The **Umbrella Program on Food and Nutrition Security for Southeast Asia** is envisaged to serve as a platform for collaborative research on food security among the University Consortium members and partner universities/institutions from the other Southeast Asian Ministers of Education Organization (SEAMEO) member countries. It aims to align the program of work on food security of SEARCA and the University Consortium to the development needs in the region and to support ongoing ASEAN-level programs on improving food security. The priority areas for collaboration shall be addressed through three integrated components: research and development, capacity building through graduate education and training, and knowledge management.

Participatory and bottom-up approach was observed in the development of the **Umbrella Program** including consultations with the SEARCA senior fellows; benchmarking, scoping, and policy reviews; survey of UC members and other potential partners in the region; and regional consultation-workshop.

Consistent with the currently accepted international food security frameworks and the Food and Agriculture Organization’s definition, which in itself subsumes nutrition security and food safety, this **Umbrella Program** highlights the interrelations of the dimensions of food security as follows:

- **FS Dimension 1 - Food availability**
- **FS Dimension 2 - Physical Access**
- **FS Dimension 3 - Economic Access**
- **FS Dimension 4 - Utilization**
- **FS Dimension 5 - Stability**

The **Umbrella Program**’s work scope will directly contribute to ASEAN-level initiatives on food security. It is guided by the strategic thrusts of the ASEAN Integrated Food Security Framework, specifically:

- **Strategic Thrust 2**: Promote Conducive Food Market and Trade;
- **Strategic Thrust 4**: Promote Sustainable Food Production;
- **Strategic Thrust 5**: Encourage Greater Investment in Food and Agro-based Industry to Enhance Food Security; and
- **Strategic Thrust 6**: Identify and Address Emerging Issues Related to Food Security.

In general, the **Umbrella Program** is guided by the following principles: inclusiveness and participation, collaboration, sustainability, supply and value-added chains, ecosystems approach, partnership with private sector, link to policy, climate change risks, and vulnerability management. In its present form, the **Umbrella Program** considers current global issues and trends which recognize, inter alia, the ecological foundation of food security; Millennium Development Goals (MDG) and Post MDG or Sustainable Development Goals; a Green Economy; and equitable development pathways.

The criteria for the **Umbrella Program** include the following: value-add – addresses gaps or under-researched areas; relevance and importance for the region; benefits from collaboration; balance of R&D, capacity building, and knowledge management; and convergence with donor institutions.

### Three major themes

**Theme 1:**
**Food Reserves, Trade and Investment**

**Theme 2:**
**Sustainable Food Production and Utilization Systems**

**Theme 3:**
**Emerging Issues Related to Food Security**

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*Photo by Rosemarie Razon*

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*Photo by Al Benavente*
Theme 1: Food Reserves, Trade and Investment

Sub-Theme 1.1: Food Reserves (FS Dimensions 1,3,5)
Project 1.1.1: Comparative study on food reserve management and policies in Southeast Asia (Government and Community Reserve)
Project 1.1.2: Investment requirements, and optimal location and storage capacities for food reserves within the Southeast Asian Region

Sub-Theme 1.2: Food Supply Chain and Logistics (FS Dimensions 1,2,5)
Project 1.2.1: Development of efficient supply chains of major commodities
Project 1.2.2: Enhancing participation of smallholder farmers in value chains: Identification of investment opportunities and sharing of experiences and best practices
Project 1.2.3: Comparative studies on trade facilitation systems for agricultural exports in Southeast Asia

Sub-Theme 1.3: International/Regional Trade Agreements and Investments (FS Dimension 3)
Project 1.3.1: Expanded ASEAN Free Trade Agreements: Economic and agri-food impacts on selected ASEAN countries
Project 1.3.2: Feasibility of futures markets in the region for major agricultural commodities
Project 1.3.3: Role of locally rooted cooperatives in global markets
Project 1.3.4: Developing the ASEAN agri-food market information systems (FS Dimensions 1,2,3,4,5)

Sub-Theme 1.4: Standards on Food Quality and Safety (FS Dimensions 1,4)
Project 1.4.1: Development of risk-based food safety measures and harmonization of science-based food safety standards for priority ASEAN food commodities
Project 1.4.2: Capacity Building for ASEAN food quality and safety

Sub-Theme 1.5: Resilience of Food Markets and Informal Systems (FS Dimensions 1,2,3)
Project 1.5.1: Comparative study on traditional food markets and informal systems in selected Southeast Asian countries
Project 1.5.2: Policy analysis and cost-benefit analysis of national self-sufficiency versus regional sufficiency programs of strategic commodities
Project 1.5.3: Causes and costs of price instability of major commodities

Sub-Theme 2.1: Efficient Food Production Systems in Southeast Asia
Project 2.1.1: Accelerating improvements in food production efficiency and sustainability
Project 2.1.2: Capacity building for food production systems with improved efficiency
Project 2.1.3: Knowledge management to improve food production systems
Project 2.1.4: Resilient food production systems in response to disruptive natural and anthropogenic factors

Theme 2: Sustainable Food Production and Utilization systems (FS Dimensions 1,4,5)
Sub-Theme 2.2: Food Processing and Postharvest System Improvement in ASEAN

Project 2.2.1: Value adding through post-production innovations in ASEAN
Project 2.2.2: Capacity building and information exchange to improve postharvest systems management and food processing

Sub-Theme 2.3: Food Utilization Improvement

Project 2.3.1: Food nutrition and consumption
Project 2.3.2: Knowledge management for improved food utilization

Sub-Theme 2.4: Environment-related Issues in food production

Project 2.4.1: Efficient water management
Project 2.4.2: Green technology
Project 2.4.3: Capacity building on the different ways to transfer information
Project 2.4.4: Information Education Communication campaign

Sub-Theme 3.1: Systems of Knowledge Sharing

Project 3.1.1: Meta-analysis of all food security-related work in UC and partner institutions
Project 3.1.2: Capacity building and knowledge management in food security

Sub-Theme 3.2: Emergent Technologies

Project 3.2.1: Emergent food sources including underutilized crops, fungi and algae
Project 3.2.2: Capacity building workshops on emergent technologies

Sub-Theme 3.3: Climate Change and Use of Natural Resources

Project 3.3.1: Policy and technology research on climate change effects on agriculture
Project 3.3.2: Capacity building in anticipation of climate change effects on agriculture

Sub-Theme 3.4: ASEAN Economic Community (AEC) 2015

Project 3.4.1: Collaborative research on cross-border spread of pests and diseases
Project 3.4.2: Research on demographic changes and their associated effects on food security as a result of anticipated changes due to AEC2015
Project 3.4.3: Workshop on anticipated changes on intellectual property protection and data security due to AEC 2015