwEXE5gZy4QfxeMzpT-3wQMUUE2mc6pZkJOoY, accessed 26 May 2022.

³⁶ Dutfield, *Can the TRIPS Agreement Protect Biological and Cultural Diversity?* (Biopolicy International No. 19, ACTS Press, Nairobi, 1997) 16.

well as the protection of TK and cultural expressions.³⁷ According to its policy objectives and core principles, the value of TK in many aspects that can provide benefits to humanity are clearly recognised.³⁸ It also stressed the importance of protecting TK in a way that is balanced, fair, and allows TK holders the authority they require. This is similar to how intellectual creations and innovations are protected.³⁹ In addition, it emphasised that TK protection should be consistent with and supportive of existing IP systems and should expand the application of appropriate IP systems to TK subject matter for the benefit of TK holders and the general public.⁴⁰ To achieve this goal, the ICG has been undertaking various negotiations to finalise an agreement on international legal instruments for the protection of TK. According to the ICG Committee's work in the 2022/2023 biennium, the Committee will continue to further its goal of coming to an agreement on an international legal instrument or instruments that will protect traditional knowledge, genetic resources, and traditional cultural expressions in a fair and effective way.⁴¹ This clearly demonstrates progressive steps towards the development of a binding international instrument that directly address the protection of TK.

4. TK and Conventional IP Protection

Protecting TK through conventional IP system is still debatable whether it is adequate and effective. For instance, it was claimed that it may not be possible to protect TK through patent system.⁴² According to Article 27.1 of

³⁷ WIPO, “Intergovernmental Committee (IGC)”, <https://www.wipo.int/tk/en/igc/>, accessed 16 September 2022.

³⁸ WIPO, “Summary of Draft Policy Objectives and Core Principles”, https://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_7/wipo_grtkf_ic_7_5-annex1.pdf, accessed 16 September 2022.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ WIPO, “Report on the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC)” October 4 to 8, 2021, <https://www.wipo.int/export/sites/www/tk/en/documents/pdf/igc-mandate-2022-2023.pdf>, accessed 16 September 2022.

⁴² Henrik Ardhede, “Traditional Knowledge and the Patent System – Irreconcilable differences or a simple case of mistaken identity?” (Master Thesis, University of Lund) 7.

TRIPs, to be granted patent protection, the invention must be new, involve an inventive step and be capable of industrial application. When the followed criteria are satisfied, an exclusive right to make use of and exploit invention for a limited period will be granted to a patent applicant.⁴³ However, over the past few years, patent has been criticised due to its failure in preventing the misappropriation of TK.⁴⁴ Since most TK has been used and existed for a long time, as well as being based on knowledge passed down from generation to generation, the novelty and inventive step requirements may not be satisfied, rendering the invention non-patentable.⁴⁵

Furthermore, some countries chose to rely on copyright to protect their expressions of folklore. However, there are some arguments why copyright might not be the suitable measure to protect TK. Copyright aims to protect the original literary and artistic works against unauthorised uses.⁴⁶ Only the right holder, who is the author of the work, is granted the exclusive rights to adapt, distribute, perform, reproduce, and display the work. Expression of folklore is considered an important element of the cultural heritage of every nation. In the least developed countries' perspective, folklore is considered a means of expressing social identity of the local communities.⁴⁷ However, since expression of folklore is a “result of efforts and creativity not of a person or group of people but of generations of people over a long span of time”⁴⁸, it would be difficult to prove authorship of folklore by identifying a specific person or group of persons.⁴⁹ Furthermore, since “originality” is one of the requirements in order to obtain

⁴³ WIPO, “Methodological Information”, http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/patent_stats_methodology.pdf, accessed 17 May 2022.

⁴⁴ Dinesh Dayma, “Protection of Traditional Knowledge in Indian Patent Act”, <http://www.goforthelaw.com/articles/fromlawstu/article76.htm>, accessed 25 May 2022

⁴⁵ Tesh Dagne, “Protecting Traditional Knowledge in International Intellectual Property Law: Imperatives for Protection and Choice of Modalities” (2014) 14 J. Marshall Rev. Intell. Prop. L. 25, 38.

⁴⁶ WIPO, “Intellectual property and traditional cultural expressions/folklore” Booklet Number 1, 9, http://www.wipo.int/freepublications/en/tk/913/wipo_pub_913.pdf, accessed 17 May 2022.

⁴⁷ Mihály Ficsor, “The Protection of Traditional Cultural Expressions/Folklore” (WIPO National Seminar on Copyright, Related Rights, and Collective Management) WIPO/CR/KRT/05/8, 1

⁴⁸ Weerawat Weeraworawit, “Protection By Copyright and Neighboring Rights” (Papers presented at UNESCO-WIPO World Forum on the Protection of Folklore, Phuket, April 8-10 1997) 109.

⁴⁹ Ibid.

copyright protection, folklore may fail to fulfil these criteria. The expression of folklore does not need to be original since it may come from the development of new generations to preserve or improve such work to be better than a previous one.⁵⁰ In other words, some expressions of folklore may not show high standards of originality. Additionally, concerning the term of protection, the limited term of protection for copyright in most countries offers inadequate protection to expression of folklore since it may conflict with longevity of indigenous works.⁵¹ That said, many forms of TK are, in fact, older than the term of copyright protection. Therefore, copyright may not be available for them.⁵²

However, there is a clearer link between TK and some forms IP rights, especially plant variety rights, GIs, and trade secrets. For instance, according to Article 27.3(b), the member states can choose to protect plant varieties either by patents or by an effective a *sui generis* system or by any combination thereof. Therefore, new plant varieties developed by using the TK of indigenous people or communities which have a fixed identity when reproduced can be protected if the granting criteria of plant variety rights are satisfied.⁵³ This would help to protect plant breeders in a local community and encourage them to develop the plant varieties of indigenous communities, which would lead to the commercialisation of their TK for the benefit of the local communities. Ultimately, this would benefit the local communities. However, the use of plant variety rights to protect TK still has limitation given that this type of protection can only be applied to TK that relates to genetic resources.

Concerning GI protection, according to Article 22 of the TRIPs Agreement, “Geographical Indication” is defined as “indications which identify a good as originating in the territory of a member, or a region or locality in that territory,

⁵⁰ Ibid.

⁵¹ UNESCO & WIPO, Model Provisions for National Laws on the Protection of Expressions of Folklore Against Illicit Exploitation and Other Actions, (1985), 5,

<http://unesdoc.unesco.org/images/0006/000684/068457mb.pdf>, accessed 25 May 2022

⁵² Berkman Klein Center for Internet and Society at Harvard University, “Traditional Knowledge”, https://cyber.harvard.edu/copyrightforlibrarians/Module_8_Traditional_Knowledge#Traditional_IP_Modes_of_Protection, accessed 30 May 2022.

⁵³ Barry Greengrass, “Plant Variety Protection and the Protection of Traditional Knowledge” (UNCTAD Expert Meeting on Systems and National Experiences for Protecting Traditional Knowledge, Innovations and Practices, Geneva, 30 October – 1 November 2000) 4.

where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin". In other words, GI is an indication attached to products that can represent origin, reputation, quality, and other significant characteristics of the goods.⁵⁴ GI was designed to "reward goodwill and reputation created over many years or even centuries".⁵⁵ Therefore, GI can be used to protect traditional products based on TK that can represent a particular geographical origin.⁵⁶ In order for TK to be protected by GI, such TK has to be tangible and can be identified with a geographical region. When TK is protected by GI, it would encourage TK holders to manufacture goods that represent quality, reputation, or other characteristics relating to its geographical origin, and obtain benefits from selling the products. Additionally, GI is suitable to protect TK since its granting protection's criteria is not contrary to the nature and longevity of TK. However, GI also contains a disadvantage since it can only be used to protect innovation-based TK which is tangible. Therefore, intangible forms of TK such as expressions of folklore, medical treatment or knowledge cannot be protected by GI.⁵⁷ Furthermore, GI cannot be used to protect unfairly exploitation of TK which its unique characteristic does not have a link with geographical area.⁵⁸

Trade secret can be used to protect undisclosed knowledge through secrecy. Concerning the granting criteria of trade secret, according to Article 39 of TRIPs, such confidential information must have commercial value, and not be in the public domain.⁵⁹ Additionally, the information must be subject to

⁵⁴ WTO, "Geographical Indications" <http://www.wto.org/english/tratop_e/trips_e/gi_e.htm> accessed 18 May 2022.

⁵⁵ Shivani Singhal, "Geographical and Traditional Knowledge" (2008) 3 Journal of Intellectual Property Law and Practice 732, 733.

⁵⁶ Commission on Intellectual Property Rights, "Traditional Knowledge and Geographical Indications" (2002) Report of the Commission on Intellectual Property Rights, 79, http://www.iprcommission.org/papers/pdfs/final_report/ch4final.pdf, accessed 25 May 2022.

⁵⁷ Shivani Singhal, "Geographical and Traditional Knowledge" (2008) 3 Journal of Intellectual Property Law and Practice 732, 733.

⁵⁸ David Vivas Eugui and Manuel Ruiz Muller, *Handbook on Mechanisms to Protect the Traditional Knowledge of the Andean Region Indigenous Communities* (American Association for the Advancement of Science 2003) 22.

⁵⁹ Ibid., 18-19.

reasonable efforts to maintain its secrecy.⁶⁰ The outsiders who are aware of confidentiality can access secret information through access agreements, and such information will remain its status as trade secret⁶¹, and the holders of such secret information will receive payment in return.⁶² Regarding the trade secret protection of TK, the duration of protection is unlimited. Therefore, as long as TK retains its confidentiality, trade secret protection remains in effect.⁶³ In other words, once TK has diffused to public knowledge, the protection ends⁶⁴. In addition, trade secrets can assist societies profit from the revelation of TK by encouraging its disclosure to those who are able to develop or make more productive use of TK.⁶⁵ Furthermore, using trade secret to protect TK is much easier than using patent due to the flexibility of the granting criteria. Thus, TK that cannot be protected by patent or copyright due to non-compliance with granting requirements can be protected by trade secret. However, since TK must maintain its secrecy to obtain trade secret protection, if it is discovered or leaked into the public domain, it will be unable to obtain the protection. Additionally, trade secret does not provide protection to the bearer of the secret.⁶⁶ This means that in general, the holder is not granted an exclusive right to confidential information. However, it prohibits and regulates disclosure, acquisition, and use without consent within commercial practice. Therefore, trade secret can be a useful tool for holders of TK from improper acquisition, disclosure, and use by outsiders.⁶⁷

It can be seen that some forms of traditional IP regimes play a significant role in protecting TK since it can protect the dignity of TK holders and grant them exclusive rights over such TK, including the right to control its use by others. However, there are positives and negatives associated with each IP regime in terms of protecting TK. Therefore, each traditional IP regime may not be viewed as adequate measures for the protection of all forms of TK.

⁶⁰ Ibid.

⁶¹ Deepa Varadarajan, “A Trade Secret Approach to Protecting Traditional Knowledge” (2011) 36 *The Yale Journal of International Law* 371, 397.

⁶² Eugui and Muller (n 58) 18.

⁶³ Ibid.

⁶⁴ Varadarajan (n 61) 397.

⁶⁵ Ibid., 413.

⁶⁶ Eugui and Muller (n 58) 19.

⁶⁷ Varadarajan (n 61) 418 - 419.

5. Challenges and opportunities to Protect TK under IP regimes in Thailand

As the member of the WTO, Thailand is obliged to comply with the TRIPs minimum standards in protecting IP rights. However, although Thailand has no *sui generis* system for protecting TK under existing law, there are various TK that are or could be protected by existing IP regimes, particularly through a *sui generis* IP system namely GIs, plant variety rights, and trade secret.

5.1 GIs

Concerning GI protection, it can be used as a tool to add value to local products based on traditional knowledge in the community both domestically and internationally.⁶⁸ According to Section 3 of the Protection of Geographical Indications Act B.E. 2546 (2003), goods that can be granted GI protection are namely agricultural products, industrial products, and handicrafts. Furthermore, to obtain GI protection, two conditions need to be met. Firstly, GI must be a name, symbol or other things used to trade to indicate a geographical origin. Secondly, there shall be a relationship between a particular quality, reputation or other characteristic and such geographical origin.⁶⁹ Therefore, products based on TK with unique characteristics and qualities that are linked to its geographical origin can be protected as GIs. Moreover, unlike other IP rights, GI is a community rights that cannot be sold or transferred to other parties. A successful GI registration for a product containing TK can provide economic benefits for the local community. For instance, products with GI tag could gain premium prices in the market.⁷⁰ Furthermore, the quality control and inspection system of GIs products is one of the important elements of GI system. Therefore, it needs to be ensured that the product quality is maintained as specified. This could therefore help the community preserve the collective traditions through GI system. In Thailand, GI seems to be an appropriate IP regime to protect and promote TK-based products, particularly industrial products, and handicrafts that its specific quality and characteristics derive from its geographical origin. As of May 2022, Thailand has a total of 158 GIs from 77 provinces. For instance, thai traditional dessert known as Kanom Mor Kaeng Muang Phet, was registered as GI in 2013

⁶⁸ DIP, *GI Thailand* (DIP 2019) 5.

⁶⁹ Section 3 of the Protection of Geographical Indications Act B.E. 2546 (2003).

⁷⁰ Bangkokbiznews, ““Sinit” continues to register GI products to drive the economy”, <https://www.bangkokbiznews.com/business/978436>, accessed 19 June 2022.

since it has a link between the product and territory covering 8 districts Phetchaburi province. That said, it has a unique taste due to an important ingredient and method of making based on TK transmitted from generation to generation.⁷¹

Concerning the Thai traditional handicrafts, Thai woven fabrics are traditional products created from experience that blends harmoniously with traditions that can be protected as GIs. There is an indigenous motto about the way of life of the people in the past that “When farming season has gone, women weave cloth, men strike iron.” Therefore, every household will weave cloths for use and knowledge of weaving has been passed on to members in the community, especially women. This can be considered as the traditional wisdom that is inherited from ancestors. For instance, Lamphun Brocade was registered as GI in 2016. Its production is described as “complex but always follows ancient methods”.⁷² This ancient weaving technique is an elite cultural heritage passed down from generation to generation and has a clear link with the geographical area, Lamphun province in the north of Thailand.⁷³ As a result, this has the potential to assist the local community in preserving traditional weaving processes as well as the history that lies behind the design and pattern, and it also has the potential to share this culture of weaving with the markets, both domestically and abroad.

Notwithstanding, protecting TK, especially traditional food through GI still has some limitation.⁷⁴ GI cannot be used to protect products based on TK if a link between the product and its geographical origin is not established, as in the case of the Thai famous dish Tomyum Kung. That said, although the method for making this dish comes from TK transmitted from generation to generation, there is no link between the products and territory. Therefore, Tomyum Kung cannot be protected as GI.⁷⁵

⁷¹ ASEAN GI Database, “Kanom Mor Kaeng Muang Phet”, <http://www.asean-gidatabase.org/gidatabase/sites/default/files/gidocs/THG10000052100060-en.pdf>, accessed 30 May 2022.

⁷² ASEAN GI Database, “Lamphun Brocade Thai Silk”, <http://www.asean-gidatabase.org/gidatabase/sites/default/files/gidocs/IDGI000000000039.pdf>, accessed 30 May 2022.

⁷³ Ibid.

⁷⁴ Torpanyacharn, Keovalin, The Protection of Traditional Speciality Guaranteed: Study on the Measure of Thai Law and the European Union Law (July 1, 2016). PSAKU International Journal of Interdisciplinary Research, Vol. 5, No. 2, 2016.

⁷⁵ Piyanuch Sirirajtham, “Legal Measures on Intellectual Property for Promotion and Succession of Inheritance of Cultural Wisdom: A Case Study of Tom Yum Kung” (Master of Laws thesis, 2018, Siam University).

5.2 Plant Variety Rights

Thailand adopted a *sui generis* system by enacting the Plant Varieties Protection Act B.E. 2542 (1999) to protect the rights of plant breeders to encourage new methods of breeding plants, as well as to protect the rights of farmers and local communities, including their knowledge of how to improve, preserve, and use plant genetic resources. According to this Act, plant varieties can be classified into 4 groups, namely new plant variety, local domestic plant variety, general domestic plant variety, and wild plant variety. However, the protection of new plant variety and local domestic plant variety aims to protect plant breeder's right through registration system. Whereas the protection of general domestic plant variety and wild plant variety are afforded automatic protection without registration in order to strengthen the rights of farmers and local communities.

Providing legal protection for local domestic plant variety through registration system is considered as a successful application of the concept of farmers' and local communities' rights.⁷⁶ People in the community who are involved in the conservation or development of a plant variety can register it and obtain protection if it meets the requirements provided by the law. That said, such plant variety must exist only in a particular locality in Thailand, and not registered as a new plant variety.⁷⁷ Once registered, the community is granted an exclusive right to breed, study, experiment, research, produce, sell, export out of the country or distribute by any means, the propagating material of the local domestic plant variety.⁷⁸ Furthermore, concerning the protection of general domestic plant variety and wild plant variety, this Act also sets out specific rules on access and benefit sharing agreement.⁷⁹

It can be claimed that the protection for local domestic plants, general domestic plants, and wild plant varieties can be used to protect the right of farmers and local communities. Therefore, invention based on genetic resources associated with TK can be protected through plant variety rights. For instance, Orange Theparos was the first plant variety that has been certified as registered

⁷⁶ Ibid.

⁷⁷ Section 43 of the Plant Varieties Protection Act B.E. 2542 (1999).

⁷⁸ Section 47 of the Plant Varieties Protection Act B.E. 2542 (1999).

⁷⁹ Section 52 of the Plant Varieties Protection Act B.E. 2542 (1999).

as local domestic plants in Thailand in 2019. It has been planted and preserved in Khung Bang Kachao for more than 100 years, with almost every house planting it. Another example is Marian Plum Thong Pramool Prommanee, which was successfully registered as local domestic plants in 2021. It has been planted and preserved only in Thong Pramool community in Nakhon Nayok Province.

This method, however, has some limitations. For example, the requirement for registering a local domestic plant variety is rarely met. That said, the plant is unlikely to exist in a single location because of the free exchange of plant materials and knowledge between diverse communities, which allows such plant variety to disperse to various locations.⁸⁰ Thus, plant variety rights can only provide protection for TK relating genetic resources that can satisfy these granting criteria.

5.3 Trade Secrets

Secret information or undisclosed information can be protected as IP. Trade secrets in Thailand are governed by the Trade Secrets Act B.E. 2545 (2002). According to this Act, trade Information, such as, facts, or other information in any media, formulas, patterns, compilations or assembled works, programs, methods, techniques, or processes that can meets the 3 elements, namely being confidential, having a commercial derived from its secrecy, and being subject to reasonable efforts to keep in secret, can protected as a trade secret. Hence, TK maintained with the community that can satisfy these requirements can be considered as trade secret. To obtain trade secret protection, registration is not required. Moreover, trade secrets can be protected indefinitely as long as the secret is not revealed.⁸¹ Furthermore, since the scope of trade secret is quite broad, this regime can protect various TK forms such as methods, techniques, and recipes for food and beverages, as well as medical treatments that have been passed down from generation to generation within the community. For instance, a secret recipe of Thai traditional food within the community can be protected through this regime.

However, maintaining the secrecy is one of the important elements of trade secret .TK would be unable to be protected if the knowledge leaks into

⁸⁰ Meeklam (n 3).

⁸¹ WIPO, “Frequently Asked Questions: Trade Secrets”,

https://www.wipo.int/tradesecrets/en/tradesecrets_faqs.html, accessed 25 May 2022.

the public domain or is discovered by outsiders.⁸² Some argued that due to the nature of TK, it would be difficult for TK to maintain its secrecy since TK may be diffused among various people of the community.⁸³ As a result, there would be a possibility that TK may be discovered by the outsiders. Moreover, it is undeniable that some TK is already in the public domain. Consequently, to protect TK under the trade secret regime, the community to which it belongs needs to make reasonable efforts to maintain its secrecy. Otherwise, it cannot be protected by the law, and anyone is free to utilise it. This would therefore result in misappropriation of TK.

5.4 Other Forms of IP Rights

The granting criteria for other forms of IP rights, particularly patent and copyright, appear to be incompatible with the nature of TK. Therefore, some kinds of TK cannot be protected by these IP regimes. For instance, concerning the requirements of patentability under the Patent Act B.E. 2522 (1979), novelty or newness is one of the granting criteria.⁸⁴ Consequently, only the invention or industrial design based on existing TK that can satisfied all the requirements provided by the law can obtain patent protection. Nonetheless, TK typically consists of technical know-how, practices, skills, and innovation that have been transmitted orally or in writing from one community to another. Consequently, this may diminish the innovation's novelty. Moreover, in some cases, developed countries have used patents to protect their commercial products based on TK in developing countries, as patent applicants are not required to demonstrate that such resources were accessed with prior informed consent or disclose the origin of such resources. Therefore, it would be difficult to examine whether the applicants are adhering with the CBD's objectives which encourage benefit-sharing to an indigenous community. This can therefore result in the improper use of TK. For instance, in the case of *Pueraria Mirifica*, a significant Thai medicinal plant that is well-known for its ability to soften and firm the skin, Japanese companies have registered its extract as patents in many countries, including

⁸² Varadarajan (n 61) 397.

⁸³ Giannina and Nunez (n 32) 520.

⁸⁴ Section 5 of the Patent Act B.E. 2522 (1979).

Japan and the United States.⁸⁵ Consequently, patent Law in some countries such as Switzerland, Norway and China require patent applicants to demonstrate the origin of a plant variety and traditional knowledge as a condition of obtaining a patent.⁸⁶ However, there is no such requirement under the Thai patent law.

Copyright can be used to protect TK, especially expression of folklore that can satisfy all copyrighted work requirements. According to the Copyright Act B.E. 2537 (1994), there are 3 important requirements that need to be satisfied, namely having originality, being an expression of idea, and falling within the type of the work provided by law.⁸⁷ Copyright gives the authors an exclusive right to use, publish, and commercialise their works for a certain period of time. However, some argued that protecting TK through copyright is not sufficient due to some limitations. For instance, the nature of folklore may not be suitable for the concept of authorship. That said, folklore such as Thai folk tales and folk dance is typically the result of the efforts and creativity of generations of people. Therefore, it may not be possible for an individual to claim copyright authorship. Additionally, copyright has a duration of protection. According to the Copyright Act B.E. 2537 (1994), in general case the copyright will last for the life of the author and fifty years after his death.⁸⁸ Consequently, such a limited duration of copyright protection may be insufficient as it conflicts with the longevity of folklores.

It can be seen that some types of TK can be protected under Thailand's conventional intellectual property laws. However, these available mechanisms have both advantages and disadvantages. Those TK that does not meet the legal protection criteria may be left unprotected. In order to determine what IP measure would be most suitable for protecting TK, the objective of protection as well as its advantages and disadvantages must be carefully taken into consideration.

⁸⁵ Konkamol Sotachinda, “The Protection of Traditional Knowledge in Application with Thai Herbs” (Master Thesis, 2017, (National Institute of Development Administration).

⁸⁶ Bio Thai, “Cannabis Patents and Failures to Protect Herbs and Local Wisdom”, <https://biothai.net/economic-on-bio-resources/life-patents/1750>, accessed 30 May 2022.

⁸⁷ See the Copyright Act B.E. 2537 (1994).

⁸⁸ Section 19 of the Copyright Act B.E. 2537 (1994).

6. Conclusions

Thailand acknowledged the significance of TK and the need to protect them. Despite the absence of a *sui generis* system for the protection of TK, Thailand has been employing conventional IP regimes, particularly GIs and plant variety rights, to protect TK since these concepts are compatible with the nature of TK. In addition, it can grant indigenous and local communities the right to control the use and ensure that the benefits are returned to the local community. Consequently, this can aid in preventing the unauthorized use of TK by outsiders. However, each of the available IP protection regimes possesses both benefits and drawbacks. Each regime has statutory granting criteria that are insufficient to cover all types of TK. Therefore, when selecting an appropriate protection mechanism, both advantages and disadvantages should be carefully considered. However, TK that does not meet the requirements provided by the laws will remain unprotected. This demonstrates that using only existing IP regimes to protect TK in Thailand is insufficient. There is still some limitations and loophole in the current legal system that allows misappropriation of TK. Thus, to increase the efficiency of the protection of TK in Thailand, the adoption of a *sui generis* system for TK protection should be strongly reconsidered. However, for the benefit of TK holders and the general public, the protection of TK should be compatible with and supportive of existing IP systems. In addition, as stated in one of the initiatives to promote innovation in ASEAN outlined in the AEC Blueprint 2025, Thailand, as one of the ASEAN members should strengthen regional cooperation in the area of TK. Consequently, this would assist in enhancing the effectiveness of legal mechanisms to protect TK on a national and international scale.

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