



WIPO-ASEAN Regional Project IP Policy



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WIPO ASEAN Regional Project on IP Policy FINAL ASSESSMENT REPORT

Brunei
Cambodia
Indonesia
Lao PDR
Malaysia
Myanmar
Philippines
Singapore
Thailand
Viet Nam

1.0 INTRODUCTION

Recognizing that the core stages of intellectual property (creation, protection, commercialization and technology transfer, management) play an important role in the various aspects of the development of a country, it is critical that intellectual property (IP) is leveraged in order to contribute in a relevant and strategic way to the attainment of the development goal. A well-defined and transparent legal framework involving IP and well-established IP policies for creators are among the essential elements for a successful technology transfer. A transparent technology transfer framework makes for better research collaboration, including between and among individual creators, universities and research institutions within a country. When these countries belong to a regional block (economic, political, or otherwise) such as the Association of Southeast Asian Nations (ASEAN), the importance of collaboration in technology transfer cannot be overemphasized. Multiplying those ten times among the ASEAN Member States (AMS) makes for a valuable synergistic impact in the region leading to better products and services for the public, not to mention potential exponential revenue streams for universities and research institutions to fulfill their mandates.

With the ten (10) Member States comprising the ASEAN studdling in a spectrum of development, the Initiative for ASEAN Integration (IAI) and Narrowing the Development Gap (NDG) aimed at narrowing the development divide and enhancing ASEAN's competitiveness was first established by the ASEAN Leaders at their Summit in 2000.¹ For its part, the ASEAN Working Group on Intellectual Property Cooperation formulated the *ASEAN IPR Action Plan 2016-2025* identifying multiple deliverables, among which is Deliverable 16.3, namely: Comprehensive collaborative programs between the IP Offices and Science & Technology, Research & Development Institutions, and Universities to improve their capacity to identify, protect, and manage their IPs are developed.

The World Intellectual Property Organization (WIPO) on the other hand, supports and provides services to universities and research institutions that are members of the Technology and Innovation Support Centers (TISCs) program. In line with WIPO Expected Result 4.4 as it relates to universities and research institutions, the IP for Innovators Department (IPD), in order to develop and reinforce the services and support of TISCs, as well as existing Technology Transfer Offices (TTOs)/Intellectual Property Management Offices (IPMOs)/University IP Office and other structures in AMS in the fields of technology transfer and IP commercialization, is set to develop a series of tools focusing on the pillars of institutional ecosystems that aim to support deliverable 16.3 of the *ASEAN IPR Action Plan 2016-2025* through several projects.

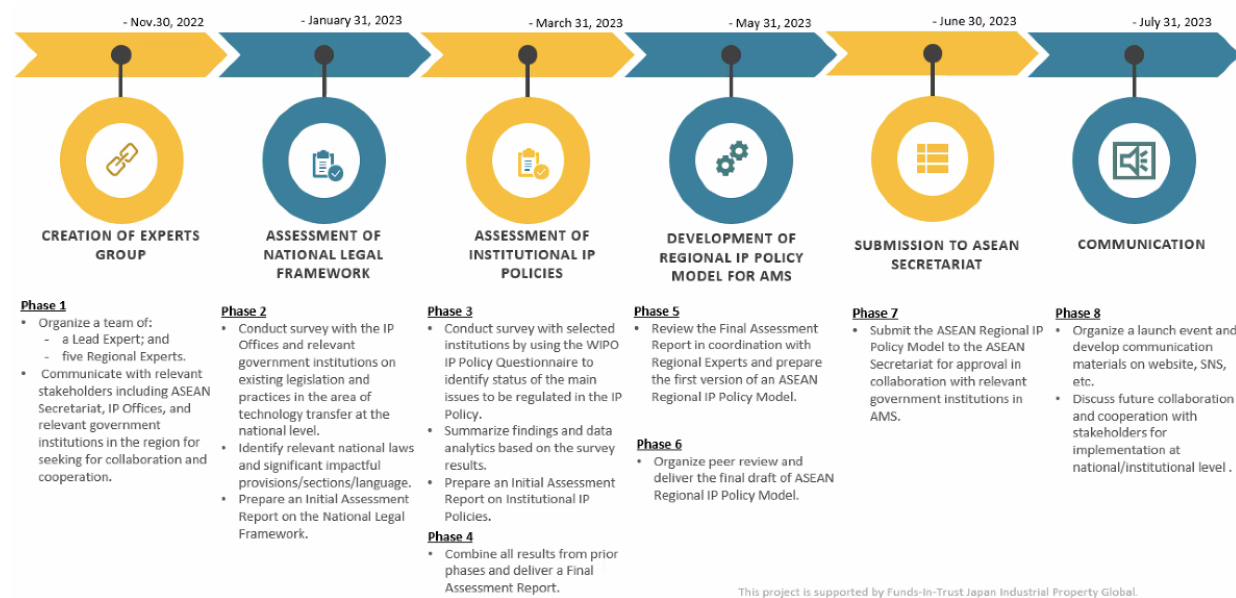
This project on the development of institutional IP Policy model for the ASEAN was made possible and implemented with the generous financial support from Funds-In-Trust Japan Industrial Property Global provided by the government of Japan, through the Japan Patent Office.

¹ <https://asean.org/our-communities/initiative-for-asean-integration-narrowing-development-gap-iai-ndg/>

2.0 THE PROJECT

In support of the said ASEAN IPR Action Plan, this WIPO-ASEAN project is designed to ultimately develop a Regional Institutional Intellectual Property Policy (IIPP) in the AMS (hereinafter referred to as the “IIPP Project”, for brevity.) The first Part, consisting of four (4) phases, aims to understand both the national legal frameworks and the current institutional IP policies and practices implemented and adopted by academic/research institutions (ARIs) in the area of technology transfer in each of the AMS. Taking into consideration the findings in the first Part, the second Part, likewise consisting of four (4) phases, involves the crafting of the Regional IP Policy Model to help universities and academic/research institutions (ARIs) deal with key issues relevant to the development of their own institutional IP Policy.

WIPO / FIT Japan Project on the Regional Model of Institutional IP Policies for Academic Institutions in ASEAN Member States



To carry out the IIPP Project, a team of experts was selected/recruited by WIPO. The IIPP Team is composed of a Lead Expert², an International Expert³, and five to seven (5-7) Regional Experts (REs).⁴ Each of the regional experts is an expert at least in his/her native country within the

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⁴ Designated Regional Experts involved in the Project:

Philippines and Brunei: **Josephine R. Santiago**

Indonesia: **Rofiq Iqbal**, Dr. Eng., Executive Secretary of Technology Transfer, Institute of Innovation and Entrepreneurship Development, Institut Teknologi Bandung, Indonesia

Thailand and Cambodia: **Orakanoke Phanaraksa**, Ph.D., Senior IP Consultant, Technology Licensing Office, National Science and Technology Development Agency

Malaysia and Myanmar: **Ahmad Fadzlee Rashid**, Managing Director, IPVOLUSI Sdn Bhd

ASEAN. Except for the REs from Indonesia and Viet Nam, the rest of the REs chose a second AMS to work on. This team of IIPP Experts, together with WIPO, sought collaboration and cooperation with relevant stakeholders including the ASEAN Secretariat, IP Offices, and relevant government institutions and ARIs.

To arrive at this understanding, government institutions and ARIs from ten (10) ASEAN countries were surveyed on the national laws and legal framework relating to IP Rights (IPRs) and IP policies, the existing legal environment for university IP and technology transfer, the existing economic environment for the transfer of technology from universities and PROs to the private sector, and the prevailing IPRs in research findings and other academic works held by university and R&D staff.

The findings in this final assessment report describe the existing IP environment in the AMS generally, and highlight policies and more specifically, the practices on technology transfer. These will be used as a starting point in highlighting best practices, making recommendations for identified gaps, and ultimately in crafting the Regional IP Policy for AMS.

3.0 METHODOLOGY APPLIED

1. Revision and Redesign of the WIPO Survey Questionnaire

As soon as the IIPP team was created, the REs lost no time in revising, redesigning and testing the WIPO proposed survey questionnaires for deployment to the intended recipients in the AMS for implementation in the subsequent phases.

A total of two (2) questionnaires were prepared for deployment.

Questionnaire No. 1 (Q1) — entitled “Needs Assessment Questionnaire on technology transfer activities for Government Ministries/Agencies” — had 4 sections on the survey web page, containing questions about the profile of the respondents and national laws or IP/innovation policies or strategies in the respective AMS.

Questionnaire No. 2 (Q2) — entitled “Needs Assessment Questionnaire for Stakeholders from Academic and Research Institutions” — had 4 sections on the survey web page, containing questions about the profile of the respondents and national laws or IP/innovation policies or strategies in the respective AMS.

Singapore and Lao PDR: **Ma Mun Thoh**, RTTP, Deputy Director, Technology Transfer and Innovation, National University of Singapore and **Karen Teo Soo Ling**, Deputy Director, Technology Transfer and Innovation, National University of Singapore

Viet Nam: **Nguyen Minh Huyen Trang**, Deputy Director of Student Affair Department, Vietnam National University Ho Chi Minh City

2. Collaboration

The REs, through WIPO's assistance, sought collaboration and cooperation with relevant stakeholders including the ASEAN Secretariat, IP Offices, and relevant government institutions and ARIs. Focal points were designated for each AMS coming from national IP Offices.

Subsequently, WIPO sent the letter to all ASEAN IP Offices introducing the IIPP Project and inviting them and other government ministries and agencies, especially those involved in the research and technology transfer activities of the academic/research institutions, to participate in two (2) surveys. Introductory and follow-up meetings were held to introduce the REs and explain the IIPP Project.

3. Deployment of Q1 and Q2

In the deployment of Questionnaire No. 1 (Q1), the ten (10) focal points contacted a total of thirty-four (34) government ministries and agencies, including the national Intellectual Property Offices (IPOs) of most AMS and various other government institutions. Some government agencies and ministries submitted more than one response which came from different staff members within the same agency. For the purposes of this survey, responses coming from the same government agencies were treated as one. In case there were complete and partial responses, the more complete responses were taken into consideration.

The REs analyzed the responses and conducted desk research to highlight relevant IP laws in each jurisdiction. The provisions of these laws were then examined vis-a-vis the WIPO IP Policy Template in order to identify in which areas laws were silent, in agreement, or in consonance. The *Initial Assessment Report of the National Legal Framework* was produced and submitted to WIPO.

For the subsequent phase, WIPO sent another letter inviting all ARIs in the ASEAN region to participate in the survey and providing the link to Questionnaire No. 2 (Q2). In addition, the ARIs were invited to share copies of their existing IP policies.

A total of one hundred thirty-seven (137) ARIs responded to the survey, while sixty (60) IP policies were submitted.

The provisions of the IP policies submitted were consolidated and placed side by side with the WIPO IP Policy Template. Under appropriate headings, REs identified areas where the policies were silent and had common provisions; they were also requested to propose the initial language for the Regional IP Policy. The proposed language were either best practices in the IP policies, consistencies with the WIPO IP Policy Template, or peculiarities that could be added as options or alternatives to enable institutions to tailor their IP policies to their needs and profiles. The *Institutional IP Policy Assessment Report* was produced and submitted to WIPO.

4. The Current Assessment

4.0 CHALLENGES AND LIMITATIONS IN THE IMPLEMENTATION OF PART I OF THE PROJECT

Challenges were encountered throughout the duration of Phases 1-4 of the IIPP Project. In summary:

1. The 5-month Project timeline consisting of eight (8) phases was relatively short considering that there were two (2) survey components, i.e., one for the government ministries/agencies and another for universities and research institutions.
2. The wide range of the topics in the questionnaire traverses the IP spectrum from creation, protection, utilization, technology transfer and many others in between. In most of the AMS, the responsibilities cut across different government ministries/agencies. Hence, the focal person had to identify and deploy the questionnaire links to those involved in the process.
3. The timeline of the phases had to be readjusted a number of times to accommodate more responses from national ministries and departments, and academic and research institutions and other compliance for the IIPP Project.
4. The designation of country focal persons for the IIPP Project in each of the ASEAN IP Offices created the necessary communication lines with the assigned RE for Q1 and Q2. The focal person determined the list of respondents for the two surveys and served as an intermediary for the other ministries/agencies and ARIs as the REs did not have direct contact with them. In view of the tight timeline, REs were not able to connect with the ARIs for clarifications, whenever necessary.
5. In a couple of AMS, the questionnaire for government ministries/agencies (Q1) was mistakenly distributed to unintended respondents, i.e., universities and research institutions. Despite this, the responses erroneously submitted were preserved and set aside.
6. REs were not able to see the list of participants and non-participants to the surveys until the respondents submitted their answers at the end of the deadline to respond. In some instances, REs requested the focal person to invite certain critical ARIs, if not done so, when REs didn't receive responses. The wait-and-see situation essentially extended deadlines.
7. A common occurrence across the ten (10) AMS was that many responses were only partially completed. Several follow-ups were needed for the REs to get complete responses.
8. Some of the national laws on intellectual property and IP policies of academic and research institutions—particularly Lao PDR's Law on Technology Transfer and the IP Policies of academic and research institutions in Thailand—are not in the English language, posing a challenge in crafting the analysis of the laws and regulations. In a correspondence with the Department of Intellectual Property of Laos, the official translation of the Law on Technology Transfer, which has 21 pages in total, will take 2 to

3 months. In view of the strict time limitations, these could no longer be included in this Report.

9. The IP policies of some academic and research institutions, particularly in Singapore, are confidential. Hence, the Experts had no opportunity to read and analyze the IP framework of certain institutions.
10. Institutions from Cambodia, Lao PDR, and Myanmar have no available or did not attach Institutional IP policy for reference. In Viet Nam, it is confirmed that many institutions have issued IP policies, however, the IP policies are currently under review and, where necessary, will be revised to comply with the amendments to the Intellectual Property Law that came into force on January 1, 2023.
11. In Myanmar, some of the IP Laws enacted in 2019 have not yet come into force. For example, the Patent law is expected to come into force in 2024. Therefore, some respondents from government ministries and agencies are not fully aware of the IP laws enacted.

5.0 SUBJECTS

Aside from the government ministries and agencies who answered the Q1 and Q2 surveys, the IIPP Project also covers the following subject matter:

- Q1: The IIPP Experts reviewed at least fifty-eight (58) laws and regulations concerning IP and technology transfer were reviewed by the IIPP Experts. These laws and regulations were compared among each other to surface the commonalities and peculiarities, which will be discussed in the Observations section of this assessment report.
- Q2: Likewise, the IIPP Team reviewed sixty (60) English versions of IP Policies⁵ submitted by the academic and research institutions through the electronic survey form, plus a number of IP Policies in the Thai language. The commonality of the IP Policies of the academic and research institutions will likewise be discussed in the Observations section of this assessment report.

6.0 RESULTS

The results of both Q1 and Q2 are summarized as follows:

1. **Top IPRs covered by laws.** Among the ASEAN Member States, the responses indicated that they have national law provisions on IP. The Q1 question on the subject allowed multiple responses. According to the respondents' knowledge of IPRs in their respective countries, the most well-covered IPs by laws and statutes, are copyright (96.3%), trademarks (96.3%), and patents (94.4%).

⁵ Brunei - 2; Indonesia - 8; Malaysia - 12; Philippines - 36; Singapore - 2
Thailand - In Thai language.

No IP policy submitted for review: Cambodia, Lao PDR, Myanmar, Viet Nam.

For the remainder small percentages for each of the top IPRs covered by law, the responses indicated that the national law provisions on the matter is either (a) going through deliberations prior to submission to Parliament or Congress; (b) the bill is pending in the Parliament or Congress; (c) there is no law covering the said IP; and (d) the respondent answering the survey is unaware of the national law provisions.

Moreover, in the list of IPRs provided in the survey, genetic resources, traditional knowledge and traditional cultural expression (55.6%), utility models (63%), and geographical indications and integrated circuits/layout design (both at 66.7%) are available in over a majority of the AMS.

2. **Basis for IP policies.** The Q2 respondents were allowed to have multiple choices. Based on the responses received, the majority of the institutional IP policies are based on national guidelines or recommendations. A close second, the majority of the institutions also based their existing IP policies on existing IP policies of other universities (50.5%) and national model IP policies for universities (48.4%). Notably, the WIPO IP Policy Tool Kit is underutilized, with only 17.7% of ARIs having used it as a guide.
3. **Existence of IP policies.** Around 75% of the Q2 respondents said their academic and research institution has a written IP policy relevant to the creation, ownership and protection of IP, R&D procedures, technology transfer, and commercialization activities. Coming in second are the “No” answers (14%). Despite a majority of ARIs having IP policies, responses to the succeeding items highlight areas of opportunity for improvement.
4. **Standard models and templates.** More than half (54%) of the Q1 responses said there is a national-level consensus on a standard model, template, or guideline for IP policies at academic and research institutions. Notably, more responses indicate that the respondents do not know (24%) whether there is indeed a consensus on a standardized model than those responses answering in the negative (22%).
5. **Sources of funds and IP ownership.** Sixty-five & 2/10 percent (65.2%) of the Q1 responses indicated that when the research is funded by public money, the invention/creation is owned by the academic/research institutions. Meanwhile, 45.7% indicated that in case the research is funded by private money, the invention/creation may be (co)-owned by the funding party.
6. **Right to commercialize.** In almost all types of IP, respondents of Q2 answered that in their institution the researcher, inventor, or creator has the right to commercialize the IP with patents (73.6%) and copyrights (61.6%) leading the list. Even in genetic resources, traditional knowledge and traditional cultural expression (11.2%) is substantial even while being the lowest in terms of percentage.

7. **Evaluation of commercial viability.** IP Valuation Methods, Market Study/Test/Evaluation/Research, and Technology Readiness Level are the top three (3) procedures/methodologies used to evaluate commercial viability of the research outcomes/results. However, some responses indicate that for their institution, a mix-and-match or a combination of procedures/methodologies is conducted.
8. **Benefit sharing.** Provisions on benefit-sharing were uncommon at a national level, but were often stipulated at an institutional level instead. In case of benefits resulting from the exploitation of IP, those who shared in these benefits were most commonly the ARI (81%), the inventor or creator (76.6%), and the university department where the invention was conceived (49.5%.)

Further, the most common splits for benefit sharing between ARIs and researchers were 60-40 in favor of the ARI (27.9%) and 50-50 between the ARI and the researcher (19.6%.)

9. **Challenges and obstacles for institutions.** The most widespread challenges experienced by the academic and research institutions are the desire to prioritize publication of research findings over IP protection (51% of responses rating it “Very Relevant,”) the lack of funds or support to scale up prototypes (44.1%), and the lack of permanent position for technology transfer staff (42.1%). Other issues in the list are also very relevant, hinting that the ARIs are beset with issues that look for solutions.

These challenges seem to be systemic issues that speak of the priorities of ARIs. In this regard, TTOs/IPMOs may need to strengthen collaboration with other entities in their universities to bring awareness to IP initiatives.

10. **Areas for improvement.** IP Commercialization emerged as the top area of improvement (70.1% of Questionnaire No. 2 responses) by far. This is followed by IP Management (55.6%), IP Protection first before Publication (47.9%), and IP Publication and Disclosure (46.5%). Concerns listed by respondents in survey results include, but are not limited to, having no IP policy in place at all, IP policies being of a general nature, and the need to strengthen implementation of policies that are in place.
11. **Equality, diversity, and inclusion.** More than the majority of respondents (54%) said they are not aware of any government policies or directives to promote gender equality and diversity in IP management and technology transfer activities in academic/research institutions.

7.0 OBSERVATIONS

This section is divided into four (4) parts, namely: Commonalities, Peculiarities, Strengths, and Weaknesses.

- The **Commonalities** sub-section focuses on the common grounds among ASEAN Member States with respect to their national IP policy frameworks. This section also

zeroes in on the common denominator among IP Policies in academic and research institutions in specific countries.

- The **Peculiarities** sub-section highlights the unique features, if any, among the national IP Policies of ASEAN Member States that you wish to highlight.
- The **Strengths and Weaknesses** sub-sections feature the assessment of the IIPP Team taking into account the surveys and analyses of laws and regulations related to IP.

The following observations are based solely on the responses to Q1 and Q2, desk research, and the occasional interview by the REs.

7.1 COMMONALITIES

The survey responses from Questionnaire No. 1 yielded common answers across different government ministries and agencies from the countries in the ASEAN Region. The responses may also be corroborated with the national laws and regulations reviewed by the IIPP Experts. In fact, the countries may be grouped according to the key principles and characteristics as to how their IP framework operates.

1. **Ownership of IP and rights of use.** According to respondents from Brunei, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam, the source of financing is a factor in determining ownership. Particularly, according to respondents from Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam, in case the research is funded by public money, the invention/creation is owned by the academic/research institutions.
2. **Publication, non-prejudicial disclosure, and trade secrets.** According to respondents from Malaysia, Myanmar, and Philippines, there is loss of IP rights with public disclosure. However, in these countries, there is a one-year grace period (or non-prejudicial disclosure) from the date of earliest disclosure for the filing a patent application.
3. **Commercialization.** According to respondents from Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand, licensing is recognized as a way to transfer IP rights for commercialization. Moreover, technology transfer activities are highlighted. Common to the countries with provisions on technology transfer is the theme of IP rights remaining vested in the universities and research and development institutions, such as in the case of Indonesia, Malaysia, Myanmar, Philippines, Singapore, and Thailand.
4. **Government support for commercialization.** Almost all of the governments of AMS have some form of support or assistance for commercialization of IPRs. Primarily, government support takes in the form of funding, which is the most common among AMS. In the Q1 survey, ninety-four percent (94%) of the responses said that their government funds ARI-based research through grants. Other forms of support are via contracts (44%), subsidies (30%), and cooperative agreements (26%).

To illustrate some of the support extended by governments to ARIs, respondents from Brunei and Indonesia mentioned that the support for spin-offs is given via grants, subsidies, and contracts. For the Philippines, apart from the funding support, training and workshops on IP commercialization and valuation are provided by the government. For Thailand, more than 60% of the responses said that support for spin-off companies mostly take in the form of incubator units provisions.

For Cambodia, whose IP legal framework is still in its early stages, the impact of IP laws, particularly in terms of support, has yet to be seen.

5. **Incentives and distribution of revenues.** The survey results showed, particularly from Malaysian, Philippines, Singaporean, Thai, and Vietnamese respondents, that governments are given flexibility in the form of incentives that are issued to entities for their efforts in commercialization of IP resulting from research and development. Forms of incentives mentioned include guarantees of purchase and financial incentives.
6. **Existence of National IP Strategy.** The Philippines, Singapore and Viet Nam have existing national IP strategies spanning several years.

For the Philippines, the National Intellectual Property Strategy (NIPS) - Philippines 2020-2025 is envisioned to be “collaborative and a whole-of-society approach using effective and efficient advanced tools, and best practices for the creation, utilization, protection, and respect of IP.”⁶ For Viet Nam, the Intellectual Property Strategy was issued in 2019, for the first time at national level, and it marked a new development step in the IP field emphasizing that it is an important tool, not only to promote innovation, but also to improve national competitiveness and contribute to economic, cultural and social development of the country⁷. Meanwhile, the Singapore IP Strategy (SIPS) 2030 has a focus on supporting enterprises in deriving value from intangible assets (IA) and IP, including increasing enterprise access to IA and IP arising from publicly-funded R&D. The SIPS 2030 also looks to build an IA/IP-savvy workforce and a base of IA/IP talent, by introducing a holistic suite of IA/IP training and education programs.⁸

Moreover, the responses from Questionnaire No. 2, which was answered by academic and research institutions, and the review of their respective IP Policies yielded commonness among these institutions. The key findings are the following:

1. **National principles in IP policies.** Academic and research institutions generally follow the national principles embodied in IP laws. Though some academic and research institutions presently do not have IP Policies, their institutional framework is guided by

⁶ <https://www.ipophil.gov.ph/national-intellectual-property-strategy-nips/>

⁷ <https://www.most.gov.vn/en/news/753/viet-nam%E2%80%99s-intellectual-property-strategy-until-2030--driving-force-for-development-of-intellectual-property-assets.aspx>

⁸ <https://www.ipos.gov.sg/manage-ip/singapore-ip-strategy-2030>

enacted laws and implemented rules. This means that the general rules and exceptions usually provided by laws are also applied at the institutional level.

For instance, in the Philippines, the IP policies of ARIs generally follow the national legal principles regarding copyright and patent IP ownership, as embodied in the IP Code of the Philippines. This is especially true in the case of public-funded universities and colleges.

For Singapore, all the respondent institutions have written IP policies with TTOs and processes in place for IP disclosure, management and commercialization, which is in line with the key principles of the National IP Protocol. For example, the Protocol states that IP created using public funds shall be actively managed to ensure optimal utility. There is also government funding to support innovation and enterprise activities of the universities and PROs.

In cases where there is an existing institutional IP policy, national laws and rules are deemed supplementary in interpreting the provisions of the policies. Otherwise, in the case of absence of institutional IP Policies, the national laws are used in lieu of policies.

2. **Adoption of the language of WIPO template.** Some academic and research institutions, particularly in Brunei, the Philippines and Indonesia, have already adopted the wording of the WIPO IP Policy template.

7.2 PECULIARITIES

Among the following are peculiarities in the IP framework of some AMS:

1. In **Cambodia**, as of writing of this report, a few legislative drafts of the IP laws are going through its deliberations before submission to the Parliament/Congress. These include trade secrets/confidential business information, genetic resources, traditional knowledge and traditional cultural expression.
2. In **Myanmar**, under patents and industrial design laws, there are certain conditions for employer ownership entitlement under the employment contract. For instance, if the person develops an invention or design in a similar scope to the former company that he/she had resigned from within a year, the company still owns the rights, unless the person can prove otherwise.
3. In the **Philippines**, schools and universities are expressly mandated by Section 230 of the IP Code to adopt IP policies that would govern the use and creation of intellectual property with the purpose of safeguarding the intellectual creations of the learning institution and its employees and developing them in relation to licensing agreements.

Moreover, the Intellectual Property Office of the Philippines provides assistance to universities under its Innovation and Technology Support Offices (ITSOs) in the procurement of subscriptions to technology and patent information systems.

7.3 STRENGTHS

1. **Ownership of IP by ARIs.** Both the national legal frameworks and IP policies of the ARIs indicate ARI ownership by default in cases of public funding. Most government institutions (62.5%) reported that in case the research is funded by public money, the invention/creation is owned by the ARIs. On the other hand, ARIs reported that their policies stipulate that in cases of public funding, the resulting IP is most likely owned by them (81.3% of responses,) and less often co-owned by the public funding source and the ARI (33.9%.)

In the wake of the US Bayh-Dole Act of 1980's passage, a critical number of AMS⁹ have enacted a similar or an improved version law providing for ownership by the ARIs of the IP, thereby allowing universities to retain ownership to inventions made under state-funded research.

2. **Government facilitation of R&D collaborations.** It is evident from the reports of both government institutions and ARIs that efforts are being made by government institutions to facilitate collaboration and provide assistance in the procurement of systems for the protection and commercialization of IP.

A little over seventy-two percent (72.2%) of government institutions reported that they facilitate "many" collaborations between ARIs and third parties other than academic collaborators. The ARIs¹⁰ (53.8%), on the other hand, report that government ministries and agencies provide assistance in procuring subscriptions to technology and patent information systems.

3. **Harmonization and uniformity among ARIs' IP policies.** The second ranking basis for IP policies were existing IP policies from other universities, at 50.5% of responses.

This indicates that ARIs likely make their IP policies available to other ARIs. This facilitates the sharing of best practices among ARIs when it comes to the crafting of IP policies.

7.4 WEAKNESSES

1. **Low adoption rate of national guidelines or recommendations.** Despite established national legal frameworks in the AMS, only 56.5% of ARIs responded that their IP policies were based on national guidelines or recommendations for institutional IP Policies. Specific to dealing with issues relating to copyright, 60.5% of ARIs reported that they

⁹ Philippines, Thailand, and Viet Nam have modified versions of the US Bayh-Dole Act of 1980. Singapore has a modified version of the Act in the form of its National IP Protocol.

¹⁰ Brunei, Indonesia, Myanmar, the Philippines, Viet Nam, and Singapore are the AMS who reported that they provide support to ARIs on procuring subscriptions to technology and patent information systems are.

resorted to the application of national laws and regulations.

It is ideal to have a higher adoption rate of national guidelines or recommendations. While some flexibility should be afforded to ARIs, ARIs should be encouraged to adopt the national regulations and standards. This is to ensure that government and private entities are able to seamlessly collaborate and create IP, facilitate technology transfer, and safeguard the rights of creators.

2. **Lack of clarity around IP Commercialization.** Both government institutions and ARIs ranked IP Commercialization as an area for improvement in their IP policies. Overwhelmingly, 66.7% of government institutions and 70.1% of ARIs indicated this as an area of concern.

This is peculiar, considering that most ARIs (81.7%) reported that their institutional IP policies contained regulations or guidelines with respect to the commercialization of IP created at their institution. However, examining the recommendations of the REs pursuant to their respective countries' national legal frameworks reveal likely root causes of these gaps.

For example, Indonesia reports having complete regulatory instruments on IP Commercialization but points towards the lack of awareness, limited resources, inadequate legal framework, lack of enforcement, and insufficient collaboration as hindrances. Viet Nam, on the other hand, described its regulations on IP commercialization as general and reported problems related to the valuation of IP generated by state-funded research.

3. **Gaps in IP Management.** Somewhat intertwined with IP Commercialization, IP Management gaps were evident and seen as a priority in both surveys: 51.9% in Questionnaire 1 and 55.6% in Q2. These include, but are not limited to, inadequate resources, permanent staffing, evaluation tools and methods (e.g., valuation, market studies, TRL), incentives, and benefit-sharing.
4. **Prioritization of publication over protection.** One of the most widespread challenges experienced by the ARIs is the desire to prioritize publication of research findings over IP protection (51% of responses rating it "Very Relevant"). Oftentimes, the immediate rewards provided by the universities to their researchers/academics/inventors for disclosing what would otherwise be potential IP is more appealing than to withhold them until a patent is filed.

This serves as a common problem for the TTO/IPMO IP Management challenges. As shown in Q2, 47.9% identified this as an area for improvement and involves, for example: (1) adequate staffing of TTO/IPMO to engage and inform researchers; (2) adequate budgets to file patent applications in a timely manner, thereby providing confidence to inventors; and (3) incentive for researchers to disclose, such as allowing patent

applications to be considered for promotion and tenure decisions. In the Philippines, some universities have already considered patent filings for purposes of promotion and other administrative or academic recognitions.

5. **Lack of gender and diversity (GAD) initiatives.** Consistent between government institutions and ARIs is that only a minority have GAD initiatives (31.5% for government institutions and 25% for ARIs.)

These figures may even be inflated since when asked to expound, some institutions that reported having GAD initiatives simply said that there was no differentiation as to gender in their IP policies and that opportunities were available to both genders. Further, a few responses made it clear that the GAD initiatives they were referring to were university-wide or found in national laws, not at all specific to their TTO/IPMO or technology transfer activities.

6. **Lack of licensing guidelines around the use of third-party IP.** Only 35.9% of ARIs responded positively as to their institutional IP policies having guidelines on the usage of third-party IP.

With only a minority of ARIs having guidelines around this matter, a tendency for the misuse of third-party IP arises. Further, collaboration between institutions is more difficult without existing guidelines on how each party intends or is allowed to use other parties' IP. Having IP policies with provisions on licensing would address this.

7. **Limited R&D Expenditures.** Other important issues identified in the responses are the lack of funds or support to scale up prototypes (44.1%), and the lack of permanent positions for technology transfer staff (42.1%). These are only a few examples of how a lack of R&D funding and consequently, expenditure, manifest.

The low budget for R&D in a country may be considered on its face as a weakness as it limits opportunities for discoveries emanating from R&D activities but at the same time allows ARIs to be creative in looking for opportunities for collaboration with third parties.

8.0 RECOMMENDATIONS

A country's national legal framework has a substantial impact on the IP policies of ARIs. Countries should strengthen their national legal frameworks so it provides adequate guidance to institutions in their creation of their IP policies. It is important to encourage institutions to create IP policies to facilitate smoother collaboration between institutions, technology transfer activities, and to ensure creators' rights are protected.

For instance, in the Philippines, the ARIs generally follow a "templated" IP Policy. The IP Policies are likewise similarly patterned to the existing IP Code, as proven by the review of the IP Policies

in the Annex of the report. It ensures the harmony of principles between institutions and government agencies. This way, both parties are guided as to the process and goals of protecting and commercializing IPs.

Moreover, this harmonious relationship of national legal frameworks and IP policies are essential as a vehicle for further collaboration, not only among researchers and institutions, but also among countries. As seen in concrete examples below, we have seen how bolstered commercialization will benefit the countries and the Region.

As the AMS undertake individual efforts to strengthen their national legal frameworks, the following recommendations may also be adopted.

Define policies in relation to technology

IP policies are largely shaped by a country's direction and priorities. As an example, countries that place agriculture as its top priority would necessarily have more comprehensive policies on IPRs different from countries prioritizing technology.

However, common to all countries is the need to align technology transfer policies and activities with its overall direction. This is only possible when governments are proactive in specifying the direction government ministries and agencies and ARIs ought to take.

Adopt a Model IP Policy in the ASEAN Region

Adoption of model IP policies is essential to address the identified weaknesses regarding lack of guidance in national laws and regulations towards institutional IP policies.

Model IP policies provide a robust framework for implementing strategic and tactical practices that address challenges, both within a country and throughout a region. A recent empirical study explored IP management practices among universities in the European Union.¹¹ The report presented models and processes of IP management and commercialization.

Four main challenges were identified, showing similarity to findings in both the National (Q1) and Institutional (Q2) assessments: (1) lack of funding for proof-of-concept work and the consequence is that most IPs remain at low Technology Readiness Level (TRL); (2) resource constraints; (3) a broad range of technologies and industries with which technology transfer offices (TTOs) need to work; and (4) a non-existent local industry combined with legitimacy problems when trying to partner internationally. These challenges typically make IP management in the university setting more difficult than in the private industry setting. The study was completed in parallel to a number of other European Commission studies examining knowledge and technology transfer practices in the EU.

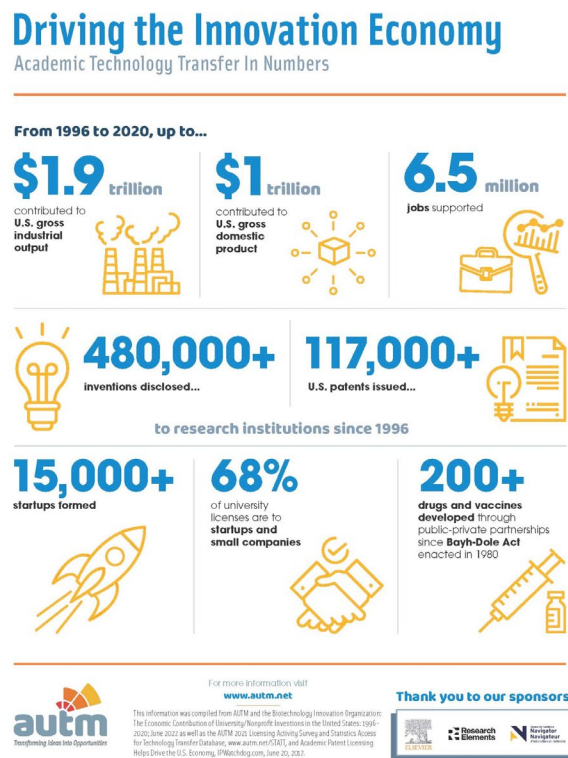
This WIPO-ASEAN IIPP Project aims to provide such a Model IP Policy.

¹¹ European Commission, Directorate-General for Research and Innovation, Holgerson, M., *The management and commercialisation of intellectual property in European universities –*, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2777/969317>.

Incorporate Common and Standard Metrics to Bolster IP Commercialization

Metrics and impact measures are used to evaluate performance, educate stakeholders and the public, identify trends, provide benchmarks, examine gaps (e.g., gender and diversity initiatives), guide solutions, and provide clarity for the innovation and commercialization ecosystem.

AUTM and BIO (Biotechnology Innovation Organization) have collaborated on studies showing the importance and impact of university/non-profit inventions to the U.S. economy. These studies are used with stakeholder and policymakers to advocate for solutions to key challenges including increased funding of R&D, changes in law and regulatory processes, new programmatic initiatives, and increased collaborations. The most recent study compiled data from 1996-2020¹² and documents the sizable return that U.S. taxpayers receive on their investment in federally funded research. It shows that, during a 25-year period, nonprofit patents and the subsequent licensing to industry bolstered U.S. industry gross output by up to \$1.9 trillion, U.S. GDP by up to \$1 trillion and supported up to 6.499 million jobs, as shown in the infographic below.

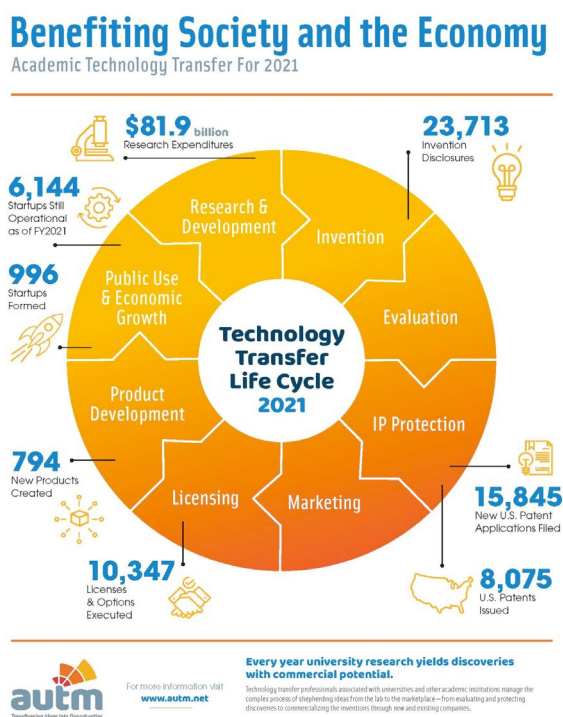


The European Commission's Intellectual Property Action Plan was published in 2020 to assist innovators and researchers make the most of their discoveries and thereby generate societal impact. Research and innovation are identified as driving forces that also support the ongoing

¹² Economic Contributions of University/Non-Profit Inventions in the U.S.: 1996-2020
https://autm.net/AUTM/media/About-Tech-Transfer/Documents/BIO-AUTM-Economic-Contributions-of-University-Nonprofit-Inventions_14JUN2022.pdf.

green and digital transitions. Improving access to, and sharing of, intellectual assets, can increase the commercialization of research results and the market uptake of innovative solutions.¹³ SARIMA (South Africa) also provides good examples.¹⁴

AUTM has conducted its Annual Licensing Survey in the U.S. for thirty (30) years and is a benchmark used by technology transfer offices, stakeholders, and policymakers. The survey, in various forms, has been implemented in a number of other countries to assist in planning for innovation-driven initiatives. The most recent survey, AUTM 2021 Licensing Activity Survey¹⁵ confirmed that the global pandemic continued to have some effects, but as AUTM stated “the technology transfer industry has the resilience needed to survive and thrive despite recent challenges.” Major highlights are shown in the infographic below.



This WIPO-ASEAN IIPP project has identified the overwhelming need for clarity in IP commercialization. It is recommended that a follow-on effort to the Model IP Policy focus upon identifying a set of common terms and definitions (metrics, impacts) used in more mature IP ecosystems (i.e. U.S./AUTM, E.U./European Commission), followed by a pilot ASEAN survey incorporating those common metrics and impacts. To support these efforts, it would be useful for

¹³ European Commission, Directorate-General for Research and Innovation, *Valorisation policies – Making research results work for society*, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2777/031782>.

¹⁴ [Resources: Innovation & Technology Transfer](#).

¹⁵ [2021 Licensing Survey](#).

the ASEAN member states and their relevant government agencies to be consulted on the availability of the proposed metrics/data.

While there is value in using quantitative indicators to monitor and benchmark the performance of technology transfer activities, it is recognized that quantitative indicators/metrics are not sufficient to articulate the full impact of such activities and efforts undertaken by the ARIs. Much of such impact could also be conveyed via other means such as through case studies which can be tailored depending on the objectives and target audience. For example, the AUTM Better World Project (<https://autm.net/about-tech-transfer/better-world-project/about-better-world/>).

On a broader scale, such metrics and impacts could be incorporated into WIPO's GII (Global Innovation Index).

Increase Capabilities of IP Management Offices

IP management offices implement policies and the professionals that support its functions require specific skill sets; access to best practices; continuing education; and the ability to operate effectively not only in their country, but globally so as to respond to opportunities with industry and other collaborators. IP Management was identified as a need by 55.6% of respondents in the Regional Institutional IP Policy (Q2).

Recently, WIPO and JPO have sponsored a regional project that includes less-developed countries in Africa and focuses upon the professional development of TTO/IPMO staff. The project, an initiative of FIT/Japan¹⁶, will facilitate the exchange of participants selected from SADC (Southern African Development Community) countries, to be hosted by established South African TTOs. An expected outcome will be to strengthen relationships across the region as well as in-country to interact, collaborate, and build capacity going forward.

SARIMA (Southern African Research and Innovation Management Association) is a leader in the SADC, providing thought leadership and advocacy, a platform to facilitate and promote best practices, and a champion in strengthening capacities and capabilities of institutions and practitioners. Currently two important projects are supporting efforts across the SADC and beyond. One of these is the WIPO-ARIPO initiative¹⁷ which highlights many of the challenges faced in different member countries. The ARIPO network includes many SADC countries, but brings in additional African countries. In addition, a project to develop a regional TISCs (Technology and Innovation Support Centers) network affiliated with universities/research institutes in SADC provide a unique opportunity to increase awareness, engage researchers, and increase the sense of "community" of innovation.

Such initiatives in ASEAN could address shortcomings in the weaknesses identified concerning IP Management, leverage and link ASEAN TISCs, and allow TT institutions/organizations/individuals to emerge, engage, and provide leadership in ASEAN

¹⁶ Funds-In-Trust Japan Industrial Property Global.

¹⁷ https://www.wipo.int/cooperation/en/funds_in_trust/japan_fitip_global/news/2023/news_0006.html.

regional efforts. An initiative by University of Malaya (UM) under *UM's Top-Notch Staff Attachment Programme, a human capital enhancement and rejuvenation initiative*. A Technology Transfer manager from UM Center of Innovation and Enterprise was attached to Technology Transfer & Innovation Office of National University of Singapore (NUS) for a three month training in fostering innovation & entrepreneurship.

It would be useful to build networks and facilitate regular exchange between the ASEAN ARIs and other international or regional IP management and technology transfer professionals. This could encourage the exchange of best practices, experience and contacts in these fields. International professionals could include experts from WIPO, AUTM and other renowned international ARIs. Building a community of practice or platforms to facilitate such regular exchange could be beneficial to raise the IP management capabilities in ASEAN.

Professional credentials, specific to knowledge and technology transfer (KT/TT), are also relevant to professionals and practitioners. The ATTP (Alliance for Technology Transfer Professionals) was formed in March 2010, as a cooperative effort among KT/TT professional associations and now has fifteen (15) member associations¹⁸. ATTP's mission is to promote and maintain global standards in knowledge and technology transfer via the Registered Technology Transfer Professional (RTTP) designation, the international professional standard for knowledge transfer and commercialization practitioners working in universities, industry and government labs. ATTP (1) maintains internationally recognized standards for the knowledge and technology transfer professional; (2) awards the RTTP designation to knowledge and technology professionals who demonstrate core competency and achievement in the field; (3) supports national associations of KE/KT professionals to raise the caliber of their members through recognized programs of professional development; and (4) encourages training providers to deliver programs that comply with internationally recognized standards.

Malaysia's ITMA (Innovation and Technology Managers Association) is a member of ATTP, the sole ASEAN member. It is recommended that other existing and emerging KT/TT professional associations in ASEAN examine the opportunity and requirements to join ATTP. As such, professionals and practitioners would be exposed to the global community of KT/TT, increase knowledge, improve IP management practices, achieve professional recognition, and facilitate collaborations between and among institutions and industry within the ASEAN region and globally.

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¹⁸ Alliance Members - ATTP.