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Briefing paper

*Food, biological diversity
and intellectual property*

QUNO's Briefing papers on Intellectual Property and Agriculture aim to inform discussion about what kind of intellectual property systems can best encourage innovation and economic development, whilst also fostering resilient, equitable and sustainable food systems.

We envision an international system that ensures long-term food security, protects fragile livelihoods and provides incentives to maintaining biological and genetic diversity.

CONTENTS

Thailand: Farmers, Seeds and Plant Protection	2
Plant Breeders' Rights	2
Definition of Breeder	2
Conditions for Protection	2
Duration of Protection	3
Scope of Breeders Rights	3
Compulsory Licensing Exception	3
Rights of Farmers and Local Societies	4
Registration of Local Domestic Plant Varieties	4
General Domestic Plants & Wild Plant Varieties	4
Farmers Privileges	4
Disclosure of Origin	5
Access and Benefit-Sharing	5
Challenges and Future Prospects	5

Developing country *sui generis* options

Thailand's *sui generis* system of plant variety protection

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This briefing paper is the first in a series on TRIPS-compatible alternatives to UPOV-style plant variety protection (PVP) systems.

Many people believe that a country must join UPOV 1991 in order to comply with WTO intellectual property obligations.

This is not the case.

*WTO rules do require Members to protect intellectual property in plant varieties.¹ This can be a *sui generis* system, developed to suit each country's needs and priorities. Regrettably, there is limited information and awareness of the *sui generis* options available to countries. Most technical assistance and advice is geared to encouraging countries to adopt a UPOV-type system, in spite of the fact that UPOV is designed for industrial-type agriculture, and not the diversity of agricultures that co-exist in developing countries.*

*The purpose of this briefing paper series is to describe areas in which developing countries have had experience with *sui generis* systems, with a view to encouraging and supporting countries wishing to develop a PVP system suited to its needs.*

1. Please visit www.quno.org/areas-of-work/intellectual-property-and-agriculture for QUNO's briefing note on the PVP flexibilities currently available to specific WTO Members

Thailand: Farmers, Seeds and Plant Protection

Thailand's plant protection regime² is the result of Thailand's joining the WTO and its adherence to the TRIPS Agreement. Implemented in 1999, the Thai PVP Act represents a unique *sui generis* system for the protection of plant varieties, different from the model set out in the *International Convention for the Protection of New Varieties of Plants* (UPOV). Like other developing country WTO Members, Thailand construed the term '*sui generis* system' in Article 27.3(b) of the TRIPS Agreement as allowing it to determine the type and design of the plant protection regime it adopted.³ Thailand has not joined UPOV.

It is estimated that more than one-third of the 60 million Thai population are farmers.⁴ Most of the seed in Thailand is marketed by major seed corporations, such as *Chia Tai* and Monsanto, but farmers are still a significant source of seed supply, producing around 20% of the seeds required for agriculture in Thailand.⁵

The central tenet of the Thai PVP Act specifically addresses Thailand's major concern to protect local farming communities while simultaneously promoting the breeding of innovative plants by establishing IP protection. Thus, the Thai PVP Act divides plant varieties into two main categories: (1) new plant varieties, and (2) extant varieties, which refer to local domestic plants, general domestic plants, and wild plant varieties.

Since the inception of the Thai PVP Act, 101 new plant variety rights have been granted in Thailand.⁶

This paper discusses the rules and provisions of Thailand's *sui generis* system for plant variety protection, comparing it with UPOV.

Plant Breeders' Rights

Chapter III of the Thai PVP Act, entitled "Protection of New Plant Varieties," provides a comprehensive set of provisions that attempt to protect the rights of plant breeders. While the Thai PVP law deviates from certain aspects of UPOV, the fact remains that many provisions for breeders' rights in Thailand's PVP law are taken from the UPOV system.

Definition of Breeder

Under the Thai PVP Act, a "breeder" is deemed to be 'a person who has bred or developed a variety and, as a consequence thereof, obtained a new plant variety'. This legal definition tracks the same standard as UPOV. While a farmer can also be a breeder, a community of farmers that creates a new variety does not fall within the scope of this definition.

Conditions for Protection

Thailand's PVP Act assigns breeders rights over new, distinctive, uniform, and stable varieties. The "novelty" standard is defined in terms of commercial novelty, which means that, prior to sale the application material is the standard for determining novelty. The exact scope of novelty requirement is similar to the criteria of novelty under the UPOV Convention.

To be eligible for protection, a plant variety must also meet the so-called "DUS" criteria, namely, distinctiveness, uniformity and stability. Thus, the criteria of DUS in Thailand's PVP provisions are also adopted from the UPOV Convention.⁷

2. *The Plant Variety Protection Act B.E.2542* (1999) (Thailand) ('PVP Act of Thailand') available at www.wipo.int/wipolex/en/text.jsp?file_id=129781 (accessed 30 December 2013)

3. See Pawarit Lertdhantewe, 'Asian approaches to international law: focusing on plant protection issues' (2013) 8(5) *Journal of Intellectual Property Law and Practice*, 388-398 (discussing the term *sui generis* system for plant variety protection in Article 27.3(b) of TRIPS)

4. Centre for Agricultural Information, *Report on Agricultural Economics in 2006-07* (2008) (in Thai). This report is the most recent report on agricultural information in Thailand, prepared by the Thai government

5. See Prem Nath et al., *The Vegetable Sector in Thailand: A Review* (1999)

6. Statistics on registration of new plant varieties in Thailand are available through Plant Variety Protection Division at www.doa.go.th/pvp

7. The PVP Act of Thailand (n 2) arts. 7, 8 and 9; Pawarit Lertdhantewe, 'Thailand's plant protection regime: a case study in implementing TRIPS' (2012) 7(3) *Journal of Intellectual Property Law and Practice*, 186-193 (arguing that the eligibility thresholds in Thailand's PVP Act track the UPOV standard)

Duration of Protection

The Thai PVP Act provides varying durations of protection. Unlike UPOV, new plant variety rights have a specific term of 12 or 17 years, depending on the type i.e. shorter than that of the UPOV, which provides a minimum 20-year term of protection. The reason for this may be to ensure that the IP system does not contribute to creating a monopoly over food produced.

An impressive protection term in the Thai PVP Act is the sub-categorization of the protection term applied to trees (27-year term of protection). This extra duration is offered for trees because they typically do not become obsolete: the breeding of a new and better tree is a relatively rare occurrence. This term of protection is longer than that prescribed in the UPOV.

Scope of Breeders' Rights

Under the Thai PVP Act, breeders of new varieties have exclusive monopoly rights to retain/prevent others from producing, selling, distributing in any manner, importing or exporting the protected new plant variety without their authorization (similar to the 1991 UPOV treaty). However, these exclusive rights are subject to certain exceptions, including the following:

1. An act related to a protected new plant variety without the intention of using it as propagating material;
2. Education, study, experiment or research related to a protected new plant variety for the purpose of breeding or developing plant varieties;
3. An act related to a protected new plant variety committed in good faith;
4. The cultivation or propagation by a farmer

of a protected new plant variety from the propagating material made by the farmer, provided that, in a case where the Minister, with the approval of the Commission, publishes that new plant variety, its cultivation or propagation by farmers may be made in a quantity not exceeding three times the quantity obtained;

5. An act related to a protected new plant variety committed for non-commercial ends; and
6. The sale or distribution by any means, importation or exportation, or possession for the purpose of any of the aforesaid activities, of the propagating material of the protected new plant variety which has been distributed by the right holder or with the right holder's consent.

Compulsory Licensing Exception

The Thai PVP Act provides another exception to the rights of plant breeders. This provision is referred to as "compulsory licensing". Interestingly, the compulsory licensing provision in Thailand's PVP law allows other persons to compete with the right holder. The Director-General of the Department of Agriculture has the power to authorize a third party to use such a protected variety without the authorization of the breeders. Compulsory licensing provides essential stability to the national welfare, such as food security; thus, this provision should be commended.

Rights of Farmers and Local Societies

Thailand's plant protection regime responds to the preferences of farmers and local communities, with the majority of those preferences found in the set of provisions concerning local domestic plants, general domestic plants, and wild plant varieties that provide special treatment to farmers and local communities.⁸ The most noteworthy features of the Thai PVP Act thus lie in a set of provisions that seek to protect the rights of farmers and local farming communities.

8. See Chapter IV and V of the Thai PVP Act, *Ibid.*

Each of the provisions discussed below not only deviates from the UPOV, but also demonstrates that the rights are contoured to suit the unique national conditions.

Registration of Local Domestic Plant Varieties

The protection of local domestic plant varieties was introduced in the Thai PVP law as a means to provide exclusive monopoly rights to farmers and local communities that take care of the existing plant varieties found within Thailand's territory. Since the objective of the Act is to balance plant breeders' rights with the rights of farmers and local communities, it recognizes the vital role played by farmers and local farming communities in conserving, developing and improving plant genetic resources by allowing them to register local domestic plant varieties. Interestingly, there is no explicit mention of the "rights of farmers" or "rights of local communities" in Thai law, but the term "local domestic plant variety" is used as a way to refer to the recognition of the rights of farmers and local communities. This is a concept that UPOV ignores, even though discussions around Article 27.3(b) of the TRIPS Agreement suggest that the protection of innovation by farmers and local farming communities in the developing world should be promoted by the implementation of a more comprehensive *sui generis* system for plant variety protection.⁹

General Domestic Plants & Wild Plant Varieties

Another significant deviation from UPOV lies in a set of provisions for the legal protection of general domestic plants and wild plant varieties,¹⁰

which encompasses everything in the public domain, including materials traditionally cultivated by farmers or of which farmers possess common knowledge. Thus, the PVP Act defines 'wild plant variety' as a 'plant variety that currently exists or used to exist in the natural habitat and has not been commonly cultivated', while 'general domestic plant variety' is defined as 'a plant variety originating or existing in the country and commonly exploited, and shall include a plant variety which is not a new plant variety, a local domestic plant variety or a wild plant variety'. Such protection is meant to cover all types of plant varieties found within Thailand and to strengthen traditional knowledge rights (prior art) protection.¹¹ This clearly adheres to the principles of the Convention on Biological Diversity (CBD) with respect to protecting traditional knowledge.

Farmers' Privileges

The most significant feature of the Thai PVP Act lies in providing farmers with a saved-seed exemption. Such an exemption deviates from UPOV, and highlights the fact that the PVP Act has been contoured to suit Thailand's conditions. The Act recognizes farmers' traditional rights to save and re-use seeds from their harvests by incorporating the concept of farmers' rights (as expressed in the ITPGRFA).¹² Farmers' traditional rights are commonly referred to as "farmers' privileges" or "farmers-saved seed" exemption. Thus, this exemption in the Thai PVP law permits farmers to retain seeds from crops grown in subsequent seasons to produce more crops. Farmers' right to save seed is extremely important to a country like Thailand, with a high proportion of small-scale farmers. Thus, this exception is to be commended.

9. *Review of the Provisions of Article 27.3(b)*, WTO Doc. IP/C/W/369, 8 August 2002, 13.

10. See Chapter V (§§ 52-53), entitled "General Domestic Plant and Wild Plant Varieties," of the PVP Act of Thailand (n 2)

11. Daniel F. Robinson, *Exploring Components and Elements of Sui Generis Systems for Plant Variety Protection and Traditional Knowledge in Asia* (2007), 31.

12. *International Treaty on Plant Genetic Resources for Food and Agriculture*, art. 9, Rome 3 November 2001, Doc. Y3159/E

Disclosure of Origin

Although the requirements for eligibility in Thailand's PVP Act discussed above can be traced to the text of 1978 UPOV Convention, the law sets out a disclosure of source and legal provenance requirement for the registration of new plant varieties. The Act specifically requires every application to include details of the origin of the new plant variety, and all information regarding the use of genetic material in the breeding process or development of the new plant variety. Commentators have suggested that such requirements are meant to restrict deceptive acts domestically and serve as a passport or permit for the transfer of biological materials.¹³

Access and Benefit-Sharing

A final area where the Thai Act differs from UPOV relates to access and benefit-sharing (ABS) measures. The Thai PVP Act essentially details the ABS rules for general domestic plant and wild plant varieties¹⁴ and sets out a range of requirements with regard to IP, including the intention of those seeking access to genetic resources. More importantly, the statute requires breeders to accept a profit-sharing agreement where a general domestic plant or a wild plant variety or any part thereof has been used in the breeding of the variety for a commercial purpose. This is meant to facilitate the introduction of benefit-sharing to protect the rights of local communities. Nonetheless, a recent study shown that the rewards through ABS measures are actually disconnected

from the farmer.¹⁵ Consequently, it is arguable that local farming communities are generally left uncompensated.

Challenges and Future Prospects

While the objectives of the *sui generis* PVP system implemented and developed by Thailand are commendable, the Thai PVP Act currently faces a great deal of criticism.¹⁶ Whether or not Thailand should join UPOV remains controversial. Some commentators believe that Thailand should ratify the 1991 UPOV Convention, thereby bringing plant breeders' rights protection in line with international standard under UPOV.¹⁷ Conversely, critics refuse to accept this approach on the ground that UPOV does not adequately recognize the rights of farmers.¹⁸

Secondly, the provisions for the rights of farmers and local societies are largely declaratory and have insufficient practical effect. While there exists a statutory framework in place for the registration of local domestic plant varieties, no farmers and local communities have so far been able to register their varieties and thus realising benefits from its generous provisions.¹⁹

Lastly, Thailand's plant protection regime has become a subject of many debates and proposals for statutory reforms.²⁰ While work on legislative reform is continuing, the outcome remains uncertain, partly because of the frequent bouts of political instability in Thailand.

13. Lertdhamtewe (n 3) 397; and Robinson (n 11) 22

14. Daniel Robinson, 'Sui Generis plant variety protection systems: liability rules and non-UPOV systems of protection' (2008) 3(10) *Journal of Intellectual Property Law and Practice*, 659-665, 663

15. Robinson (n 14) 663

16. See Pawarit Lertdhamtewe, 'Plant variety protection in Thailand: the need for a new coherent framework' (2013) 8(1) *Journal of Intellectual Property Law and Practice*, 33-42 (identifying the major problems underlying Thailand's plant protection regime, as represented by the PVP Act)

17. See e.g., Jade Donovanik, *The Implications of Compliance with the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) For Thailand's Development: Focusing on Plant Protection* (JSM Thesis, Stanford University 1997)

18. Jakkrit Kuanpoth, 'TRIPS-Plus Rules under Free Trade Agreements' in Christopher Health and Anselm Kamperman Sanders (eds), *Intellectual Property & Free Trade Agreements* (2007) 27, 40

19. See Pawarit Lertdhamtewe, *Plant Variety Protection in Thailand: The Need for a New Coherent Framework* (AsianSIL Working Paper 2012/11, 2012) 16

20. See Cabinet Resolution, *Draft of Plant Variety Protection Act*, The Cabinet of Thailand Meeting on Tuesday 16 November 2010 (calling for the need to adjust several provisions contain in the Thai PVP Act)

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