



# MALAYSIA AND SEARCA



SEARCA's headquarters was constructed with funding from the International Development Research Centre (IDRC) of Canada and the Government of the Philippines.



Established in 1966, the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) is one of the 26 specialist institutions of the Southeast Asian Ministers of Education Organization (SEAMEO), a treaty organization that promotes regional cooperation in education, science, and culture.

The SEAMEO member countries are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, and Vietnam. The associate member countries of SEAMEO are Canada, France, Germany, Morocco, the Netherlands, New Zealand, Spain, and the United Kingdom. Malaysia is one of the founding member countries of SEAMEO, which was established in 1965.

SEARCA's objectives are to:

1. Provide high-quality graduate education and training in agriculture;
2. Promote, undertake, and coordinate research addressing the development needs and problems in agriculture of the region; and
3. Disseminate the findings of agricultural research and experimentation.

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### **SEAMEO SEARCA**

College, Los Baños, Laguna 4031, PHILIPPINES

Tel: (63-49) 536-2290, (63-49) 554-9331 to 9336, (63-2) 8657-1300 to 1302

Fax: +63 49 536-7097

E-mail: [post@searca.org](mailto:post@searca.org)

Website: [www.searca.org](http://www.searca.org)



## Our Vision

A leading enabler and champion of excellence in agriculture and rural development in Southeast Asia

## Our Mission

To elevate the quality of life of agricultural families through sustainable and resilient livelihoods and access to modern networks and innovative markets



## Our Strategic Objectives

- Access new and innovative financial services
- Adopt new, sustainable, and resilient production technologies and systems
- Integrate with modern postharvest and logistics system
- Gain access to and operate in modern networks and markets





supports the  
UN Sustainable Development Goals



## Our Strategic Intent

SEARCA, in the next five years, commits to BETTER, BIGGER, and SMARTER outcomes and impact on the agriculture industry and its stakeholders, most especially the larger proportion of resource-poor farmers, by delivering better services through more context-relevant and valuable services to even more beneficiaries in more effective and efficient ways.

Alongside other global, regional, and national organizations, SEARCA aligns its direction toward contributing to the achievement of the United Nations (UN) Sustainable Development Goals (SDGs) that address global challenges to achieve a better and more sustainable future for all. SEARCA commits to contribute and allocate resources for the achievement of five SDGs which directly align with its mandate and focus, with an emphasis on creating partnerships (SDG17). Moreover, SEARCA also touches three other SDGs as it tries to achieve the five.

## EDUCATION AND COLLECTIVE LEARNING



SEARCA's core program on Education and Collective Learning (ECL) leads the development of a new breed of agriculture leaders and professionals through its scholarships and other graduate study programs. ECL also leads the technical and professional trainings, and coordinates roundtable discussions, conferences, fora, and all other SEARCA learning events.

### ■ GRADUATE SCHOLARSHIP AND INSTITUTIONAL DEVELOPMENT

#### ► GRADUATE SCHOLARSHIP PROGRAM

One of SEARCA's main objectives is to produce high-quality human resources in agriculture for the SEAMEO region in order to strengthen their institutions that would propel regional development. One of the major undertakings under this program is the provision of scholarships that enable Southeast Asians working in agriculture and rural development to pursue their master's or PhD studies. SEARCA



scholars are envisaged to assume leadership roles in their respective countries and influence the directions of agricultural and rural development in Southeast Asia.



## Full Master's and PhD Scholarships

So far, SEARCA has awarded 92 full graduate scholarships (61 MS, 31 PhD) to Malaysians who pursued their studies at Universiti Putra Malaysia (UPM) and the University of the Philippines Los Baños (UPLB). In addition to the full graduate scholarships, SEARCA also awarded PhD research scholarships to four Malaysians. Of the 87 scholarships awarded, 65 (52 MS, 13 PhD) had been completed.



## UPM-SEARCA Scholarship

SEARCA and UPM initiated a joint graduate scholarship program in 2012. Since then, 13 Southeast Asians received UPM-SEARCA scholarships: 1 Bruneian, 1 Cambodian, 4 Indonesians, 2 Malaysians, 2 Filipino, 2 Thais, and 1 Vietnamese.

## Agropolis-UPM-SEARCA Scholarship

In May 2018, SEARCA, Agropolis Fondation of France, and UPM signed a formal agreement to offer PhD Fellowships to Southeast Asian students who will conduct their research under the joint supervision of scientists, researchers, or professors from their respective home university and from any of the 41 higher education institutions and research units that are part of the foundation's scientific network, including University of Montpellier, Montpellier SupAgro, the French Agricultural Research Centre for International Development (CIRAD), and French National Institute for Agricultural Research (INRA).

Two Malaysians have been awarded the Agropolis-UPM-SEARCA scholarship to pursue their PhD at UPM. Ms. Julia Ng Su Chen of the World Wildlife Foundation is pursuing her PhD in bioresource management, while Mr. Yao Tze Leong of the Malaysia's Forest Research Institute is pursuing his PhD in forest management and ecosystem sciences.



### **MARDI-SEARCA Joint Graduate Scholarship**

In 2020, SEARCA inked an agreement with the Malaysian Agricultural Research and Development Institute (MARDI), which aims to strengthen MARDI's pool of professionals for research and development by providing graduate study scholarship grants to qualified MARDI officers.

Prospective graduates are expected to contribute to MARDI's main objective of generating and promoting new, appropriate, and efficient technologies toward the advancement of the food, agriculture, and food and agro-based industries. Seven scholars (5 MS, 2 PhD) have been awarded under this joint scholarship

### **Joint Scholarship under Memorandum of Agreement with Center of Excellence for Sustainable Agricultural Intensification and Nutrition (CE SAIN) of the Royal University of Agriculture (RUA) and Universiti Sains Malaysia (USM)**

Under this agreement for the project "Development of Innovative and Sustainable Aquafeed Using Local Agro-Residual Resources," one RUA constituent was awarded a scholarship to pursue MS in Aquatic Biology at USM effective second semester AY 2021-2022. This is in response to the need of Cambodia for an aquatic science expert. The scholar is expected to contribute to CESAIN's project funded by the Feed the Future Innovation Lab for Fish and enhance the capacity of RUA's Faculty of Fisheries.

### **Malaysian Alumni Association**

As a testimony that the SEARCA graduate scholarship program is a key factor in human resource development in Malaysia, a number of these scholars are now occupying key positions of responsibility in government and other sectors of the country.

In February 1993, these graduate alumni formed the Malaysian SEARCA Fellows Association (MASFA) and actively participated in capacity building activities, including the following:

- 1st RSFA Regional Conference on Food Security and Climate Change jointly organized by SEARCA and National University of Laos and held on 4-5 Dec 2013
- SEARCA-DAAD Alumni Associations Regional Consultative Workshop organized by SEARCA and held on 28-29 May 2013
- Seminar on Information Technology organized by UPM and held on 18 Jul 1997
- Symposium on Retooling Agriculture Faculties for the 21st Century organized by SEARCA and held in Nov 1996
- Seminar on People-based Sustainable Agricultural Development for a Global World Tomorrow organized by the Indonesian SEARCA Fellows and held on 30-31 Oct 1993

### **Outstanding SEARCA Scholarship Alumni (OSSA)**

On the occasion of its 50th anniversary, SEARCA honored 11 Southeast Asians with the OSSA Award, among them a Malaysian. It was the first time that SEARCA conferred such accolade on its alumni who have championed ARD and distinguished themselves in creating positive impact through their work.



Prof. Dr. Mahiran Basri of UPM, Malaysia's premier green chemist, was recognized for her study on the successful nano-delivery of agrochemical actives to lessen pollution in the environment and her work on transdermal delivery of drugs, which helped young and old people effectively absorb medicines applied through the skin. She also pioneered the work on using palm oil and derivatives as feedstock for synthesis of new compounds. She was named the Top Research Scientist of Malaysia for publishing more than 300 papers. Aside from her awards, which also include the ISESCO Science Prize in Chemistry, Archer Daniels Midland Award, Tan Sri Datuk Ong Kee Hui Award, Ram Bais Biotechnology Award, and UPM Best Researcher Award, Dr. Basri also registered patents in Southeast Asian countries and in the United States.

### ► REGIONAL SEARCA ALUMNI ASSOCIATION (RSAA)

SEARCA, in partnership with the Regional SEARCA Alumni Association (RSAA), organized the Scholars' Conference 2023 on "Advancing Agricultural Research for Improved Food Security." Twenty-eight scholars presented their research across six parallel sessions from March 14-15, 2023, via the SOLVE Platform. The two-day conference is the Center's way to support their academic achievements and recognize their capacity to produce quality research that has a great impact on agriculture and rural development.

One Malaysian SEARCA Alumna served as Parallel speaker:  
PARALLEL SESSION ON AQUATIC SCIENCE

#### **Dr. Izzati Adilah Binti Azmir**

Senior Lecturer

University Technology MARA

Shah Alam, Selangor, Malaysia

### ► UNIVERSITY CONSORTIUM

UPM is one of the founding members of the Southeast Asian University Consortium for Graduate Education in Agriculture and Natural Resources (UC) initiated by SEARCA in 1989. The other founding members are Institut Pertanian Bogor (IPB) and Universitas Gadjah Mada (UGM) in Indonesia, Kasetsart University (KU), and University of the Philippines Los Baños (UPLB).

UPM has been instrumental in the increase in collaborative activities and projects of the UC. Notably, it was UPM that proposed the conduct of a UC Graduate Forum as a venue for students from the UC to present their research results and develop a network for collaboration. UPM hosted the inaugural conduct of the forum in 2015 with the theme "Life Science, Food Science and Agriculture." Since then, the UC Graduate Forum has become an annual event that UC students look forward to. Its success has even spurred the institution of the UC Faculty Forum which was initially conducted in 2019. UPM also greatly contributed to the development of a joint curriculum for the Master of Science in Food Security and Climate Change (MS FSCC) project funded by the European Commission's ERASMUS + Capacity Building for Higher Education from 2016 to 2019. Under the project, the university hosted the 2018 UC Summer School with the theme "Oil Palm-Cattle Integration: A Transition towards Sustainability in Food Security and Climate Change"



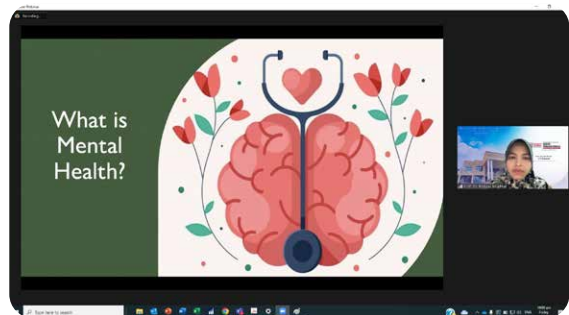
As part of the MS FSCC project, the University Consortium partnered with eight (8) non-UC member universities in Southeast Asia, one of which was Nilai University, to build the capacity of its students, staff, and faculty to help address the imposing challenges of climate change and food security in their country and the region.

So far, at least 110 Malaysians have participated in UC activities:

- 24 graduate exchange students
- 33 thesis grantees
- 31 exchange faculties
- 3 research fellows
- 7 professorial chair holders
- 12 seed fund for collaborative research grantees

### **GSID Conversations**

The GSID Conversations is an avenue for scholars to discuss with experts from different fields regarding complementary topics in agriculture and rural development. The activity also shares the experience and insights of experts on translating knowledge and skills into meaningful contributions to society.



As part of its 55th Anniversary activities, SEARCA invited Prof. Dr. Shahrim Karim, Professor of Malaysia Heritage Food and Culture, Department of Food Service Management, Faculty of Food Science and Technology, UPM, to discuss sustainable and healthy food consumption during the 2nd GSID Conversations on 22 October 2022 via the SOLVE Platform.

For the 3rd GSID Conversations, Dr. Ng Siew Imm, Associate Professor at the School of Business and Economics and Associate Editor of the International Journal of Economics and Management, UPM, shared about Navigating Delays and Disruptions during Postgraduate Studies on 27 May 2022 via the SOLVE Platform.

The 4th GSID Conversations on 16 December 2022 was organized for scholars to talk about mental health problems and its prevention. Prof. Dr. Firdaus Mukhtar, Professor of Clinical Psychology and Deputy Dean for Admission, Institutional Relations & Financial Aid Unit at the School of Graduate Studies, Universiti Putra Malaysia, and the President of the Asian Cognitive Behavior Therapies Association, served as guest speaker for the event. She provided her expert advice on mental health, the symptoms for self-monitoring, and the basis if and when it is time to seek help.

## Outstanding PhD SEARCA Scholar and Special Citation Awards

SEARCA awarded Outstanding MS and PhD SEARCA Scholars for FY 2021/2022. The PhD awardee is from Malaysia, Dr. Tuan Syaripah Najihah Tuan Mohd Razali, PhD in Agricultural Technology, Universiti Putra Malaysia (UPM). The awardee was evaluated according to: i) academic grade point average; ii) duration of studies in the degree program; iii) papers presented in international conferences; iv) publications in scientific journals; v) academic awards or recognitions received and; vi) other curricular activities or engagements.



(left) Dr. Shahidah MD Nor, Special Citation for Academic Achievement awardee and (right) Dr. Tuan Syaripah Najihah Tuan Mohd Razali, Outstanding PhD SEARCA Scholar FY2021-2022

For the first time, SEARCA awarded a Special Citation to a scholar for her significant academic achievements. The awardee is Dr. Shahidah MD Nor who obtained a general point average of a perfect 4.0 at UPM; published seven papers as lead author in refereed journals; and presented four others in scientific forums during her incumbency as a SEARCA scholar. She also presented at the ATMI-ASEAN High Level Policy Forum and was chosen as a Chrysalis Award finalist, meant to contribute to Malaysia's Science, Technology, Innovation, and Economic ecosystem.

### ► SEARCA GOLD MEDAL FOR ACADEMIC EXCELLENCE

In academic year 1977-1978, SEARCA began giving the SEARCA Gold Medal for Academic Excellence to deserving agriculture students in response to a proposal by UPM (then called Universiti Pertanian Malaysia). Initially, the gold medal was given as an award of distinction to UPM's best student in agribusiness.

From 1977 to 1993, 11 medals were given to outstanding UPM agribusiness students. From 1995 to 1999, SEARCA extended the award's coverage to UPM's best students in sustainable upland agriculture. Two students were awarded in the area of sustainable upland agriculture and two in agribusiness. Starting in July 2004, the award was reoriented to include the best students in natural resource management and rural growth promotion. Two students were awarded in these areas of specialization. Altogether, 17 SEARCA gold medals have been awarded.



### ► REGIONAL PROFESSORIAL CHAIR GRANTS

Since 1974, SEARCA provides professorial chair grants to highly competent faculty and research staff of universities in Southeast Asia. Initially, the grant was offered only to faculty and

research staff of UPLB but it was later on expanded to include other universities in the region starting 2012. Since academic year 2011-2012, the SEARCA Regional Professorial Chair Grant has recognized the contribution of institutions and individuals in the fields of agriculture and related sciences, thereby contributing to ARD in Southeast Asia through instruction, research, innovation, and extension work. Thirteen professors from UPM and one from Universiti Teknologi Malaysia have since been awarded the SEARCA Regional Professorial Chair Grant.

## ► INSTITUTIONAL DEVELOPMENT

Through SEARCA's Personnel Exchange Program, Dr. Khew King Ling, Professor and Plant Pathologist at Universiti Sains Malaysia visited UPLB, SEARCA's host institution, to explore collaborative research opportunities between Malaysia and the Philippines. During his month-long stint at UPLB, Dr. Khew was able to share his teaching and research experienced to UPLB's Department of Plant Pathology.

SEARCA also collaborated with Universiti Malaysia Sarawak on a three-year project to develop and implement a Master of Science related to Integrated Management of Natural Resources and Agricultural Development (INRAD) that was launched at SEARCA in November 2006. Funded by the Asia Link Program of the European Union, the project aimed to develop the human resource capacities of the Royal University of Agriculture (RUA) in Cambodia and Universitas Lampung (UNILA) in Indonesia. Aside from Universiti Malaysia Sarawak, KU also provided technical assistance to RUA and UNILA. In 1996, SEARCA assisted UPM's Institute of Consultancy in setting up the University Business Center.

Under the SEARCA-led project on Leveling-Up Philippine Higher Education Institutions in Agriculture, Fisheries, and Natural Resources (LevelUPHEI AFAR), Universiti Putra Malaysia hosted various benchmarking activities for members of the State Universities and Colleges - Association of Colleges of Agriculture in the Philippines (SUC-ACAP). Select senior faculty members were also given the opportunity to stay for one month to conduct research and curriculum development.

## ■ TRAINING FOR DEVELOPMENT

Short-term training is SEARCA's fast lane to building the capacities in the agriculture and rural development sector of SEAMEO member countries. Training activities are geared toward developing the technical and managerial competencies of university faculty members, researchers, agricultural and environmental leaders, and development practitioners in Southeast Asia.

Since SEARCA began this capacity building service in 1970, 940 Malaysians had participated in 207 international, regional, in-country SEARCA training courses, faculty seminars, and learning forums on various topics, including:

- Agricultural Research Management
- Case Writing in Agribusiness and Related Projects
- Training Methodology and Techniques
- Social Laboratory and Technology Transfer Management

- Teaching Personnel in Higher Education in Agriculture
- Information Systems for Subnational Development Planning
- Development Strategies and Planning for Farmers' Communities (DSPFC)
- On-Farm Trials for Technology Verification (OFTTV)
- Data Management for Rural Development (DMRD)
- Strategies for Rural Development
- Research Management Enhancement Course (RMEC)
- Sustainable Agriculture for the Uplands
- Climate Change Adaptation and Mitigation
- Leadership Excellence in Academe Program for Southeast Asia (LEAP SEA)
- Natural Resource Management

Twenty-three of these learning events were conducted in Malaysia, as follows:

- Seminar-workshop on Rural Credit and Savings, Jan 1971
- Workshop cum Training on Farmers' Association Agribusiness Management, Jun 1973
- Agricultural Research Management International Conference-Workshop, 28 Nov-2 Dec 1977
- Course for Grain Drying Technicians, 10-20 Apr 1978
- Malaysian Agricultural Research Management Training and Case Writing Workshop, 25-30 Jun 1979
- Third Regional Seminar on Management of Farmers' Associations, 9 Jun-3 Jul 1980
- Workshop on Small Business Development, 22-27 Sep 1980
- AGROVOC Training Seminar, 1-5 Jun 1981
- SEARCA-UPM Workshop in Research Management for the Development of Farmers, 14-16 Sep 1981
- Specialized Course on the Operation of Modern Rice Processing Facilities, Feb 1982
- In-country Training cum Workshop on Development Strategies and Planning for Farmers' Communities (DSPFC), 10-21 Jan 1983
- 15th Regional Training Program on DSPFC, 9 Nov-18 Dec 1987
- 19th Regional Training Program on DSPFC, 5 Sep-14 Oct 1988
- 23rd Regional Training Program on DSPFC, 10 Jul-18 Aug 1989
- Fifth Research Management Enhancement Course, 1-26 Aug 1994
- Regional Event on Understanding the Fundamentals of Halal towards Food Security in the ASEAN Region, 8-11 Apr 2019



Learning event participants' visit the UPM Lab of Halal Services during the "Regional Event on Understanding the Fundamentals of Halal towards Food Security in the ASEAN Region" held on 8-11 Apr 2019.



One of SEARCA's main objectives is to conduct and coordinate appropriate and relevant research that promotes accelerating transformation through agricultural innovation (ATTAIN). Central to the Center's resolve to be strategically visible and more relevant for all stakeholders and strategic agricultural and rural ecologies, SEARCA's core program on Research and Thought Leadership undertakes policy analyses, research for development, and facilitate knowledge platforms.

### ► PAST RESEARCH PROJECTS AND POLICY STUDIES

SEARCA has worked with various development organizations and research institutions in the implementation of the following completed research and policy studies in the ASEAN region, including Malaysia:

#### **Implications of ASEAN Economic Community (AEC) and Trade and Investments on Regional Food Security**

SEARCA partnered with the Universitas Gadjah Mada (UGM) of Indonesia to implement this project which was identified by the SEARCA-initiated Southeast Asian University Consortium for Graduate Education in Agriculture and Natural Resources (UC) as one of the six priority research and development areas for collaborative undertaking under SEARCA's Umbrella Program on Food and Nutrition Security for Southeast Asia (FANSSEA). The project analyzed the potential impacts of AEC on existing trade agreements, flow of investments, and related commitments among ASEAN member countries, including Malaysia, and across existing ASEAN Free Trade Agreements (FTAs), and its implications on food security in the region.



## Safeguarding and Sustaining the Integrity of Halal Food

The project intended to generate high impact researches in the areas of alternative ingredients, authentication techniques, consumer acceptance, and perception as well as the effect of halal slaughtering system on animal welfare and meat quality. The project also aimed to contribute in providing a well-trained human capital in the halal food processing industry and a comprehensive database of halal food products and traceability system.



The project had six components:

- Comparative study on the consumers' acceptance and economic impact of verified and certified halal food in ASEAN countries
- Development of authentication and analytical tools for halal food product verification
- Development of alternative ingredients and products for halal food processing application
- Welfare and meat quality of livestock slaughtered according to halal method using restraining mechanism and different knife sharpness
- Development of database and halal traceability system for halal food products
- Halal awareness and halal compliance training in food processing for ASEAN countries



Universiti Putra Malaysia (UPM) led the project, which is a UC initiative. Tokyo University of Agriculture (Tokyo NODAI) and UPLB are also involved as project partner institutions.

## Postharvest System Improvement – Best Practices in Fresh and Dried Chili in Southeast Asia: Quality and Safety Aspect, Kasetsart University

From July 2015 to February 2016, the project was conducted with Kasetsart University (KU) as lead in collaboration with the members of the UC, specifically University of the Philippines Los Baños (UPLB), Universitas Gadjah Mada (UGM), IPB, and Universiti Putra Malaysia (UPM) with country focus on Indonesia, Malaysia, the Philippines, and Thailand. The outputs of the study include:

- Supply chain of fresh chili varies in each country and comprise of pool traders, distributors, wholesalers, retail traders and household;
- Middle-large scale chili farms showed a good adherence to good agricultural practices (GAP) while small scale chili condiment producer revealed noncompliance with all aspects of good manufacturing practice (GMP); and
- GAP guidelines for both fresh and processed chili production need to be disseminated more extensively to small farms and industries in Southeast Asia.

## ASEAN Working Group on Social Forestry Strategic Response Fund (ASRF) under ASFCC Phases 2 & 3

Malaysia was one of the countries covered by the ASEAN Working Group on Social Forestry Strategic Response Fund (ASRF), which SEARCA implemented as the supporting partner of the ASEAN-Swiss Partnership on Social Forestry and Climate Change (ASFCC). The ASRF is a flexible funding mechanism that aimed to enable the ASEAN Member States Focal Points to quickly respond to emerging issues and challenges and articulate policy recommendations and directions on social forestry as it relates to climate change, food security, and poverty alleviation.

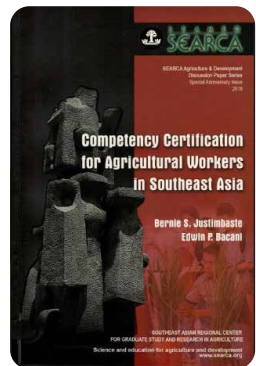


Under the two phases of ASRF, grants were awarded to three projects in Malaysia from 2014 to 2020:

- Development of a National Roadmap on Social Forestry in Malaysia
- Technical Study Tour on Social Forestry
- Conservation and Consumption Goods & Nature-Based Recreation: A Community-Based Ecotourism Project in Malaysia

## Competency Certification for Agricultural Workers in Southeast Asia

SEARCA had been enjoined by the Southeast Asian Ministers of Education Organization (SEAMEO) in 2017 to conduct a study on competency standards for agricultural workers in Southeast Asia as a step forward in mapping national competency standards among the Southeast Asian countries. SEAMEO promotes technical and vocational education and training (TVET) as one of its seven education priorities. Hence, the collaborative study has been instrumental to the formulation of regional and national qualification reference frameworks and assurance framework, which was recognized to be essential in the harmonization and internationalization of TVET in Southeast Asia.



The results of the project were presented and validated in a regional workshop convened in May 2018 in the Philippines and jointly hosted by SEARCA and the Philippine Technical Education and Skills Development Authority (TESDA). It was participated in by representatives of TVET institutions from Brunei Darussalam, Indonesia, Lao PDR, Malaysia, Philippines, Thailand, Timor-Leste, and Vietnam; SEAMEO Secretariat; SEAMEO Regional Center for Vocational and Technical Education and Training (VOCTECH); SEARCA; the International Labour Organization (ILO); and private sector organizations involved in skills development of agricultural workers. It crafted a four-point recommendation that was subsequently presented and elevated for consideration in the 4th HOM on SEA-TVET held in September 2018.

The four-point recommendation focused on the following:

- Encourage TVET institutions to increasingly assume proactive and transforming roles in assessing, validating, and certifying skills and experience gained through non-formal and informal modes within a lifelong learning framework;
- Strengthen and expand competency certification systems to cover recognition of non-formal and informal learning;
- Encourage TVET institutions to pursue partnerships and alliances with a broader range of stakeholders; and
- Promote support from regional TVET networks and international cooperation.

### **Review and Assessment of the Agricultural Innovation Systems (AIS) in ASEAN**

The Organisation for Economic Co-Operation and Development (OECD) collaborated with SEARCA for the conduct of this scoping study whose results were the basis for the policy dialogue between the OECD and ASEAN countries, including Malaysia, to secure food security in a long-term perspective.

Implemented from July 2015 to June 2016, the study aimed to identify the policy issues to improve agricultural productivity growth and sustainability in ASEAN region. Specifically, it aimed to provide an overview of agricultural innovation system in ASEAN countries, highlighting the need to evolve agricultural innovation system to generate innovative solutions for long-term food security concerns.

### **Food Reserves: A Comparative Study on Food Reserve Management and Policies in Southeast Asia**

Malaysia was among the countries covered by this project, which was a collaboration between SEARCA and the members of the UC. The project was under the auspices of SEARCA's Umbrella Program on Food and Nutrition Security for Southeast Asia 2014-2019.

The project aimed to:

- Define and understand the importance of keeping food stocks and reserves, and the rationale behind countries' decision to stockpile.
- Identify commodities that countries stockpile and the modalities and mechanisms of food stockpiling that have been adopted, including physical, virtual, trade, national, and regional mechanisms.
- Examine the implications of a changing regional trade regime on a country's foodstocks, as well as the impact of individual countries' food reserves on a regional stockpiling mechanism such as the ASEAN Plus Three Emergency Rice Reserve (APTERR).
- Explore the feasibility of establishing other types of regional stockpiles beyond reserves.

In addition to the survey in the 11 Southeast Asian countries, SEARCA organized a workshop involving all countries to determine the role of food reserve management and policies in the region and identify implications of a changing regional trade regime, like the ASEAN Economic Community 2015 (AEC 2015), on a country's food stocks. Countries stockpile food, particularly rice, in different modalities and adopt a mix of trade instruments. Thus, SEARCA chose rice as a starting point to study food reserve management processes and policies in Southeast Asia.

### **Umbrella Program on Climate Change Adaptation and Mitigation in Southeast Asia**

From 2015 to 2020, this program was jointly implemented by SEARCA and the UC with the CGIAR Research Program on Climate Change, Agriculture and Food Security–Southeast Asia (CCAFS SEA) and the International Center for Tropical Agriculture (CIAT). It covered Malaysia and the 10 other Southeast Asian countries.

### **Umbrella Program on Food and Nutrition Security for Southeast Asia**

The Umbrella Program on Food and Nutrition Security for Southeast Asia was envisaged to serve as a platform for collaborative research on food security among the UC members and partner universities/institutions from the SEAMEO member countries. It aimed to align the program of work on food security of SEARCA and the UC to the development needs in the region and to support ongoing ASEAN-level programs on improving food security. The priority areas for collaboration were addressed through three integrated components: research and development, capacity building through graduate education and training, and knowledge management.

### **Other Past Research Projects**

SEARCA also implemented a number of research projects with significant outcomes in Malaysia, including the following:

- Comparative Study of Agricultural Efficiency in Southeast Asia
- High-level Agricultural Manpower Requirement of Selected Countries in Asia
- Uniform Regional Tests of Selected Varieties of Crops which are Potential Sources of Protein in Seven Locations in Southeast Asia
- Agricultural Information Bank for Asia (AIBA)
- Action Model for Human Resource Development
- Research Management Project in Asia
- Planning Methodology for Farmers' Community Development
- Data Management for Rural Development and Food Security
- ASEAN Integrated Pest Management (IPM) Knowledge Network Project
- Sub-Mekong and Malaysian Market Assessment Mission
- Small Grants Programme for Operations to Promote Tropical Forests in South and Southeast Asia (SGP PTF)



## ► RESEARCH AND COLLABORATIVE GRANTS

### **Seed Fund for Research and Training (SFRT)**

The Southeast Asian region has a number of promising researchers and scientists whose desire to contribute to the region's development through research and knowledge dissemination initiatives is hindered by lack of funds. This situation serves as a barrier to translating promising research and training into scientific outputs that could be applied to promote development.

To address this concern and in line with the Center's thrust of promoting, undertaking and coordinating research programs relevant to the agriculture and rural development needs of the region, SEARCA will make available a pool of funds to be known as the SEARCA Seed Fund for Research and Training (SFRT).

The SFRT is envisaged to provide chosen research and training project proposals with limited start-up funds intended to enhance chances of securing long-term support from donor agencies. A grant of up to USD 15,000 shall be awarded as seed fund for research/training.

To date, a total of five Malaysians received SFRT grants for their research projects.

### **Travel Grants Program**

To reinforce the Center's efforts and resources in accelerating transformation through agricultural innovation (ATTAIN) and become a leading enabler and champion of excellence in agricultural and rural development, SEARCA provides travel grants of up to a maximum of USD 1,200 to each qualified agriculture and agriculture-related professional, social scientist, or graduate student in Southeast Asia.

To date, more than 10 Malaysians have been provided travel grants under the program.

### **IFS-SEARCA Collaborative Research Grants**

In 2016, the International Foundation for Science (IFS) and the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) implemented a grants scheme for collaborative research called the IFS-SEARCA Collaborative Research Grants Pilot in Southeast Asia. It was open to the nine Southeast Asian countries of Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, Timor-Leste, and Vietnam, and focused on climate change adaptation and mitigation.





As a follow-on collaboration between IFS and SEARCA, in December 2020, the Mentorship Program for Advanced Grants was launched with a Call for Research on Accelerating Transformation through Agricultural Innovation (ATTAIN). Promising scientists will benefit from translating their research and scientific outputs into knowledge that can be applied to promote development, while enhancing their capacities to develop research proposals and conduct research, and also expanding their reach in terms of contributing to the body of knowledge in their research areas. The purpose of the Mentorship Program is to nurture relationships between established scientists and early career researchers (the IFS-SEARCA grantees) that are intended to help the latter to strengthen their research processes, ensure that their projects are of high quality, and produce useful results.

In partnership with SEARCA, IFS supports Southeast Asians who are enrolled in a PhD degree program or have recently completed a master's or PhD degree within the five years from the time of the call, and with limited research start-up funds. This call, however, gives priority in terms of number of slots to its scholarship alumni; faculty and staff of partner universities and universities under its institutional development assistance program; and other regular employees of development organizations, academic institutions and government agencies of Southeast Asian countries, such as Cambodia, Lao PDR, Myanmar, Philippines, Timor-Leste, and Vietnam.

The implementation of the new Advanced Grant scheme continued. Ten (10) successful applicants received an IFS-SEARCA Advanced Grant to conduct their research within one to three years.

## ► RESEARCH PUBLICATIONS

### **Agroforestry Status, Trends, and Outlook in Southeast Asia**

The World Agroforestry (ICRAF) and SEARCA recognize the momentum brought by the adoption of the ASEAN Guidelines for Agroforestry Development and would like to harness this development by heeding the call of the ASEAN food, agricultural, and forestry (FAF) sector to produce the first Agroforestry Status, Trends and Outlook for Southeast Asia. The report published in 2021 gathered the



relevant perspectives from key stakeholders in the sector to respond to the challenges and ensure resilient interventions in agroforestry. This will further guide development efforts and sustainable policies that can shape leadership roles, produce more responsive institutional arrangements, and enhance governance.

Under the Technical Cooperation Program of the Food Agriculture Organization of the United Nations (FAO) and the ASEAN Secretariat on “Scaling up Agroforestry for food security and

environmental benefits in Southeast Asia,” the ASEAN Food, Agriculture and Forestry sector is requesting a report that encapsulates the status, trends and outlook of agroforestry in the Southeast Asian region. Such report will:

- Provide information on agroforestry practices, concepts, programs, policies, training, education and research, industry, issues/challenges, impacts and other relevant aspects.
- Draw an outlook of agroforestry into the future toward a resilient Southeast Asian region.
- Have an accompanying monitoring and reporting design for ASEAN Member States, which include Malaysia, to report on contributions and progress toward achieving resilience through agroforestry in the region.

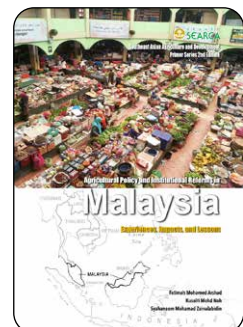
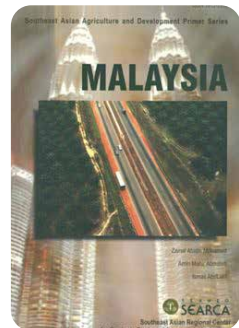
### **Farms, Food, & Futures: Toward Inclusive and Sustainable Agricultural and Rural Development in Southeast Asia**

Dubbed as Agriculture and Rural Development (ARD) Book 2016, SEARCA spelled out in this publication the nuances of productivity-enhancing interventions moving forward, carefully drawing from in-depth analyses and syntheses of lessons, experiences, and empirical evidence on Asia’s ARD. The book provided an overview of the complex issues and challenges, as well as opportunities arising from the structural transformation and market integration happening in the region. For the ARD Book 2016, SEARCA assembled eminent experts and thought leaders working in ARD in the region, and together authored the book with four cross-cutting and contemporary ARD themes, namely: inclusive growth; sustainability; regional integration; and institutions, governance and transformation.

### **Agriculture and Development Primer on Malaysia**

SEARCA published a primer on Malaysia in 2005 as part of its Southeast Asian Agriculture and Development Primer (SAADP) Series. Each volume of the series presents the featured Southeast Asian country’s state of agriculture in a holistic, yet concise form. The first edition presented the country’s state of agriculture and shows the institutions, structures, and policies, and other areas affecting the sector’s performance over the past three decades. Its authors are Dr. Zainal Abidin Mohamed, Mr. Amin Mahir Abdullah, and Mr. Ismail Abd Latif, all of the UPM Department of Agribusiness and Information System.

Published in 2014, the second edition of the primer on Malaysia was authored by Dr. Fatimah Mohamed Arshad, Mr. Kusairi Mohd Noh, and Ms. Syahaneem Mohamad Zaibalabidin, all of UPM. This edition presented an analysis of the country’s experiences, lessons, and insights on policy reforms and institutional innovations in the agriculture sector. Also discussed in the primer are a number of policy innovations that contributed to Malaysian’s agricultural development such as the Economic Transformation Program. The primer also offered policy recommendations to address new and emerging issues on food security, poverty, and environmental sustainability.



## Other Publications

SEARCA has published books, monographs and other publications on various topics related to Malaysia's agriculture. Many of these were outputs from SEARCA's research projects and knowledge events. The most recent publications include the following:

- The Need for Pro-smallholder Policy in Malaysia
- An Integrated Assessment of the Impacts of Paddy Land Conversion on Biodiversity and Food Security in Kedah, Malaysia
- Technical Study Tour on Social Forestry to Enhance Capacity Building through Knowledge Sharing of Malaysian Delegates
- Development of a National Roadmap on Social Forestry in Malaysia
- The ASEAN Free Trade Area (AFTA): Impacts and Effects on Malaysian Agriculture
- Southeast Asian Agriculture and Development Primer Series: Malaysia
- Agricultural Policy and Institutional Reforms in Malaysia: Experiences, Impacts, and Lessons

Malaysia is also featured along with other countries in 24 publications published by SEARCA.

Meanwhile, two articles on Malaysia were published in the Asian Journal of Agriculture and Development (AJAD), SEARCA's international refereed journal. Published twice a year in June and December, AJAD is indexed in the Emerging Sources Citation Index (ESCI) of the Web of Science (WoS), EBSCO Information Services, Research Papers in Economics (RePec), AgEcon Search, Socio-economic Research Portal for the Philippines (SERP-P), CAB Abstracts, ASEAN Citation Index (ACI), The Essential Electronic Agricultural Library (TEEAL), and Australian Business Deans Council (ABDC).

Moreover, nine Malaysians co-authored in 11 other SEARCA publications, including two AJAD articles.

## ► AGRICULTURE, FORESTRY, AND NATURAL RESOURCES (AFNR) KNOWLEDGE PLATFORM

For almost six decades, SEARCA has been actively working with different like-minded institutions and networks in conducting research that addresses critical issues related to the region's agricultural and rural development. Capitalizing on this knowledge resource, SEARCA is leading the establishment of the Agriculture, Forestry, and Natural Resources (AFNR) Knowledge Platform.

This primarily aims to facilitate and sustain an ecosystem for knowledge sharing that contributes to agricultural and rural development in the Southeast Asian region and beyond. It also ensures access to an accurate, highly credible, sound, timely, and reliable source of information that will fuel future research activities, capacity building initiatives, policy development and technological innovations aimed at accelerating transformation in the region's agricultural sector.

It has three main components: knowledge generation, exchange, and utilization. Knowledge generation includes the conceptualization and organization of opportunities for knowledge sharing and learning (conferences, roundtable discussions, webinars, etc). Part of this is facilitating the link with other SEARCA programs and the AFNR KP. While AKRU works on scholarly publications, AFNR will work on popular formats, addressing the needs of our other stakeholders and providing another entry point/access to other SEARCA resources.

The second part is the Knowledge Exchange, the actual website itself. In this part, contributions of the programs will be categorized into these thematic areas. These are loosely based on our ATTAIN Priority Areas (our current five-year plan): Food and Nutrition Security; Sustainable Farming Systems and NRM; Value Addition, E-Commerce, and Industry Development; Policy and Thought Leadership; and Training and Capacity Building. There will also be links to other tools/resources like the SEARCA Library, AgPractices, Access Agriculture videos, etc.

The last part is knowledge utilization, the community of practice. We envision the contents of the AFNR KP to stir discussions in the COP. Regular activities (example: online forum on a certain timely/relevant topic) will be designed to keep the COP active and engaging.

## EMERGING INNOVATION FOR GROWTH



SEARCA's core program on Emerging Innovation for Growth (EIG) is focused on providing farmers and farming families wider access to innovative products and services as well as business models for increased productivity and income through:

- Open Innovation and Agri-Incubation
- Knowledge and Technology Transfer
- Project Development, Monitoring, and Evaluation

### ► **InnovEIGhts**

The InnovEIGhts program is envisioned to support, facilitate, and implement co-created and co-piloted agribusiness incubation, information and technology transfer projects, and impact-and action-driven extension and technical assistance engagement for Southeast Asia. The said program envisions to establish and develop the agriculture and rural development sector through:

- Agricultural technology development and technology transfer,
- Adaptation and adoption of village-scale relevant technologies,
- Inclusive rural community development
- Local and immediate agribusiness clustering, and
- Gender inclusive and high impact projects.

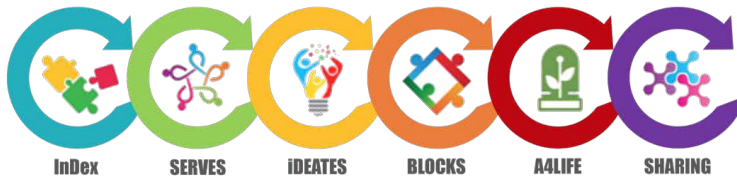
The program also intends to achieve a number of goals in support of inclusive agricultural and rural development:

- Strengthen university public agri-research and university-based agribusiness incubators to promote local inclusive innovation ecosystem,
- Provide platform and projects for more effective and efficient prototyping, up-scaling, and commercialization of technologies and delivering impact-driven farming community assistance,



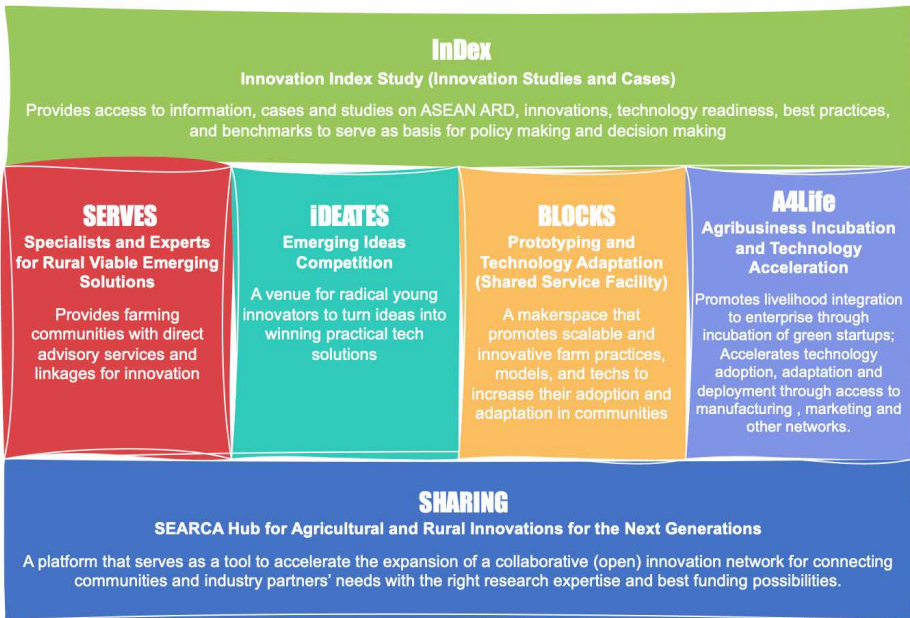
- Provide value-added services and assistance in the promotion of A/F tech-based startups and in the scaling-up of existing agri-technologies and agri-enterprises.
- Advance knowledge, attitude, and skills of farming communities and startups through innovation and entrepreneurial mentoring and trainings, and
- Build a coalition of support services from key government institutions and other relevant stakeholders.

The InnovEIGhts program is a combination of independent but highly integrated components design to achieve SEARCA ATTAIN in aligned to targeted SDGs and to serve the different levels of beneficiary-stakeholders and Academe-Industry-Government (AIG) partners.



The program is composed of:

1. Innovation Index Studies (InDex) is the research and information arm of the InnovEIGhts program.
2. Specialists and Experts for Rural Viable Emerging Solutions (SERVES) is a program that provides co-created and co-piloted farming family and farming community livelihood projects that identify and implement innovative but practical solutions to persistent farming challenges.
3. Emerging Ideas Competition (iDEATES) focuses on engaging the youth, children, and agri-innovators in promoting agri-innovation and scientific farming methods to modernize agriculture and build local rural innovation ecosystems.
4. Building Linkages and Open Collaboration for Knowledge System (BLOCKS) is an innovative and open shared service hub that offers a platform and networks of fabrication centers, design resources, experts, and projects. It is responsible for promoting locally adaptable agri-technologies and practices that can be adopted by small farmers and rural communities.
5. Agriculture 4.0 Livelihood Integration towards Farming Enterprises (A4LIFE) focuses on building local and community-based innovation ecosystem and inclusive agribusiness value chains. It aims to produce a generation of green startups and agripreneurs.
6. SEARCA Hub for Agriculture and Rural Innovations for the Next Generation (SHARING) is a powerful innovation and open collaboration platform and access tool that serves as a gateway for information, programs, resources, and networks in the world where SEARCA operates.



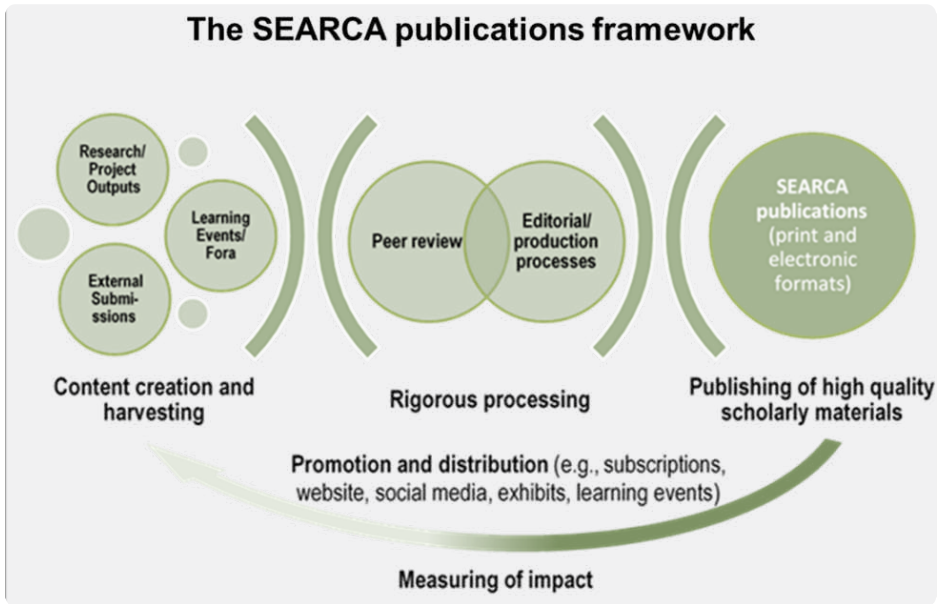
► **GRANTS FOR RESEARCH TOWARDS AGRICULTURAL INNOVATIVE SOLUTIONS (GRAINS)**

The SEARCA Grants for Research towards Agricultural Innovative Solutions (GRAINS) was awarded to the Universiti Putra Malaysia in 2023 for the project entitled “Electroencephalography (EEG) as an Innovative Integration Tool in Halal Slaughtering and Animal Welfare for Socio-Economic Development in Southeast Asia.”

► **BENCHMARKING OF THE AGRICULTURAL RESEARCH FOR DEVELOPMENT (R4D) MANAGEMENT SYSTEM WITH SELECTED ASIAN COUNTRIES**

This project focuses on highlighting the experiences, challenges, best practices, strategic directions, and opportunities of different agricultural organizations in Thailand, Malaysia, South Korea, and Japan that are providing R4D grants and has the same mandate as the Department of Agriculture–Bureau of Agricultural Research (DA-BAR). Currently, the project team is conducting a series of key informant interviews (KII), site visits, meetings, and consultations for the DA-BAR-funded benchmarking project.

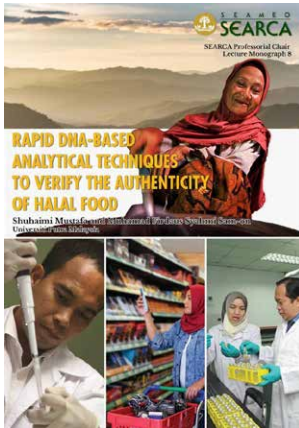
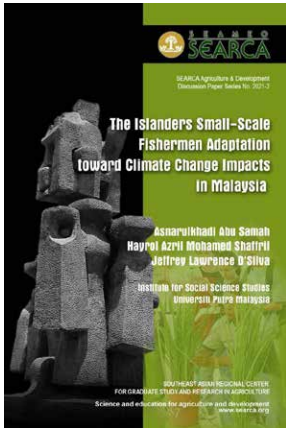
## APPLIED KNOWLEDGE RESOURCES



The Center's applied knowledge resources contribute to SEARCA's vision of becoming Southeast Asia's leading enabler and champion of excellence in ARD, particularly by asserting leadership in knowledge creation in these fields. Apart from the packaging of knowledge through publication, these knowledge products are also shared through its websites and increasingly complemented by social media. SEARCA also maintains a library and an archives system to store generated knowledge.

### ► PUBLICATION

SEARCA publication provides one important avenue for knowledge creation in ARD. This ensures that research results, policy discussions, and best practices from the field, among its primordial knowledge sources, are packaged and broadly shared. SEARCA aims to publish high-quality professional, intellectual, and scholarly output in ARD with scholars, researchers, and policymakers as intended readers. A broad spectrum of ARD themes is published through a number of serial and non-serial SEARCA publications that include books, journal articles, monographs, discussion papers, and policy briefs.



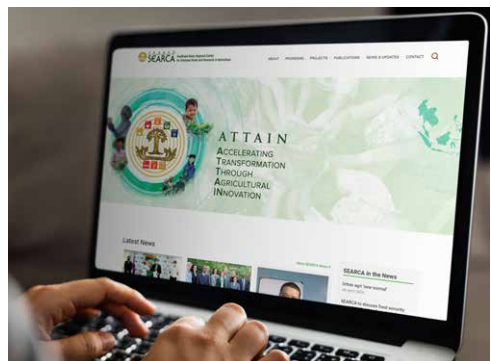
Publishing for over half a century now, SEARCA has a publication pipeline of materials primarily sourced from outputs of its staple programs. External contributions are also welcome, notably for the Center's priority thematic content. All materials submitted for publication as books, monographs, or journal articles undergo rigorous peer review and editorial processes to ensure high quality.

Over 500 various publications are curated in SEARCA's knowledge inventory system (mostly those published year 2000 onward). As of 30 June 2023, 22 titles either focused on Malaysia or included it in its country of coverage have been published by SEARCA. These include monographs (6), discussion paper series (1), briefs and notes (6), proceedings (2), and journal articles (7).



## ► PROMOTION AND DISTRIBUTION

The Center has, in recent years, been investing in ensuring that its publications and other knowledge products maximize their intended use and not gather dust on a shelf. As it were, its momentum for more visibility online has proven more relevant than anticipated during the pandemic that started in 2020. The situation resulted to



lessened printing and suspended the traditional distribution of physical copies and face-to-face knowledge exchanges/interactions.

The SEARCA website complemented by its social media presence are the current channels in which the Center's knowledge creations are accessed. Almost all publications are downloadable for free; learning/knowledge events and presentations are also freely accessible. As of 30 June 2023, a total of 45,310 publications have been downloaded from [searca.org](https://searca.org), SEARCA's official website. Over 23,000 people from 159 countries have downloaded these knowledge materials. The most downloaded types are refereed journal articles, books and monographs, and various briefs and notes. As of June 2023, 488 downloads of SEARCA publications have been made by Malaysians.

## ► LIBRARY AND ARCHIVES

The SEARCA library, which houses a collection of over 15,500 agriculture and development-related references, serves primarily SEARCA scholars and staff, but it also accommodates other users. The references are also listed in SEARCA's online library information system (LIS) <https://lis.searcaapps.org/lis/> to facilitate faster access and search. The LIS also includes theses and dissertations of SEARCA scholars as well as weblinks to various online resources, such as articles on the latest updates in agriculture and development.

The Center's archives have digitized all vital records for efficient information processing, storage, access, and dissemination. As of September 2023, over 6,500 SEARCA documents have been digitized, including personnel and scholars' records, project reports, publications, financial statements, agreements, directors' exit reports, five-year plans, memorandums, and contracts.



## MANAGEMENT

Malaysia is currently represented in the SEARCA Governing Board by YBhg Prof Dr Nazamid bin Saari, Deputy Vice-Chancellor (Research and Innovation), Department of Food Science, Faculty of Food Science and Technology, UPM. The SEARCA Governing Board is the Center's highest policymaking body composed of representatives of the 11 SEAMEO member countries.

At present, the SEARCA Director is Dr. Glenn B. Gregorio. The Deputy Director for Programs and the Deputy Director for Administration are Dr. Nur Azura Binti Adam and Assoc. Prof. Joselito G. Florendo, respectively.







