



TIMOR-LESTE 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. Timor-Leste joined SEAMEO in 2006.

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.

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 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

So far, 69 full graduate scholarships (51 MS, 18 PhD) were awarded to Timor-Leste nationals. These include the scholars funded by the German Academic Exchange Service (DAAD) under a special scholarship project for Timor-Leste nationals in 2003 even though Timor-Leste was not yet a member of SEAMEO at the time. To date, 59 Timorese scholars (44 MS, 15 PhD) have completed their graduate programs.



During the Testimonial Ceremony for SEARCA Graduates FY2022-2023 held last 3 August 2023, Special Citation was awarded to Dr. Manuel Da Costa, PhD Veterinary Public Health at IPB University, for academic excellence and for completing his PhD degree on time.

Regional SEARCA Alumni Association

The first set of SEARCA Alumni Association of Timor-Leste (SAAT) officers took their oath of office on 15 January 2015 in Dili. Mr. Agustinho da Costa Ximenes, SAAT President, led the alumni who attended the event.

Less than a year after constituting SAAT, Timorese alumni led the conduct of the 2nd Regional SEARCA Fellows Association Conference on Food Security, Poverty Reduction and Climate Change Adaptation on 8-9 October 2015 at Hotel Timor.



Attended by more than 120 participants, the conference was sponsored by the Ministry of Agriculture and Forestry, Timor-Leste and SEARCA. It was also supported by 21 international organizations, including the Food and Agriculture Organization of the United Nations (FAO), European Union (EU), United States Agency for International Development (USAID), and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

A number of the SEARCA graduate alumni from Timor-Leste are holding or have held high positions of responsibilities in government, universities, and research or development institutions.

Emerging Leaders in Transition Economies (ELITE) Awardee

Mr. Agustinho Da Costa Ximenes, a Timorese SEARCA alumnus, received this special citation on the occasion of SEARCA's 50th Anniversary in November 2016 for his continuous active contributions to nation-building, policy formulation, and program delivery.



Mr. Ximenes earned his MS in Agronomy in 2010 from the University of the Philippines Los Baños (UPLB), which he completed under the SEARCA scholarship program.

Academic Bridging Program

This program provides assistance to nationals of Cambodia, Lao PDR, Myanmar, Timor-Leste, and Vietnam to strengthen their academic preparation and qualification to pursue graduate studies in agriculture and related fields.

Aside from enabling scholars to enroll in undergraduate technical courses to enhance expertise in their areas of specialization, the program also supports English language proficiency training. The UPLB Graduate School offers a non-degree program specially designed to suit the academic background and specialization of each qualified candidate.

Seven bridging scholarships had been awarded to Timorese so far. Upon completion of their non-degree programs, six of the scholars were accepted to the UPLB Graduate School and one to the UGM Graduate School. All of them have since obtained their master's degrees. This program has been supported by the DAAD and SEARCA.

► INSTITUTIONAL DEVELOPMENT

Timor-Leste was 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 Universidade Nacional Timor Lorosa'e (UNTL) under this program through scholarship support to its faculty members and by enabling UNTL faculty and research staff to participate in the following SEARCA activities:

- Short course on Climate-Agriculture-Impact Modelling
- In-country training/conferences
- Other SEARCA learning events

■ 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 Timor-Leste joined SEAMEO in 2006, 57 Timorese had participated in 24 learning events, namely:

- International Ecotourism Travel Mart (2023)
- Southeast Asian Learning Framework on Inclusive, Integrated, and Innovative Public Policy Cycles for Family Farming (2022)
- Basic English Training for SEARCA Scholars (2021)
- SEARCA Independent Dialogue for the UN Food Systems Summit (UNFSS) 2021: Breaking Silos: Transforming Agricultural Education and Research toward Sustainable Food Systems in Southeast Asia (2021)
- First Leadership Development Program for Higher Education Institutions in Southeast Asia (2019)
- IFS-SEARCA Mentoring Workshop on Collaborative Research in Climate Change Adaptation and Mitigation (2018)
- Executive Forum on Food Security: Leaders in ASEAN Agriculture and Development for Timor-Leste (2018)
- Value Chain Development Course (2018)
- Exposure-Workshop on Farm Tourism Practices in Southeast Asia (2017)

- Knowledge-sharing Workshop on Processes and Outcomes of ISARD (2017)
- IFS-SEARCA Workshop on Collaborative Research (2017)
- Innovation Platforms, Rural Advisory Services, and Knowledge Management towards ISARD: A Forum-workshop (2016)
- Executive Forum on Food Security: Leaders in ASEAN Agriculture and Development (2015)
- Executive Forum on the New ASEAN Agriculture Landscape (2013)
- International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security (2012)
- Impact Assessment of Poverty Alleviation: Focus on Technology and Capacity Development (2012)
- Second Online Course on Responding to Climate Risks in Agriculture and Natural Resource Management (2011)
- Second, Third, Fifth, and Sixth Executive Forums on Leadership Excellence in Academe Program for Southeast Asia (LEAP SEA) (2010, 2012, 2014, 2015)
- 2nd International Training Course on Responding to Changing Climate: Knowledge-based Strategies in Managing Risks in Agriculture and Environment (2009)
- Unraveling the Policy Issues and Development Challenges on Biofuels: An Executive Forum (2008)
- Experts' Consultation Meeting on Overcoming Obstacles to Agricultural Microfinance in Southeast Asia (2007)

On 28 February-2 March 2018, SEARCA collaborated with Timor-Leste's Ministry of Agriculture and Fisheries (MAF), UNTL, and the SEARCA Alumni Association of Timor-Leste (SAAT) in organizing the "Executive Forum on Food Security: Leaders in ASEAN Agriculture and Development for Timor-Leste." This learning event was held at UNTL in Dili, Timor-Leste. The forum is part of the offerings of SEARCA's Short-Term Training Program under the then Knowledge Management Department-Training Unit. It has been tailored from what SEARCA has been offering as a regional course according to Timor-Leste's specific context and needs. Thirty-one middle managers and senior leaders in 12 national agriculture, fisheries, and rural development agencies, nongovernment organizations (NGOs), and key faculty members and officials of higher education institutions (HEIs) in agriculture and related fields participated in this forum.



Dr. Acacio Amaral (on microphone), Dean, Faculty of Agriculture, National University of Timor-Lorosa, was one of two Timorese who participated in the 2nd Regional Executive Forum on Food Security: Leaders in ASEAN Agriculture and Development (LAAD), held at the SEARCA headquarters on 1-5 June 2015.



Mr. Leonardo Soares, Researcher at Uniaun Agrikultores Ermera, a farmers' movement in Timor-Leste, presents his re-entry action plan during the International Ecotourism Travel Mart (IETM) held on 29 March-2 April 2023 held at the International Institute of Rural Reconstruction (IIRR) in Silang, Cavite, Philippines.

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, 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 Timor-Leste:

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

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 nonformal 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.

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 Timor-Leste 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.

► 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.

Mr. Dedisio Jose Lay Ximenes of HealthNet Timor-Leste has been the only SFRT grantee so far. His research was "Enhancing Food Production, Quality and Safety through Integrated Sustainable, and Marketdriven Farming Systems."

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.

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

Timorese 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.

- Regional Workshop on Competency Certification for Agricultural Workers in Southeast Asia (9-10 May 2018, SEARCA, Philippines)
- Regional Roundtable Discussion and Workshop on the Development of Ecological Monitoring Network in Southeast Asia (24-25 Oct 2016, SEARCA, Philippines)
- Second International Conference on Agricultural and Rural Development in Southeast Asia (ARD2014) (12-13 Nov 2014, Makati City, Philippines)
- Regional Consultation Workshop: Umbrella Program on Food Security (25-26 Jul 2013, SEARCA, Philippines)

► 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.

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 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.



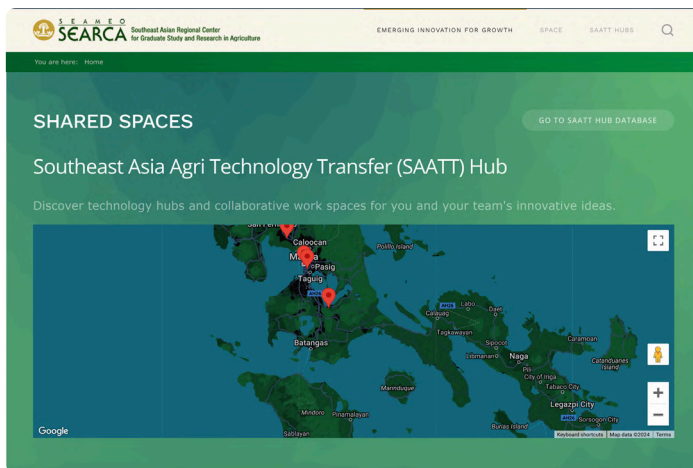
The SPACE platform is now accessible via <https://space.searca.org/>

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 agri-technologies, 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, 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 AGRI-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.

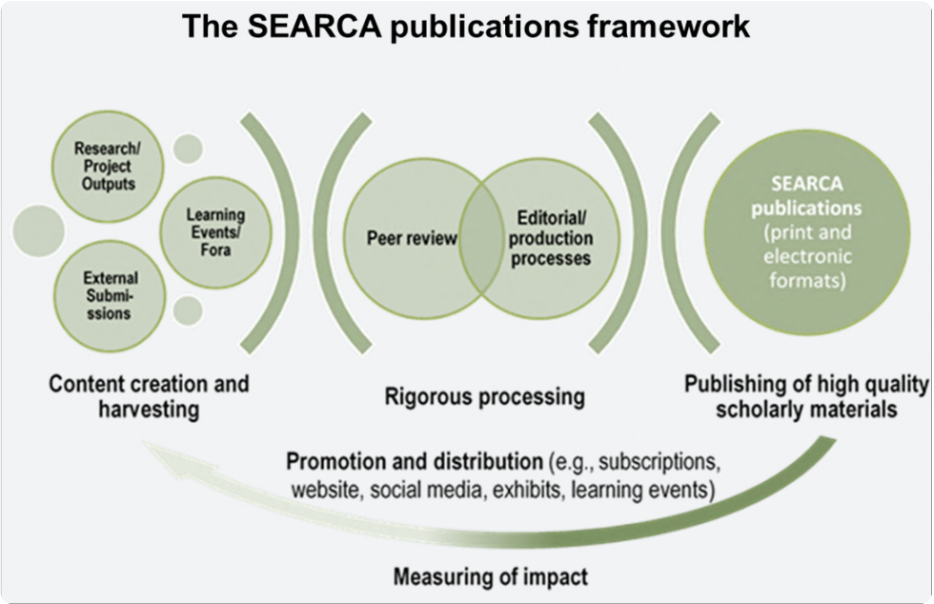
Unveiled Impact Stories of Innovation

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, 2 titles either focused on Timor-Leste or included it in its country of coverage have been published by SEARCA. These include a monograph (1) and a journal article (1).

Agroforestry Status, Trends, and Outlook in Southeast Asia

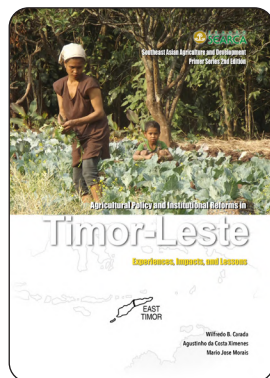
The World Agroforestry (ICRAF) and SEARCA recognize the momentum brought by the adoption of the ASEAN Guidelines for Agroforestry Development and would like to harness this development by heeding the call of the ASEAN food, agricultural, and forestry (FAF) sector to produce the first Agroforestry Status, 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 Timor-Leste, 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,



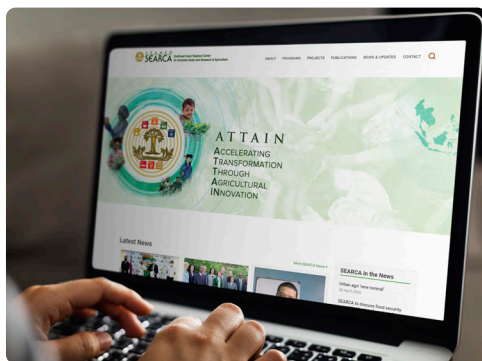
namely: inclusive growth; sustainability; regional integration; and institutions, governance and transformation.

Agriculture and Development Primer on Timor-Leste

SEARCA published a primer on Timor-Leste as part of its SAADP Series in 2018. The Timor-Leste primer analyzed the country's experiences, lessons, and insights on policy reforms and institutional innovations in the agriculture sector. It revealed how Timor-Leste regained its competitiveness in food and agriculture products through liberalization of its trade policy and prudent macroeconomic management. The primer also discussed the major structural changes in the country's agriculture sector that led to its strong resurgence as a key driver of Timor-Leste's economy, particularly the government's efforts to enhance food safety. The primer is authored by Wilfredo B. Carada of the University of the Philippines Los Baños, and Agustinho da Costa Ximenes and Mario Jose Morais, both of Timor Leste's Ministry of Agriculture and Fisheries.

► 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 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, 44 downloads of SEARCA publications have been made by Timorese.

► 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

Timor-Leste is currently represented in the SEARCA Governing Board by Dr. Acacio Cardoso Amaral, President, Instituto Politécnico de Betano (IPB), Timor Leste. 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.

