PROJECT IMPLEMENTATION PLAN

Reference No.: 513

Date of Issue	27 December 2024
Project Code	21-CP-40-SP-DMP-C-VN01
Title	Improvement of Productivity in Greenhouse Vegetable Production
Timing	1 October 2022–31 August 2025
Hosting Country(ies)	Vietnam
Venue City(ies)	Not Applicable
Modality	Hybrid
Implementing Organization(s)	Directorate for Standards, Metrology and Quality, Vietnam and APO Secretariat
Participating Country(ies)	Vietnam
Overseas Participants	Not Applicable
Local Participants	Not Applicable
Closing Date	Not Applicable
Remarks	This PIP supersedes the one issued on 6 October 2022 (Ref. No.: 21-CP-40-SP-DMP-C-VN01-PP2200011-005). Following progress in project implementation and a no-cost extension granted by the Government of Japan, updates have been made to the sections on Timing and Implementing Organizations. Additionally, new sections on Rationale, Topics, Outcome, and Qualifications have been introduced, incorporating relevant information in line with the PIP template adopted in 2023.

Objectives	Establish a demonstration farm with a greenhouse microclimate control system using smart technology applications in Vietnam to promote the productivity and competitiveness of vegetable production; showcase successes of the demonstration farm to other member countries; and promote agricultural transformation in APO members through the adoption of smart technology applications.
Rationale	Agriculture is crucial for food security and sustainable development. Agriculture worldwide faces challenges including intensifying climate change and global warming, affecting crop growth cycles and diminishing workforces due to migration of rural populations to urban areas. The COVID-19 pandemic exacerbated pressure on the sector, especially requirements to restrict movements and human contact.
Background	Vegetable demand in Vietnam has diversified as more produce is processed, frozen, and exported. However, 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. Microclimate control systems using smart technologies such as the IoT and data analysis are solutions. Environmental data in greenhouses such as temperature, moisture, CO2 levels, and sunlight are accumulated in cloud systems and then compared with crop growth. Such production systems can analyze optimal crop growth conditions to produce the best-quality vegetables with the required input amounts. Establishing a demonstration farm on greenhouse horticulture with a microclimate control system will encourage the adoption of such technologies in Vietnam and other APO members to promote vegetable production in the region.
Topics	Introducing microclimate control systems in Japan to the demonstration farm; and Reviewing the diagnosis and progress and recommending ways to resolve problems or administrative bottlenecks faced.
Outcome	Enhanced understanding of innovative agricultural technologies and systems for demonstration farms and dissemination to other member economies.
Qualifications	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.

Please refer to the implementation procedures circulated with this document for further details.

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