



## PROJECT NOTIFICATION

Ref. No.: 21-CP-41-GS-OSM-C-PN2200108-001

<b>Date of Issue</b>	07 December 2022
<b>Project Code</b>	21-CP-41-GS-OSM-C
<b>Title</b>	Observational Study Mission on Microclimate-controlled Greenhouses for Innovative Agriculture
<b>Timing and Duration</b>	8–10 February 2023 (three days)
<b>Venue and Hosting Country(ies)</b>	Tokyo, Japan
<b>Modality</b>	Face-to-face
<b>Implementing Organization(s)</b>	APO Secretariat
<b>Participating Country(ies)</b>	Vietnam
<b>Overseas Participants</b>	10
<b>Local Participants</b>	Not Applicable
<b>Qualifications of Participants</b>	Staff of the Vietnam National Productivity Institute, Department of Standards, Metrology and Quality of Lam Dong Province, Lam Dong Crop Production and Plant Protection Sub-department, and Garden Mountain Joint Stock Company working on the Demonstration Project on Improvement of Productivity in Greenhouse Vegetable Production
<b>Nomination of Participants</b>	Not Applicable
<b>Closing Date for Nominations</b>	Not Applicable

## **1. Objectives**

- a. Observe and learn best practices of microclimate control in greenhouses in Japan.
- b. Understand the mechanisms of microclimate control in greenhouses.
- c. Learn about data collection and analysis in microclimate-controlled greenhouses.

## **2. Background**

Recently, vegetable demand in Vietnam has diversified as more produce is being processed, frozen, and exported. Vegetable production must be increased and quality adjusted to meet various demands. On the other hand, labor productivity in vegetable production in Vietnam is not high because many workers are from local ethnic groups in remote areas. Some have worked for a long time because of stable salaries, with good benefits and allowances. Therefore, cutting labor costs is an important issue.

To meet such requirements, precise vegetable production control is needed. The APO initiated a demonstration farm project on Improvement of Productivity in Greenhouse Vegetable Production in October 2022. This project is a collaboration with the Vietnam National Productivity Institute, Department of Standards, Metrology and Quality of Lam Dong Province, Lam Dong Crop Production and Plant Protection Sub-department, and Garden Mountain Joint Stock Company. This entire project is scheduled to be completed in August 2024.

As part of the project, this study mission is being conducted for the beneficiaries to understand the mechanisms of control and microclimate data collection and analysis by referring to selected farms and plant factories in Japan. It is important to learn about and observe best practices before installing microclimate control systems. This project is funded by the Ministry of Agriculture, Forestry and Fisheries of Japan under a special grant to demonstrate microclimate control systems used by Japanese greenhouses.

## **3. Scope, Methodology, and Certificate of Attendance**

The study mission comprises presentations by resource persons, group discussions, field visit(s), and other relevant learning methods. The indicative program schedule is below.

Day 1:

- Overview of microclimate control systems
- Sensors to collect microclimate data
- Setting up sensors
- Analysis of microclimate control data using graphs

Day 2:

- Field visit to a farm with a microclimate control system

Day 3:

- Field visit to a complex of plant factories

The detailed program and list of resource persons will be provided one month prior to the program with announcement of the names of the selected participants.

The participants are required to attend all sessions. This full participation is a prerequisite for receiving the APO certificate of attendance.

## **4. Financial Arrangements**

### **4.1 To be met by the APO**

- a. All assignment costs of resource persons.

b. Airfare:

- Discounted round-trip economy-class international airfare by the most direct route between the international airport nearest to the participants' place of work and project venue for those from NPOs, SMEs, and public-sector and nonprofit organizations.
- Arrangements for air tickets for participants will be made by designated travel agents endorsed by NPOs.

c. Accommodation and Per Diem Allowances:

- Hotel accommodations and per diem allowances for overseas participants for up to four days at the predetermined rates in the host country.

d. Transport:

- Transportation expenses of participants between the airport and hotel designated for the project.

#### **4.2 To be met by participants**

a. Participants from large, profit-making organizations attending training courses or observational study missions, except those from Bangladesh, Cambodia, Fiji, Lao PDR, Mongolia, and Nepal:

- Round-trip international airfare between the international airport nearest to the participants' place of work and project venue.
- Participating Country Expenses at USD200.00/person.

b. For All Participants:

- Travel insurance with a minimum coverage value of USD10,000.00 to cover accident, illness, hospitalization, death, and specific expenses related to COVID-19 such as medical treatment, extension of stay due to quarantine, and flight rescheduling/cancellation, if applicable. Participants are required to submit copies of insurance certificates to the APO Secretariat prior to departure.
- All expenses related to PCR testing and visa fees.
- Any expenses incurred for stopovers on the way to and from the project venue as well as for extra stay at the project venue before and/or after the official project period because of early arrival or late departure, for example, due to either limited available flights or any other reason.
- Any cancellation charges for airfare and hotel accommodations arising from withdrawals after letters of acceptance have been issued by the APO.

#### **5. Implementation Procedures**

Please refer to the implementation procedures for APO multicountry projects circulated with this document.



Dr. Indra Pradana Singawinata  
Secretary-General