



VIETNAM AND SEARCHA

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 Australia, Canada, France, Germany, Morocco, the Netherlands, New Zealand, Spain, and the United Kingdom. Vietnam 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.

SEAMEO SEARCA

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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.



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.

Full Master's and PhD Scholarships

Since 1968, SEARCA has been awarding scholarships to Southeast Asians to pursue graduate studies in agriculture and related fields at selected universities in the region. These SEARCA scholars are envisaged to assume leadership roles in their respective countries and influence the directions of agricultural and rural development in Southeast Asia.

So far, a total of 165 Vietnamese were awarded full SEARCA scholarships (99 MS, 66 PhD). Of this number, 141 had completed their graduate programs (87 MS, 54 PhD) at various universities with which SEARCA has special arrangements. The study posts of Vietnamese SEARCA scholars included Universiti Putra Malaysia in Malaysia; Central Luzon State University, University of the Philippines Los Baños and University of the Philippines Visayas, all in the Philippines; and Tokyo University of Agriculture (Tokyo NODAI) in Japan.

IDRC-SEARCA Southeast Asian Upland Agriculture Fellowship Project

The scholarship project, which started in 2013, aims to establish a critical mass of high-quality human resources in Vietnam, Cambodia, and Lao PDR who could serve as catalysts for developing sustainable agriculture programs for upland communities that are generally vulnerable to food insecurity. Ten Vietnamese completed their master's degrees while one completed her doctorate degree under this project.

NTU-SEARCA Joint Scholarship Program for Global Agriculture Technology and Genomic Science (Global ATGS)

A partnership between the National Taiwan University and SEARCA, the joint scholarship aims to cultivate agricultural professional talents, encourage academic excellence, and promote research and development in agriculture within Southeast Asia through a two-year Master Program in Global Agriculture Technology and Genomic Science (Global ATGS). The academic program tackles emerging agricultural biotechnologies and smart agriculture through its cross- and inter-disciplinary curriculum. Since its pilot offering in AY 2020/2021, SEARCA has awarded two Vietnamese under this joint scholarship.

Agropolis Fondation-SEARCA Joint Scholarship Program

The partnership with Agropolis Fondation (AF) in France aims to strengthen and promote scientific cooperation and knowledge sharing between Southeast Asia and France on the basis of equality and mutual benefit. The joint scholarship program combines research and higher education and capacity building activities in the fields of agriculture and food and sustainable development. It provides PhD Fellowships to Southeast Asian students who will spend 18 months in any of SEARCA's study posts and another 18 months in a research unit in Montpellier, France from among AF's vast scientific network, under a Cotutelle program. The scholars are jointly supervised by scientists, researchers and professors from these two institutions. Mr. Nguyen Van Hieu of Cuu Long Delta Rice Research Institute, Vietnam was awarded to pursue Double degree in PhD Plant Breeding at UPLB and CIRAD, France.

Tokyo NODAI-SEARCA Scholarship for Dissertation Doctorate Program

Started in AY 2010/2011, the project aims to contribute to the enhancement of agricultural research and development in Southeast Asia by providing a three-year scholarship leading to a Dissertation Doctorate at Tokyo NODAI. Two Vietnamese completed their PhD programs under this project.

Asian-European International Master's Degree Course on Food Science

The project was a pilot offering of a 19-month intensive training in food science leading to a master's degree that will be conferred by France's Ecole Nationale Supérieure des Industries Agricoles et Alimentaires (ENSIA). Of the 16 students from five Southeast Asian countries, three were from Vietnam.

PhD Research Scholarships

SEARCA also awards PhD Research Scholarships to Southeast Asian nationals whose research work are relevant to the priority thrusts of SEARCA. To date, six Vietnamese received the SEARCA PhD research scholarship, including four who have completed their PhD program under this scholarship.

IRRI-SEARCA Affiliate Scholars

A special arrangement between the International Rice Research Institute (IRRI) and SEARCA enabled SEARCA scholars to conduct their thesis research under the supervision of an IRRI scientist. Ms. Ngo Thi Thanh Truc (PhD, environmental science), Mr. Ho Viet The (MS, plant breeding), and Ms. Tran Nhat Lam Duyen (PhD, agricultural economics) were able to take advantage of this arrangement. As IRRI affiliate scholars, they were able to use IRRI's laboratory and office facilities as well as IRRI's Library and Documentation Center for their research.

Sandwich Program Scholarships

A Vietnamese PhD scholar, Ms. Pham Huu Yen Phuong, was the first scholar under the SEARCA's sandwich program in collaboration with Centre de Cooperation Internationale en Recherché Agronomique pour le Developpement or the French Agricultural Research Centre for International Development (CIRAD) to pursue her dissertation research in food science.

Through sandwich programs, SEARCA provides limited support to highly qualified Southeast Asian students to conduct and complete their researches under a sandwich program arrangement outside their home university under the supervision of a counterpart adviser.

Special Graduate Seminar

The special graduate seminar is held once every semester and highlights outstanding research by a SEARCA scholar. Hosting the seminar is the Center's way to support the scholars' academic milestones and to recognize their capacity to produce quality research that has a great impact on agriculture and rural development.

Dr. Tran Manh Hai (PhD in Agricultural Economics, UPLB) presented his research titled "Farmers' preferences and willingness to pay for dairy cattle insurance in Hanoi, Vietnam" in a special graduate seminar held on 6 December 2019.

Dr. Nguyen Thanh Trung (PhD in Tropical Agriculture, Kasetsart University) presented his research on "Enhancing Soil Fertility and Sustainable Agricultural Production Using Legume-based Intercropping in Northern Mountainous Areas of Vietnam" on 29 April 2022. Dr. Trung's research was jointly supported by SEARCA, International Center for Tropical Agriculture (CIAT)-Asia, French Agricultural Research Centre for International Development (CIRAD), and the ACTAE project funded by the French Agency of Development.

Outstanding SEARCA Scholarship Alumni (OSSA)

On the occasion of its 50th anniversary, SEARCA honored 11 Southeast Asians with the OSSA Award, among them is one Vietnamese. 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.

Dr. Phan Hieu Hien of Nong Lam University was recognized for his significant contribution in the advancement of mechanized rice production in Vietnam and other countries. His most outstanding innovation is his flat-bed dryer that uses rice husks as fuel. The first-generation dryer introduced in the mid-1980s was able to process hundreds of tons of wet paddy for the first time in the Mekong Delta. The technology, which has been continuously improved by

his colleagues and farmer-mechanics based on the previous models are responsible for drying around 10 to 50 tons of rice per batch. Even during dry season, more farmers prefer using the flat bed dryer because there is less grain breakage. And while Dr. Hien has retired from the university, he is still very much engaged with the promotion of the laser-controlled land leveling technology in Vietnam, which he and his colleagues developed in 2005. In 2008, he received the much coveted “People’s Teacher” bestowed by no less than the President of Vietnam.



► REGIONAL SEARCA ALUMNI ASSOCIATION (RSAA)

Upon graduation, SEARCA scholars automatically become members of RSAA, an organization consisting of all SEARCA Graduate Scholarship Alumni. The goals of RSAA are to facilitate the development of linkages among in-country associations of SEARCA alumni, as well as foster collaborative research and development efforts in the region. As a testimony that the SEARCA graduate scholarship program is a key factor in human resource development in Vietnam, a number of these scholars have held key positions of responsibility in government agencies, in the academe, and in other sectors of the country.

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 14-15 March 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.

A Vietnamese SEARCA Alumna served as Parallel speaker:

PARALLEL SPEAKER

Session on Agricultural Economics

Dr. Nguyen Thi Duong Nga

RSAA Secretary and Treasurer and

Associate Professor

Vietnam National University of Agriculture

The 2nd conference was held on 25-26 April 2024 with the theme “Cultivating Tomorrow: SEARCA’s Insights for Agriculture’s Future” attended by 58 scholars and alumni combined. Dr. Nguyen Thi Duong Nga once again served as session moderator.

► REGIONAL PROFESSORIAL CHAIR GRANTS

SEARCA has provided professorial chair grants to highly competent faculty and research staff of universities in Southeast Asia since 1974. 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. Two Vietnamese professors have since been awarded the SEARCA Regional Professorial Chair Grant:

- Dr. Hoang Van Sam of Vietnam National University of Forestry in the field of Plant Taxonomy and Conservation
- Dr. Vo Thanh Danh of Cantho University in the field of Natural Resource Economics
- Dr. Nguyen Dac Khoa of Can Tho University in the field of Plant Pathology

► INSTITUTIONAL DEVELOPMENT



Vietnam is one of the beneficiaries of SEARCA's Institutional Development Assistance (IDA) Program, which provided support to develop centers of excellence in agricultural education in SEAMEO member countries. SEARCA selects strategic universities that have the potential to contribute to the country's development.

SEARCA has been assisting Thai Nguyen University of Agriculture and Forestry (TUAF) under this program through scholarship support to its faculty members and by enabling TUAF faculty and research staff to participate in trainings on communication skills.

Conducted on 11-15 June 2018, the English Enhancement Course had 18 lecturers in attendance. The course aimed to enhance the speaking and writing abilities of the participants, encouraged and gave them confidence to apply and pursue graduate studies in an international English program. The training focused on how to prepare a well-organized application letter and inquiry, curriculum vitae appropriate for scholarship application, and what to expect and how to answer a scholarship interview.

■ TRAINING FOR DEVELOPMENT

Short-term training continues to be one of the Center's most effective approaches for cultivating change makers and thought leaders capable of transforming the agriculture and rural development landscape in Southeast Asia. Since SEARCA began this capacity building service in 1970, 486 Vietnamese had participated in 119 international, regional, in-country SEARCA trainings, faculty seminars, and learning forums on various topics, including:

Since SEARCA began its capacity building service in 1970, 479 Vietnamese had participated in 117 international, regional, in-country SEARCA trainings, faculty seminars, and learning forums on various topics, including:

- Leadership excellence in academe
- Food supply chains and logistics
- Quality control of microbial-based fertilizers
- Food security in the ASEAN landscape
- Inclusive and sustainable agricultural and rural development
- Pig breeding and production course
- Grain postharvest technology
- Sustainable agriculture and natural resource management
- Food processing
- Data management for rural development and food security
- Agricultural research management
- Farm tourism
- Collaborative research on climate change
- Policies for inclusive value chains
- Applications of One Health/EcoHealth approach toward sustainable livestock production
- Understanding the fundamentals of Halal toward food security
- Leadership development program for higher education institutions
- Modeling geographic information systems (GIS) and agent-based modeling applications (GAMA)
- Climate leadership
- Mentorship program for advanced research grants
- Public policy cycles for family farming
- Agricultural innovation systems

Ten of these learning events were conducted in Vietnam, as follows:

- Overseas Comparative Study Mission toward Inclusive, Sustainable and Competitive Livestock and Dairy Development (2 batches, 2015)
- Workshop on Vulnerability, Impact and Adaptation Assessment for Climate Change: Approaches, Methods, and Tools (10-12 Jul 2013)
- Community Empowerment for Rural Development (CERD) Project Short-term Overseas Comparative Studies (13-17 April 2004)
- 2nd Southeast Asian Course on Sustainable Agro-Enterprise Development in a MicroRegional Context (31 Mar-18 Apr 2003)
- Advanced Higher Education Administrators Development (AHEAD) Training Course for Hanoi Agricultural University (HAU) (23-27 Sep 2002)
- In-Country Training Course on Sustainable Agriculture for the Uplands (SAU) (10-21 Nov 1997)
- In-Country Training Course on Strategies for Rural Development (SRD) (25 Mar-5 Apr 1996)
- Rural Project Analysis Training Course for Vietnam (3 June-6 July 1996)
- In-Country Training Course on Data Management for Rural Development (DMRD) (15-26 May 1995)



Dr. Arnel del Barrio (center left), PCC Acting Executive Director, and Dr. Nguyen Thi Lan (center right), Acting President of Vietnam National University of Agriculture (VNUA), sign a memorandum of understanding for possible collaborative activities on research and development, student and staff exchanges, and workshops and training courses between PCC and VNUA. The MOU was signed during the PCC officials' overseas comparative study mission in Vietnam in November 2015.

Aside from SEARCA-organized training courses, the Center also proactively finds other opportunities for Southeast Asians to participate in high-level training courses. These include the following:

- 2010 National Taiwan University Summer Program on Biodiversity - Ms. Nguyen Thi Lan Chi, then an undergraduate student of Agribusiness Management at Hanoi Agricultural University (now known as Vietnam National University of Agriculture), was among the recipients of the summer program scholarship.
- 2010 SEARCA-Beahrs Environmental Leadership Program Training - Mr. Nguyen Viet Dang of Hanoi Agricultural University (now known as Vietnam National University of Agriculture) was the first grantee of the SEARCA-Beahrs Training Scholarship awarded in 2010. Beahrs ELP is an annual three-week intensive summer certificate course organized by the University of California (UC), Berkeley.



Dr. Le Vin Thuc of Can Tho University and Dr. Cuong Van Tran of Tay Nguyen University participated in the 6th Leadership Development Program for Higher Education Institutions (LDP-HEIs) in Southeast Asia which was conducted in a hybrid mode from March to May 2024. Photo was taken during the face-to-face sessions in Kasetsart University, Bangkok, Thailand.

RESEARCH AND THOUGHT LEADERSHIP



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 and research for development as well as facilitates knowledge platforms.

► ONGOING RESEARCH PROJECTS AND POLICY STUDIES

Sustainable Agricultural Mechanization in Gender-Sensitive Food Systems Transformation in Asia (SAMGeFS)

Vietnam is one of the seven countries covered by this Food and Agriculture Organization of the United Nations (FAO)-funded project. SAMGeFS aims to examine the different innovative approaches for broader adoption and upscaling of sustainable agricultural mechanization for a gender-sensitive food systems transformation in Asia. The project has three main components, namely, country assessments, case studies, and validation workshop and experts consultation.

► 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 Vietnam:

FarmerTalk: Development of Information, Education, and Communication (IEC) Materials Highlighting Biotech Contributions to Farmer Success

Committed to the goal of sharing knowledge to elevate the quality of life of agricultural

families through sustainable and resilient livelihoods and access to modern networks and innovative markets, SEARCA and CropLife Asia have partnered to communicate the impacts and contributions of biotech crops through flyers and videos highlighting success stories of farmers in the Philippines, Indonesia, and Vietnam who have experienced firsthand the benefits of using biotech crops. The project featured case stories of two biotech corn farmers from Vietnam.

A Series Activities in the Framework of the UN Decade of Family Farming

SEARCA is documenting and systematically analyzing case studies about policies, strategies, initiatives, and programs successfully supporting family farming in selected Southeast Asian countries, including Vietnam, under Activity 2 of the project. To support the documentation of some case studies and incorporate the viewpoint from Farmers Organizations, SEARCA collaborated with the Asian Partnership for the Development of Human Resources in Rural Asia (AsiaDHRRA).

Agricultural Transformation and Market Integration in the ASEAN Region: Responding to Food Security and Inclusiveness Concerns (ATMI-ASEAN)

Vietnam was one of the five ASEAN Member States (AMS) covered by this International Fund for Agricultural Development (IFAD)-funded project, which was co-implemented by the International Food Policy Research Institute (IFPRI) and SEARCA. The overall goal of the ATMIASEAN project was to strengthen the institutional capacity of the AMS to develop and implement policies and sub-regional programs in support of integration of smallholders in sub-regional agricultural and food markets. This was done through three main components and broad activities (1) Policy studies and expert workshops; (2) High-level policy forums and roundtables; and (3) Technical assistance for planning and policy development.

The Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD) served as the project's focal agency in Vietnam which led the policy studies and national-level activities that will promote the competitiveness of small-scale rural producers and their inclusion in regional agrifood markets, including but not limited to capacity building for evidence-based decision making, policy formulation, and monitoring and evaluation.

Moreover, IPSARD conducted the policy study titled Pig Value Chain Analysis in Hanoi Province: Recommendations for Inclusive Growth under the ATMI-ASEAN project. They also developed a draft strategy for developing the animal slaughtering and processing industry and the livestock products market in Vietnam under the project. Moreover, Vietnam also provided inputs to the Maize-Meat Regional Value Chain Assessment that was endorsed by the project to ASEAN Ministers on Agriculture and Forestry (AMAF).

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 Vietnam, and across existing ASEAN Free Trade Agreements (FTAs), and its implications on food security in the region.

Rural Regional Transformation (RRT): Pathways, Policy Sequencing and Development Outcomes in China, the Philippines, and Vietnam

The project provided policy recommendations for stronger and more equitable growth in sub-national regions of China, the Philippines, and Vietnam through rural transformations. The project identified the policy implications for other developing countries through cross-country comparison; and improve the capacity of participating organizations through their collaborative work in the project.

Specifically, the project:

- Developed a database that can be used to measure regionally disaggregated indicators of rural transformation, economic growth, equity and poverty by region in China, the Philippines, and Vietnam;
- Documented the pathways of RRT, the likely risks related to different stages of rural transformation, and the major policies and sequences of policies that have facilitated regional rural transformations that benefit the rural poor;
- Examined major exogenous factors that have significantly affected regional growth, equity and poverty in different stages of rural transformation in each of three countries;
- Conducted cross-country comparison on rural transformation, policies and sequence of policies affecting growth, equity and poverty through rural transformation;
- Examined future prospects for rural transformation trajectories based on the trends observed and the results of this study; and
- Provided training on analysis of RRT, policy sequencing and development outcomes to other institutions in the participating countries.

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

Vietnam 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 Vietnam from 2014 to 2020:

- A study on the watershed management Muong Community in Da Bac District, Hoa Binh Province, Vietnam
- Review of community forestry implementation to contribute to the revision of Law on Forestry in Vietnam
- Review and evaluation of the status of forest allocation policies to produce recommendations to policymakers

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 Vietnam, 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.

Landscape: Inclusive Agribusiness in Southeast Asia

SEARCA conducted a scoping study that assessed and mapped relevant agribusiness players and their activities and roles in the region, with specific attention to Indonesia, Myanmar, the Philippines, and Vietnam. The study evaluated agribusiness innovation trends and highlighted

key champions and practices in the ASEAN region. The study results were presented at the Roundtable on Inclusive Agribusiness in Southeast Asia held in Ho Chi Minh City on 23-25 September 2015, which gathered more than 100 key agribusiness practitioners from the private sectors, farmer's groups, government, academe, civil society organizations, and international organizations.



National Action Plans for Mitigation in Rice: Comparative Assessment of Institutional Setting and Possible Entry Points for Intervention in the Philippines and Vietnam

SEARCA collaborated with IRRI on this project, in consonance with SEARCA's focus on the overarching thrust of Inclusive and Sustainable Agricultural and Rural Development (ISARD) in its 10th Five-Year Plan. The project was conducted from July 2016 to January 2017.

The study primarily aimed to identify bottlenecks in the implementation process and entry points for international institutions to support implementation of national mitigation plans in the rice sub-sector. Furthermore, the project intended to highlight key stakeholders and their roles as well as posit recommendations on how to effectively involve them to successfully reduce the carbon footprint of rice production in the Philippines and Vietnam. The outputs of the project include the following:

- Improved level of understanding of the dynamics of implementation of climate change mitigation policy, particularly in the rice sub-sector, in the Philippines and Vietnam;
- Better grasp of the Intended Nationally Determined Contributions (INDC), national climate change action plans, related initiatives in greenhouse gas (GHG) mitigation in the rice sub-sector and the resources entailed;
- Identified potential bottlenecks in the implementation of national mitigation plans in the rice sub-sector;
- Possible entry points for interventions in support of the implementation of national mitigation plans in the rice sub-sector;
- Understanding how climate change policies developed at the national level are translated to the local level; and
- Recommendations on effectively involving stakeholders to reduce the carbon footprint of rice production in the Philippines and Vietnam.

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

Vietnam 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 Vietnam 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 other research projects with significant outcomes in Vietnam, including the following:

- Strengthening ASEAN Mechanisms for Reducing Emissions from Deforestation and Forest Degradation (REDD Plus)
- Appraisal of Institutional Mandates for Agribusiness in Asia
- Promotion of Rice Resilience and Other Crops in ASEAN
- Social Laboratory for Rural and Agricultural Development
- Downy Mildew of Corn Project
- Uniform Tests of Selected Varieties of High-Protein Crops in Southeast Asia
- Research Management (RM) Project in Asia
- Cassava Production in Asia
- Post Production Research Application (PPRA) Project
- Strengthening Marketability of Technology for Sustained Food Processing at the Village Level in Vietnam

- Studies on New Fish Sauce Processing
- Sustainable Coastal Resources Management: Methodology Development Pilot Action Project
- Adapting and Transferring Lessons Learned from Manupali Watershed to Other Critical Watersheds in Southeast Asia: Focused on Vietnam
- Environmental Baseline Study: Nutrients Migration to South China
- Small Grants Programme for Operations to Promote Tropical Forests in Asia
- Gender and Development Project
- Agro-Industrial Development Project
- Regoverning Markets: Securing Small Producers' Participation in Restructured National and Regional Agri-food Systems
- Data Management for Rural Development and Food Security Project

► 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 40 Vietnamese 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, a total of 18 Vietnamese 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 successful applicants received an IFS-SEARCA Advanced Grant to conduct their research within one to three years.

► POLICY ROUNDTABLES AND CONFERENCES

Vietnam has been part of SEARCA's Policy Roundtable (PRT) Series, joining policymakers and rural development practitioners from Cambodia and Lao PDR as well as from the Philippines and other Asian countries to discuss critical and emerging agricultural and rural development issues in the region and identify collaborative strategies and policy instruments toward responding to these issues.

The Policy Roundtable Discussion Series on Capacity Building of Cambodia, Lao PDR, Myanmar, and Vietnam (CLMV) Toward Agricultural Competitiveness enabled policymakers, administrators, and rural development practitioners from Southeast Asia to discuss collaborative strategies and capacity building activities, design policy instruments to combat poverty and reduce food insecurity vis-à-vis the increasing globalization, agricultural trade liberalization, and other emerging challenges facing CLMV agriculture and rural sectors.

The sixth policy, themed “Agribusiness: Challenges and Opportunities for Agricultural Competitiveness of Transition Countries in Southeast Asia,” was held in Halong, Vietnam on 16-17 April 2009. The roundtable examined the increasingly important role being played by agribusiness and agro-industry in socioeconomic development. It highlighted the need for capacity building on macro-level agricultural competitiveness through awareness forums and study tours for policymakers and policy advisers to share lessons from successes of neighboring countries, economic policy analysis including supply chain, and micro-level competitiveness focusing on hands-on training in addressing specific bottleneck and priority segments in the supply chain common to the CLMV countries, and the provision of an enabling environment for enhancing the connections between small and medium enterprises and large urban-based enterprises.

Moreover, the 11th Policy Roundtable, themed “Building Capacities for Agricultural Competitiveness for Agricultural Competitiveness of Transition Countries on Southeast Asia: Modern Biotechnology for Food Security in a Climate Change Scenario and ASEAN Integration” was held in Hanoi, Vietnam on 26-27 May 2014. It was organized by SEARCA in collaboration with the International Service for the Acquisition of Agri-biotech Applications (ISAAA), CroPLife Asia, Agbiotech Vietnam, and the Institute for Agricultural Genetics of Vietnam Academy of Agricultural Sciences.

Policy Roundtables and Conferences Participated in by Vietnamese

Vietnamese working in ARD also participated in various policy roundtables, conferences, and fora with focus on providing evidence-based policy lessons/implications resulting from science-based studies. Likewise, these provide venue for in-depth discussion among stakeholders to address the issues concerning agricultural and rural development in the region. The following regional PRTs and conferences convened by SEARCA had Vietnamese participants:

- Regional Workshop cum Roundtable Discussion on ASEAN Economic Integration (28-29 Nov 2019, Bangkok, Thailand)
- Regional Workshop on Competency Certification for Agricultural Workers in Southeast Asia (9-10 May 2018, SEARCA, Philippines)
- International Conference on School Gardens: Leveraging the Multi-functionality of School Gardens (16-18 Apr 2018, SEARCA, Philippines)
- Forum on Promoting Sustainable Agriculture in the Mekong Sub-Region towards Food Security (6-7 Nov 2017, An Giang, Vietnam)
- Regional Workshop on Mainstreaming Biodiversity in Agriculture for Sustainable Development and Food Security in Southeast Asia (12-14 Sep 2017, Chiang Mai, Thailand)
- Policy Roundtable: Rice Policies across Southeast Asia (8 Dec 2016, SEARCA, Philippines)
- Regional Roundtable Discussion and Workshop on the Development of Ecological Monitoring Network in Southeast Asia (24-25 Oct 2016, SEARCA, Philippines)
- Policy Roundtable on Ensuring Food Security through Improving the Agricultural Insurance Program to Enhance Resilience to Climate Change in Southeast Asia (29-30 July 2015, Makati City, Philippines)
- Regional Consultation Workshop on the Umbrella Program on Climate Change Adaptation and Mitigation for Southeast Asia (12-14 May 2015, Hanoi, Vietnam)
- Second International Conference on Agricultural and Rural Development in Southeast Asia (ARD2014) (12-13 Nov 2014, Makati City, Philippines)

- Policy Roundtable on Mainstreaming Climate Change Adaptation in the Agriculture Sector towards Food Security in Southeast Asia (6-7 Feb 2014, Phnom Penh, Cambodia)
- Regional Consultation Workshop: Umbrella Program on Food Security (25-26 Jul 2013, SEARCA, Philippines)
- Policy Roundtable on Mainstreaming Climate Change Adaptation in the Agriculture Sector towards Food Security in Southeast Asia (6-7 Feb 2014, Phnom Penh, Cambodia)

► ACHIEVEMENT AWARD IN AGRICULTURAL AND RURAL DEVELOPMENT

In pursuit to honor excellence, leadership, and service in advancing agricultural and rural development in Southeast Asia, SEARCA will launch the young achiever award in ARD, in collaboration with key partners, to exemplary young individuals in the region. The objective of the award is for re-engaging the youth and recognizing young individuals who have advanced ARD in the region through their leadership, innovation, and achievement. These young individuals have demonstrated workmanship and commitment in accelerating transformation through agricultural innovation that contributes to the achievement of the Sustainable Development Goals (SDGs).

Dioscoro L. Umali Achievement Award in Agricultural Development

From 2007 to 2015, SEARCA has awarded the Dioscoro L. Umali Achievement Award in Agricultural Development to recognize exemplary contributions in the field of agriculture and rural development. It is a collaboration among SEARCA, the National Academy of Science and Technology, Philippines (NAST, Philippines), and Dioscoro L. Umali Foundation, Inc. (DLUF). The achievement award covers a full range of fields including plant and animal sciences, land and water management, environment and natural resource management, technology development, social organization, food security, poverty reduction, economics and business, and policy and governance, among others.



Dr. Vo-Tong Xuan of Vietnam was the first recipient of the Dioscoro L. Umali Achievement Award in Agricultural Development launched in November 2007. The Umali Award aims to promote agriculture by recognizing exemplary individuals who have contributed in no small measure to the advancement of agricultural development in Southeast Asia. Dr. Xuan was recognized for this dedicated and committed service toward the promotion of diversified and sustainable agriculture, particularly rice production, through his scientific publication, extension, teaching and inputs to national policies to that has impacted the lives of millions of people, especially those in developing countries who are dependent on agriculture, particularly Vietnam. As a requisite of the award,

Dr. Xuan gave a lecture after the conferment of his award in November 2008. His lecture, which was later published as a monograph, is titled “A Path to Agricultural Development.”

► **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.

The knowledge platform primarily aims to facilitate and sustain an ecosystem for knowledgesharing 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, which support the Community of Practice (CoP). 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 harvesting their knowledge products through the Applied Knowledge Resources Unit (AKRU). 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, the 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. One of the significant developments for the knowledge platform this year is its integration into the SEARCA Consortium for Agricultural Development, Research, and Extension (CADRE), where it is envisioned to serve as the Knowledge Management (KM) arm of the Research Consortium. The knowledge platform will continue to be client-driven as it caters to the information needs of external stakeholders. Its content will also be designed to stir discussions in the CoP. Regular activities (e.g., an online forum on a certain timely/relevant topic) will also be conducted to keep the CoP active and engaging.

As the KM component of CADRE, the AFNR Knowledge Platform aims to broaden the CoP (and Interest) through a culture of knowledge-sharing, exchange, and engagement. Moving forward, the knowledge platform will advocate D4A (Data for All) that supports data inclusivity access through the development and provision of agricultural data and statistics tools.

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:

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

► PROJECT DEVELOPMENT, MONITORING AND EVALUATION

Objective: Implement value-driven programs, projects, activities upholding SEARCA brand

EIGD prioritizes innovative programs, projects, and training initiatives, emphasizing diversity across various fields with a regional and subregional focus on agricultural and rural development (ARD) in collaboration with various organizations with same visions in mind.

Rice Straw Biogas Hub. Rice Straw Biogas Hub (RSBH) is a three-year project funded by Innovate UK, in partnership with the UK-based start-up Straw Innovations, Koolmill Systems, and Aston University. The project aims to make clean energy accessible to farmers in remote, under-

served rural communities through biogas generation from rice straw waste and an innovative package of technology services: efficient grain/straw harvesting; biogas-powered drying and storage, and efficient milling. Additionally, the project will develop policy recommendations to support transformational change and offer training in circular economy practices and clean energy in agriculture. The aim is to reduce emissions from rice production and promote sustainable rice straw management by converting straw into a climate-friendly energy source.

In 2024, the RSBH project team engaged with experts at Can Tho University, Vietnam, for a knowledge exchange on biogas digesters as part of the project benchmarking initiative. Plans are underway for collaborating on an international renewable energy conference featuring the results of the RSBH project.

SEARCA-initiated projects

Aligned with its commitment to fostering innovative agricultural solutions, SEARCA undertakes projects that aim to enhance agricultural knowledge and practices while safeguarding the environment.

SEARCA Carbon Footprint

To strengthen its commitment and even showcase its efforts and contribution in addressing global challenges, particularly climate change, towards a more sustainable future through the SDGs, this project aims to assess the carbon footprint of SEARCA through life cycle assessment (LCA) following ISO 14044 – LCA requirements and guideline. With the results of the initial carbon emission assessment reaching to 628.93 MT CO₂e, the SEARCA is committed to intensifying its initiative climate change mitigation.

Through this project, the carbon footprint for FY 2022-2023, which served as the baseline year, was calculated. In total, for Fiscal Year 2022 - 2023, the Center has an annual emission of metric tons of 628.93 MT CO₂e, bulk of which (54%) came from electricity consumption. This brings the emission intensity in terms of per employee basis at 6.76 MT CO₂e / employee-year, which is lower than the global average value. Finally, an excel-based calculator was developed to track the carbon footprint of the Center for the succeeding fiscal year. This study is consistent and will intensify the initiative of SEARCA in contributing to climate change mitigation through its program on “Web-based Integrated Spatial Engine and Smart Ecosystem (WISE) Rice-based Carbon Farming.”

SEARCA Carbon Farming Program. SEARCA conducted a scoping study to analyze the current landscape, methodologies, and approach of low-carbon emission farming and the carbon credit market in Southeast Asia. This involved a series of interviews with experts, private companies, non-government organizations (NGOs), and farmers with existing initiatives on carbon farming or carbon emission reduction in agriculture from Cambodia, Philippines, Thailand, and Vietnam. The gaps and opportunities identified served as basis in formulating strategies and initiatives for a robust and sustainable approach to carbon farming and trading for the agricultural sector in the region.

Through this program, it is recommended to develop a comprehensive business model that encompasses the financial, operational, and regulatory dimensions of the carbon trading scheme. This will enable a structured approach for implementing and scaling carbon trading initiatives and serve as a practical guide for stakeholders to understand economic benefits and logistical requirements of participating in this market.



SEARCHA Platform for Attaining Agri 4.0 Collaboration and Engagement (SPACE)

SPACE is a virtual community designed to foster collaboration and innovation among experts from academia, industry, government, and local communities. The platform connects professionals through an interactive database and open calls for collaboration, creating limitless opportunities for cooperative ventures in agricultural technology and sustainable development.

In a recent outreach initiative, 60 emails were sent to a carefully curated list of experts, inviting them to join SPACE's growing pool of professionals. Over 25 experts, representing a diverse range of fields, have already expressed interest in joining this dynamic network. By becoming part of SPACE, these experts are contributing to a vibrant ecosystem of knowledge exchange and partnerships that seek to revolutionize agriculture across Southeast Asia.



The SPACE platform is now accessible via <https://space.searcha.org/>

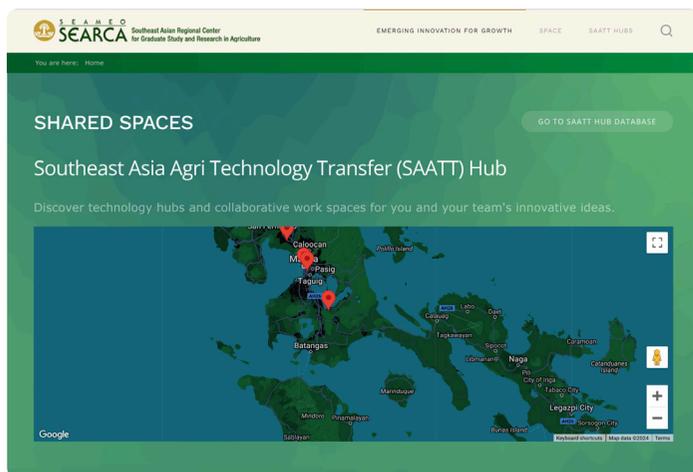
With the participation of leading researchers, technology innovators, policy-makers, and community leaders, the platform offers a unique space where cutting-edge ideas and practices

can be shared to accelerate the adoption of Agri 4.0 solutions. Through its expert pool, SPACE facilitates collaborations that address key challenges in agriculture, from increasing productivity and food security to implementing sustainable practices and advanced technologies.

Southeast Asia Agri-Technology Transfer (SAATT)

The creation and development of the Southeast Asian Agri-Tech Transfer (SAATT) Hub website hosted by SEARCA shall establish SEARCA as a champion and enabler in the agri-tech transfer landscape. The SAATT Hub shall be SEARCA's contribution to the aggressive brokerage of already existing or upcoming innovations in agriculture by serving as the virtual central hub where agribased and agri-related technology transfer institutions and stakeholders from the academe, industry, and government could promote and showcase innovative products and agri-technologies. The SAATT Hub shall also serve as a platform for agricultural cooperatives, farmers, and farming families in the region to gain access to SEARCA's IP and tech transfer assets, modern agritechologies, and disruptive solutions to transform mindsets and agricultural systems ushering Agri 4.0.

After its integration at the SEARCA website in June 2024, more than 25 of the invited experts confirmed their participation and interest in the SPACE platform. With this, 12 institutions across Southeast Asia also agreed to be part of SEARCA's network of Tech Hubs under SAATT.



SAATT webpage available at <https://saatt.searca.org/>

► KNOWLEDGE AND TECHNOLOGY TRANSFER

Objective: Enhance Partnership and leadership in priority areas and emerging concerns

Farm-level technology transfer: Automated Calamansi Sorter (ACS)

Under EIGD's Knowledge and Tech Transfer initiative is the facilitation of the adoption and transfer of emerging and innovative agritech innovations and linkages. SEARCA promotes the adoption of innovative agri-tech solutions at the farm level to enhance agricultural

productivity and sustainability. Through partnerships with academic and research institutions, SEARCA facilitates the development and dissemination of technologies that address specific challenges faced by farmers. This initiative focuses on practical solutions that improve efficiency and profitability at the farm level, ensuring that innovations are accessible and beneficial to smallholder farmers across the region.

Digital Agriculture Platform

SEARCA is modernizing agriculture through digital platforms that connect farmers directly with markets, ensuring fair trade and improved livelihoods. These platforms leverage technology to streamline the supply chain from farm to fork, benefiting both farmers and consumers. In an increasingly digital world, SEARCA's Digital Agriculture Platform bridges the gap between farmers and markets, enabling smallholder farmers to thrive in a competitive landscape. By integrating technology into traditional farming practices, SEARCA is helping to secure a sustainable and profitable future for agriculture in the region.

Agri-robotics activities

SEARCA is dedicated to bringing about agricultural transformation through the adoption of a new concept of agriculture, Agri 4.0, redefined by modern technologies, processes, and dynamics. Moreover, SEARCA is committed to the development of the next generation of agriculture leaders and professionals.

Development and Piloting of Agri-Robotics Module

Envisioning to accelerate transformation to Agriculture 4.0 by nurturing innovations, the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) invests in empowering and equipping the youth and by developing and making innovative programs available and accessible to spark their interest in agriculture through new and creative approaches to complex problems in food production. One way of doing this is by building the capacities of school teachers and equipping them with resources that they can use to integrate Agriculture 4.0 in their lessons under the K-12 curriculum.

Agri-mechanization through Tractor Development

SEARCA is advancing agricultural mechanization by promoting open systems manufacturing, which allows for the customization and scaling of farming equipment to meet the specific needs of smallholder farmers. This initiative focuses on developing and deploying innovative, locally adaptable machinery to enhance agricultural productivity. Empowering farmers with the right tools is essential for sustainable agricultural growth. Through its Agri-Mechanization initiative, SEARCA is collaborating with global and local partners to bring innovative, open-source machinery to the fields, tailored to the unique needs of smallholder farmers in the region.

► OPEN INNOVATION AND AGRICULTURE INCUBATION

Grants for Research Towards Agricultural Innovative Solutions (GRAINS)

GRAINS is a SEARCA program started in 2020 supporting agri-entrepreneurial minds by providing short-term starter funds to innovative agricultural concepts, prototypes, and ventures, supporting sustainable agriculture and rural development across Southeast Asia.

By 2023, GRAINS supported 25 total projects hailing from Indonesia, Philippines, Malaysia, Thailand, and Myanmar.

Open innovation and knowledge exchange

By facilitating two open innovation and knowledge exchanges in 2023, EIGD institutionalized partnership and collaboration among parties towards a synergistic innovation ecosystem and knowledge exchange and strengthened innovative and entrepreneurial mindsets.

The Southeast Asia Agri-Innovation Forum was a hybrid online and offsite event that showcased multi-country projects from new grantees funded by GRAINS. Chosen from hundreds of applications, these projects aim to tackle critical challenges faced by farming communities and drive agricultural transformation across Southeast Asia. Grantees from Indonesia, Malaysia, Myanmar, the Philippines, and Thailand presented their project concepts, inviting feedback and insights from our panel of experts.

AgriTech Field Day. Farmers' Exchange Program with GRAINS startup grantees. The onsite event, organized by SEARCA in collaboration with the Center of Excellence on Sustainable Agricultural Intensification and Nutrition (CE SAIN) in Cambodia, brought together farmer leaders and agritech startups in Cambodia and Europe. Startups supported by Impact Hub Phnom Penh, namely ADSA, DamDoh App, and Chalatex, and other innovators such as S.E.C. Solar Energy and SpaceCrop Technologies – Hungary, explored potential synergies within the Southeast Asian and European innovation ecosystem. The event provided a chance to share technologies and innovations, including demonstrations at the CESAIN Agricultural Technology Park, for the benefit of farmers and rural communities.

Modern Agri-Education at Learning Hubs. To facilitate the exchange and dissemination of modern agricultural knowledge among youth, the SEARCA Hub for Agricultural and Rural Innovation for the Next Generation (SHARING) webpage was launched in 2023. The SHARING website features information about the onsite SHARING museum and the SHARING Café, which can host activities such as ideation sessions, hands-on learning, and internship programs focused on agrobotics.



SEARCA Center Director Glenn B. Gregorio toured the visitors from Kaoshiung Medical University to the SHARING Museum.

These modernized learning approach and learning events focused on skill development and capacity building for the youth by providing and equipping the participants with practical knowledge and skills in technologies and innovation in agriculture. Such activities also exposed the youth to career opportunities and income-generating activities in agricultural technology, further igniting their interest in the critical fields of food security.

Through these learning events, SEARCA strengthened its impact on stakeholders and further contributed to the advancement of sustainable agriculture and rural development.

Agripreneurship and startup acceleration

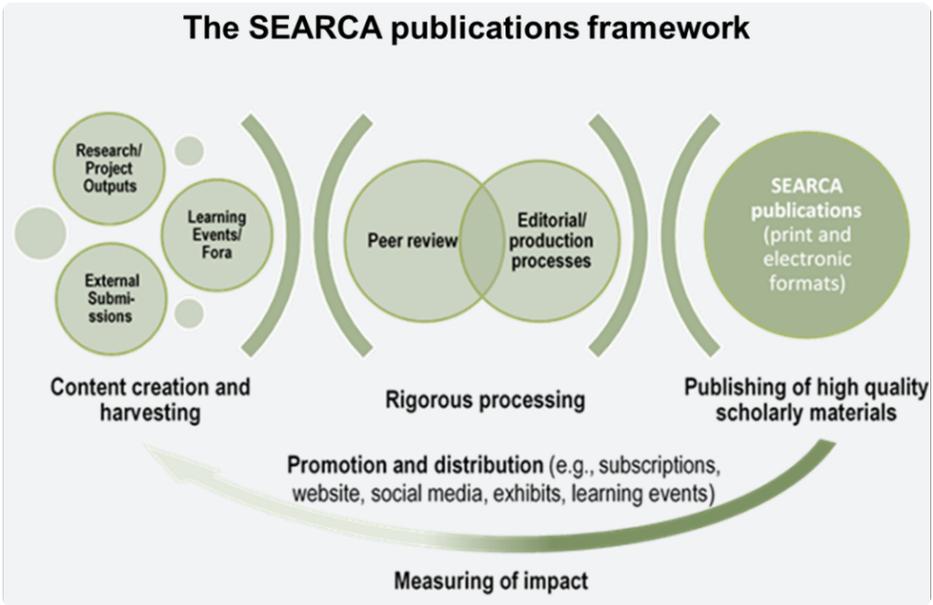
To foster the growth of startups in the agriculture sector, we launched acceleration projects in collaboration with industry partners and business incubators, starting with the Philippines and Cambodia. Our goal is to mentor agriculture-focused startups throughout the region, helping them advance to the next stage of growth and ultimately benefiting farmers and farming communities across Southeast Asia.

Unveiled Impact Stories of Innovation

To continue disseminating stories of agri-innovation from projects funded by SEARCA GRAINS, three new video packages were created to inspire the adoption of best practices and to draw lessons toward successful project implementation. A total of seven stories are accessible through SEARCA website (www.searca.org/grains#stories) and social media platforms such as YouTube.

Among which is the Bioplastic Shifts Agrowaste into Sustainable Solution that presents scientists at the University of San Carlos (USC) using discarded shrimp shells to create bioplastic, a biodegradable and low-carbon alternative to combat plastic pollution. This enables redirection of agro-industrial waste from landfills to a circular economy. The story was also repackaged by SEARCA and USC Cebu into a one-minute 'Science in Shorts' entry titled "Unusually sustainable - bioplastics from shrimp shells plus mango waste!" The video premiered at the Curious2024 - Future Insight conference in Mainz, Germany, and garnered the "Top 10 Nature Awards" out of 250 videos submitted by researchers across the world.

KNOWLEDGE DISSEMINATION



► 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 September 2024, 71 titles either focused on Vietnam or included it in its country of coverage have been published by SEARCA.

These include monographs (8), discussion paper series (11), briefs and notes (15), proceedings (3), and journal articles (34).

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 Vietnam, 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

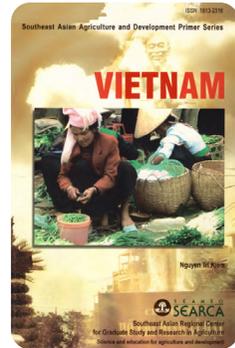
Dubbed as Agriculture and Rural Development (ARD) Book 2016, SEARCA spelled out in this publication the nuances of productivity-enhancing interventions moving forward, carefully drawing from in-depth analyses and syntheses of lessons, experiences, and empirical evidence on Asia’s ARD. The book provided 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 Vietnam

SEARCA published a primer on Vietnam as part of the “Southeast Asian Agriculture and Development Primer (SAADP) Series.” Published in 2006, the first edition of the Vietnam primer, authored by Nguyen Tri Kiem, describes the country’s agriculture and its significant contributions in bolstering the country’s overall economy. It features the primary agricultural commodities produced for the import and export market and the market trend. Government interventions and policy reforms that have had profound impact on development efforts are also discussed. The primer also delves into the important facets that could potentially

help boost the agriculture sector if addressed accordingly - public investment and research and development.

The second edition was published in 2016 and it focuses on the analysis of each country's experiences, lessons, and insights on policy reforms and institutional innovations in the agriculture sector. In the Vietnam primer, policy innovations that contributed to the country's agricultural development, such as the Economic Transformation Program (ETP), are discussed. It also offers policy recommendations to address new and emerging issues on food security, poverty, and environmental sustainability. Dang Kim Son, Tran Cong Thang, Do Lien Huong, Vo Thi Thanh Tam, and Pham Thi Kim co-authored the second edition.



Other Publications

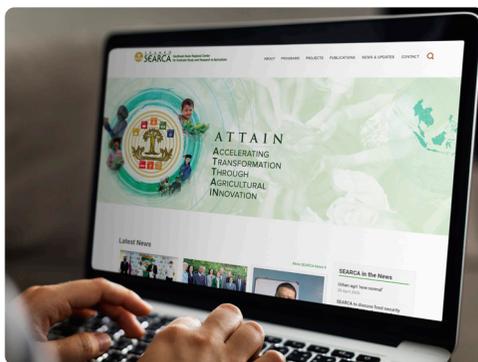
SEARCA has published books, monographs and other publications on various topics related to Vietnam's agriculture. Many of these were outputs from SEARCA's research projects and knowledge events. The most recent publications include the following:

- Transforming Pathways: Working with Farmers in Agri-Food Systems Case Studies from Indonesia, Philippines, and Vietnam
- Salinity and drought significantly affect rice production, adopting Good Agricultural Practices is a key solution: Some insights for Mekong River Delta, Vietnam
- Proceedings: Policy Roundtable on ATMI-ASEAN: The Case of the Livestock Sector in Vietnam
- Mangroves for Climate Change Adaptation: The Case of Thua Thien Hue, Vietnam
- Translating Scientific Information to Practice: The Case of Insect Pest Management in Vietnam
- Assessment of Impacts of Climate Change on Agriculture and Fisheries in the Coastal Areas of Thua Thien Hue Province, Vietnam
- Meso-Level Analysis on Rice-Farmers' Adaptive Measures for Slow Onset Hazard: The Case of Saltwater Intrusion in the Philippines and Vietnam
- Lessons Learned from Crafting the Technical Guidelines on the Forest-based Income Generation Models in Vietnam
- Management of Watershed Protection Forest Based on the Muong Minority Ethnic Communities in Da Bac District, Hoa Binh Province, Vietnam
- Integration of GIS and AHP Techniques for Analyzing Land Use Suitability in Di Linh District, Upstream Dong Nai Watershed, Vietnam
- Pangasius Quality Management and Market Access of Small-scale Farmers in the Mekong River Delta, Vietnam
- Using Salt-Tolerant Sweet Potato Varieties in Than Hoa Province, Vietnam
- Impact of Climate Change on Aquaculture in Phu Vang District, Thua Thien Hue Province, Vietnam
- Assessing Impacts of Land Use and Climate Change on Soil and Water Resources in the Srepok Watershed, Central Highland of Vietnam
- Enhancing the Marketing Capacity of Agricultural Cooperatives in Hoa Vang District, Da Nang City, Vietnam

- Assessment of Impacts of Climate Change in Fisheries and Agriculture in the Coastal Area of Thua Thien Hue Province, Vietnam
- Developing Indicators for Evaluating Climate-Smart Agriculture Practices in Vietnam
- Pangasius Quality Management and Market Access in the Mekong River Delta, Vietnam
- Assessing the Impacts of Land Use and Climate Change on Soil and Water Resources in the Srepok Watershed, Central Highland, Vietnam

► 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 June 2024, a total of 53,683 publications have been downloaded from searca.org, SEARCA's official website. Over 28,000 people from 169 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 2024, 622 downloads of SEARCA publications have been made by Vietnamese.

► LIBRARY AND ARCHIVES

The SEARCA library, which houses a collection of over 16,300 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 web links 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. Over 7,400 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

Vietnam is currently represented in the SEARCA Governing Board by Assoc. Prof. Dr. Nguyen The Hung, Rector, Thai Nguyen University of Agriculture and Forestry. The SEARCA Governing Board is the Center's highest policymaking body composed of representatives of the 11 SEAMEO member countries.

At present, the SEARCA Center 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.

