



## Agricultural Leaders of Tomorrow (ALOFT) Farmer-to-Farmer Program for Southeast Asia Volunteer Scope of Work

Assignment Summary Information			
Identification Number:	KH_017		
Country:	Cambodia		
Host Organization:	ATP-BNB		
Assignment Title:	Pest and Disease Management for Tropical Cropping Systems		
Assignment Dates:	Summer 2025		
Type of Assignment	In-person		
Area of ALOFT Technical Assistance:	climate-smart agriculture		
Associated Area(s) of Technical Assistance	extension and advisory services		
Target Value Chain:	Horticulture		
Objectives of the assignment:	<ul style="list-style-type: none"> <li>● To strengthen the capacity of ATP-BTB to manage pests and disease in their tropical cropping systems, including IPM practices</li> <li>● To build ATP-BTB's fundamental knowledge on maintaining soil fertility with balanced nutrient levels for tropical cropping systems.</li> <li>● To develop a manual/guideline for integrated pests/disease management and soil fertility management for tropical crop production</li> </ul>		
Desired volunteer skill/expertise	<ul style="list-style-type: none"> <li>● University degree in agronomy, plant science, entomology, plant pathology, or related field</li> <li>● Background in crop science/crop protection</li> <li>● Robust experience in tropical crop system production and Integrated Pest Management (IPM) in tropical conditions</li> </ul>		
PERSUAP Classification <sup>1(1)</sup>	I		
Anticipated number of people to be trained <sup>1(1)</sup>	Men	Women	Youth (15-29)
	6	4	8
Will the assignment address gender gaps? (Yes/No) If yes, please describe in assignment background & rationale			No
Will the assignment address climate change? (Yes/No) If yes, please describe in assignment background & rationale			Yes

<sup>1(1)</sup> USAID precisely classifies PERSUAP in four categories; **PERSUAP Type I** assignments directly related to pesticides recommendations, **Type II** as assignments indirectly related with pesticides, **Type III** assignments are not expected to be involved in pesticide issues and **Type IV** as assignments associated with other USAID projects and collaborators.



## A. Project Overview

### **Country Strategy Overview**

The University of Tennessee’s (UT) “Agricultural Leaders of Tomorrow” (ALOFT) regional Farmer-to-Farmer (F2F) program for Southeast Asia supports youth-led and youth-serving institutions to build more resilient and inclusive food systems. Through F2F, U.S. specialists spend two to three weeks on specific technical assignments, working directly with counterparts in the region to address local needs. ALOFT’s demand-driven voluntary technical assistance will be delivered in four primary areas: 1) climate-smart agriculture; 2) agricultural entrepreneurship and agribusinesses; 3) agricultural education; and 4) extension and advisory services. Locally appropriate technical assistance will be provided to a range of host-organizations, including farmer cooperatives, vocational training centers, extension services, and agribusinesses. The University of Tennessee, country ALOFT teams, and established host-organizations will provide the necessary logistical, technical, and material assistance to position volunteers to successfully carry out the exchange of knowledge with communities.

Through demand-driven technical assistance, the ALOFT Cambodia project seeks to strengthen the fruit, vegetables, small livestock, and aquaculture value chains. ALOFT Cambodia will collaborate closely with the Center of Excellence on Sustainable Agricultural Intensification and Nutrition (CE SAIN) at the Royal University of Agriculture (RUA) to deliver impactful and locally appropriate voluntary technical assistance. ALOFT Cambodia will deliver impactful and locally appropriate voluntary technical assistance to a range of host-organizations, including farmer cooperatives, vocational training centers, extension services, and agribusinesses. Technical assistance will promote the adoption of climate-smart agriculture (CSA) by smallholders, strengthen extension services and agricultural education, expand access to financial services, particularly youth and women, and support agricultural entrepreneurship and small-business growth.

### **Host Organization Background**

The Center of Excellence on Sustainable Agricultural Intensification and Nutrition (CE SAIN) – housed in Cambodia’s Royal University of Agriculture (RUA) – helps improve food and nutritional security in Cambodia by supporting agricultural research, education, and extension. CE SAIN works closely with the Royal University of Agriculture (RUA) to improve the skills and knowledge of public and private sector agricultural workers.

The Center of Excellence on Sustainable Agricultural Intensification and Nutrition (CE SAIN) is housed at the Royal University of Agriculture (RUA) in Phnom Penh, Cambodia. CE SAIN’s goal is “to create a Centre of Excellence that will foster private sector innovation, agricultural research, education and



**FARMER TO FARMER**  
The USAID John Ogonowski and Doug Bereuter Farmer-to-Farmer Program

**SMITH INTERNATIONAL CENTER**



training, and public-sector capacity building through improved collaboration and knowledge sharing focused on improving food and nutritional security in Cambodia.” The center’s three main objectives are to:

- 1) Coordinate and leverage Feed the Future Innovation Labs and other sustainable agricultural intensification and nutrition (SAIN) activities;
- 2) Build human and institutional capacity development of the RUA, and
- 3) Establish agricultural technology parks (ATPs) to showcase high-potential technologies and strategies to sustainably intensify smallholders farming systems.

Under Objective 3, CE SAIN has established and coordinated a network of seven Agricultural Technology Parks (ATPs). One of the seven ATPs is located in Battambang province (ATP-BTB). ATP-BTB is 1 ha in size, and half of the area is cultivated rice production. 18 technologies are practiced at ATP-BTB, including integrated fruit tree, and companion planting, mulching demonstration, integrated pest management (IPM), conservation agriculture for vegetable production, permanent beds, shade tolerance crops, shade tolerance crops under trellised vegetables, net house for vegetable production, nursery, IPM for rice, cover crop demonstration, livestock demonstration, herb garden, wild food plants, aquaculture production, and compost production. Furthermore, ATP-BTB plans to select model farmers to transfer new potential agricultural techniques and assist in technical support to the farmers/stakeholders in the region.

### ***Assignment Background and Rationale***

Rice is a staple crop in Cambodia and considered the backbone of the country’s economy as it provides food, nutrition, and income to resource-poor farmers. That said, rice production is extremely land and water intensive and is particularly vulnerable to climate change. To grow rice in Southeast Asia, 21 day to 1 month old seedlings are commonly transplanted into continuously flooded soils. This system of planting contributes to high water loss, vulnerability to salt water intrusion, drainage impairments, and declined growth for non-rice crop rotations. Furthermore, this flooding system impacts pest and disease incidence, which is of particular concern to ATP-BTB. Climate change overall has impacted the prevalence of pest & disease in rice as fluctuations in temperature as well as rainy season time/duration influences insect breeding, pest metabolic rate, and pathogen growth.

A significant amount of land in Battambang (BTB) province is used for agricultural production, primarily rice cultivation. ATP-BTB has a plot for rice cultivation that is approximately 0.5ha (approx 1.2 acres). In their production they have encountered numerous challenges, particularly with pests and diseases in all stages of rice production. For instance, during *the vegetative stage*, diseases like Rice Blast, Grassy stunt, Sheath blight, Bacterial leaf streak and Brown spot are present, along with weeds such as sedge and buffalo grass (para grass). As the crop enters *the reproductive stage* stem borers emerge, and in *the ripening stage* rats, Brown spot and Bacterial leaf streak can become a concern.



Those pests and diseases are spread widely and are difficult to control due to the abundance of rice cultivation in the region. While many rice producers in the region rely on chemical pesticides for pests and disease management, the ATP uses biological control, cultural practice control, and bio and natural pesticides. These methods often require more planning and oversight for success. In addition to pest & disease, nutrient deficiency is also a cause of concern regarding rice production.

In response to the challenges, ATP-BTB has requested technical assistance on pest and disease management for climate-smart rice production. The aim is to enhance ATP-BTB's capacity to implement best practices for climate-resilient crop management, including timely diagnosis and control of pest and disease damage, to minimize losses while ensuring nutrient balance.

## **B. Desired Qualifications of Volunteer**

The U.S. volunteer should have the following qualifications, skills, and competencies:

- University degree in agronomy, plant science, entomology, plant pathology, or related field
- Background in crop science/crop protection
- Robust experience in tropical cropping system production and Integrated Pest Management (IPM) in tropical conditions. Rice expertise is a plus.
- Strong interpersonal and communication skills
- Ability to work effectively across cultures

## **C. Objectives and Expected Results**

### ***Objectives of the Assignment***

- To strengthen the capacity of ATP-BTB to manage pests and diseases in their tropical cropping system, with an emphasis on rice, using IPM and any other relevant climate-smart practices
- To build ATP-BTB's fundamental knowledge on maintaining soil fertility with balanced nutrient levels for tropical crops, with a particular emphasis on rice.
- To develop manual/guideline for integrated pest and disease management and soil fertility management for climate-smart rice production

### ***Anticipated Results***

After F2F volunteer support, the following results are anticipated:

- ATP staff acquire the knowledge and skills required to implement effective pest and disease management, including IPM practices and other practices in rice production
- ATP staff develop their capacity to balance and manage nutrient levels in soil
- Development of manual/guideline for integrated pests/disease management and soil fertility management focused on balanced nutrient intake for rice production



### ***Expected Deliverables***

- Volunteer end-of-assignment report with recommendations to the host organization
- Final debriefing with the host organization (plus key stakeholders) and the Smith Center
- Conduct in-country outreach events in Cambodia (print, radio, TV, group presentation, social media, etc.)
- Manual/guideline for integrated pests/disease management and soil fertility management focused on balanced nutrient intake for rice production

### **D. Resources to be Contributed by Host and Local Partners**

The host organization will assign a point of contact to coordinate logistics and activities. The host will also provide a meeting space and/or training venue for SOW activities. In addition, host organizations will contribute specific resources:

- Provide translation assistance to the volunteer
- Coordinate training to present assessment findings and volunteer recommendations

### **E. Assignment Logistics and Itinerary\***

#### ***Accommodations and Logistics***

Volunteers should review the country orientation manual and video series for extensive logistics information, including pre-departure planning, expense reimbursements, health management, safety & security, and emergency protocols.

Key Points:

- Hotels and airfare will be booked by ALOFT Smith Center and reservation details will be provided to the volunteer before arrival in [country]. Hotels will offer air-conditioning, wireless internet, and proximity to local food options.
- ALOFT Smith Center will reimburse all assignment-related travel expenses
- The ALOFT [country] and/or the host organization will provide transport to assignment site
- All assignment sites will have access to local restaurants and rickshaw/taxi transportation
- Any logistic concerns can be addressed to ALOFT Smith Center using the contact information located in Section F.



### Recommended Preparation

- Complete volunteer orientation series
- Review volunteer orientation manual
- Complete volunteer pre-departure checklist
- Bring any videos, posters, PowerPoints, or other materials that are important to your training and activities. If they are in English, please send them to the field staff at least 2 weeks before your assignment to be translated. We recommend you bring these materials on both a USB flash drive and hardcopy.
- Please bring any specialized tools/equipment with you as there may be limited options for acquiring them at the assignment site.
- The ALOFT country office has laptops, Microsoft Office, a projector, flash drives, and other materials that can be used for training and workshops.
- Download [country specific] messenger app to maintain contact with volunteer partner

### General Itinerary

\*subject to change based on the needs of the host.

Day(s)	Activity	Location
Day 1&2	Travel from the USA	
Day 3	Visit CE SAIN, meet the ALOFT team, and discuss the assignment itinerary and the logistics arrangement. Travel to Battambang	CE SAIN, head office Accommodation at BTB
Day 4	<b>In the morning:</b> Meet with ATP-BTB for a visit at the park and discussion <b>In the afternoon:</b> Provide training to approximately 10 participants (ATP-BTB staff and potential others) on an overview of pest and disease management for rice (focus more on diseases)	Battambang-BTB
Day 5	<b>Training Day</b> Provide the training to approximately 10 participants (ATP-BTB staffs and potential others) <ul style="list-style-type: none"> <li>- IPM practice for rice cultivation and other practices/strategies for pest and disease management</li> <li>- Strategies to maintain soil fertility focus on</li> </ul>	ATP-BTB



	the balanced nutrient levels in cultural practice for rice cultivation	
Day 6	Field visits with the group of participants to nearby rice farmers to assess their practices, challenges, etc.	ATP-BTB
Day 7	Reflection day after the field visit to discuss the challenges and action plans	ATP-BTB
Day 8&9	Weekend free schedule	
Day 10, 11, 12	Develop manual/guideline for integrated pests/disease management and soil fertility management focused on balanced nutrient intake for rice production. Should be specifically tailored to ATP-BTB and the surrounding agro-ecological zone.	ATP-BTB
Day 13	Travel back from Battambang	Phnom Penh
Day 14	Work with the ALOFT team to wrap up the activities and produce trip and recommendation reports.	CE SAIN-Phnom Penh
Day 15& 16	Travel back to the USA	

**E. USAID Classification of Volunteer Assistance and Activities**

Primary classification for volunteer assistance (select one)

- Technology Transfer
- Organizational Development
- Business/Enterprise Development
- Financial Services
- Environmental Conservation
- Administrative

The primary classification of the type of value chain activity (select one)

- Information and Input Support Services (extension services, education program, input supplies, veterinary services, etc.)
- On-Farm Production
- Processing (primary and final product transformation, storage, transportation, etc.)
- Marketing (branding, advertising, promotion, distribution, sales, etc.)