



PROJECT IMPLEMENTATION PLAN

Ref. No.: 21-SN-04-GE-DMP-C-VN01-PP2100008-004

Date of Issue	19 November 2021
Project Code	21-SN-04-GE-DMP-C-VN01
Title	Productivity Improvement in Biobased Product Manufacturing
Timing and Duration	November 2021–May 2022
Hosting Country(ies)	Vietnam
Modality	Virtual and face-to-face
Implementing Organization(s)	Directorate for Standards, Metrology and Quality and Vietnam Standards and Quality Institute
Overseas Participants	Not Applicable
Local Participants	Not Applicable
Qualification of Participants	Not Applicable
Nomination of Participants	Not Applicable
Closing Date for Nominations	Not Applicable

1. Objectives

- a. Review and optimize operational processes in biobased product manufacturing by applying efficient production processes and quality management systems.
- b. Develop the capability for quality assurance and implementing internal quality audits.
- c. Demonstrate and disseminate the process and results of the project to inspire other organizations and stakeholders to embark on similar initiatives contributing to resource efficiency and sustainable productivity growth.

2. Background

Biobased product manufacturing uses biomass as a substitute feedstock instead of producing products solely with petroleum-based resources (InnProBio 2017). Biobased products generally provide an alternative to conventional petroleum-derived products and include a diverse range such as lubricants, detergents, inks, fertilizers, and bioplastics (USDA 2021).

Bioplastic is a plastic material that is either biobased, biodegradable, or both according to European Bioplastics (2020). Bioplastics are driving the evolution of plastics with two major advantages compared with conventional plastics. First, they save fossil fuel resources by using carbon-neutral biomass capable of regeneration. Second, the biodegradability of some types of bioplastics allows recovery at the end of product life. Bioplastics offer a broad range of functionalities optimized for each type of application and can reduce impacts on the environment.

According to a report by Ipsos Business Consulting in 2019, Vietnamese per capita plastic waste is the third highest in Southeast Asia after increasing more than 10-fold in the last three decades. The country generates 1.8 million tons of plastic waste annually but recycles only 27%. Few products manufactured in Vietnam are made from biodegradable materials that can completely decompose and are environmentally friendly. In this situation, a nationwide sustainable development movement is being initiated by the Government of Vietnam. In April 2021, Prime Minister Nguyen Xuan Phuc asked authorities and people's committees in cities and provinces to devise solutions to encourage both manufacturers and consumers to turn toward environmentally friendly plastics. The country has adopted a roadmap to eliminate the use of disposable plastic at stores, markets, and supermarkets in urban areas during 2021 and nationwide by 2025 and replace it with biodegradable materials.

This demonstration company project is part of APO initiatives to promote the adoption of productivity concepts, tools, and techniques in biobased product manufacturing. It will also contribute to green business growth, and multiplier effects are expected to support sustainable development and productivity improvement measures in Vietnam.

3. Collaborating Partner

This project will be implemented in collaboration with An Phat Holdings Joint Stock Company as the demonstration company.

4. Modality of Implementation

The demonstration company project activities will be conducted through the virtual modality. When the pandemic situation improves and the resource person(s) is allowed to travel, the face-to-face modality will be adopted.

5. Methodology

The project will be conducted in the following three stages:

Stage 1. Planning (one week)

- a. The resource person(s) analyzes the challenges and opportunities related to productivity through a diagnostic survey of the demonstration company.

- b. The resource person(s) proposes an improvement plan to the relevant partners and obtains a consensus on a mutually agreeable action plan for the scheduled duration of the project.

Stage 2. Implementation (five months)

- a. The agreed-upon productivity improvement plan is implemented, which may include training, capacity building, modification of existing practices, development of new processes, and applications of new technologies, management tools, and productivity-improvement methods.
- b. The resource person(s), Directorate for Standards, Metrology and Quality (STAMEQ), Vietnam Standards and Quality Institute (VSQI), and APO Secretariat communicate at various stages of implementation to review the diagnosis and progress and recommend ways to resolve problems or administrative bottlenecks faced during the project.

Stage 3. Evaluation and Dissemination (one week)

- a. The resource person(s), STAMEQ, VSQI, and APO Secretariat review and evaluate the results of the demonstration project to determine whether the objectives have been achieved.
- b. STAMEQ and the VSQI take the lead in planning, preparing, and conducting dissemination activities, ensuring multiplier effects of the project in the country. The results and process of the demonstration project are disseminated through locally organized activities and materials derived from the project, such as the final report, training manual, promotional materials, and a demonstration video in a local language (if possible with an English version or English translation).
- c. STAMEQ and the VSQI in consultation with the demonstration company are expected to submit the project outputs and results for dissemination activities to the APO Secretariat before the completion of this stage.

6. Project Schedule

In the implementation stage, the actual number and duration of consultations will be determined by the resource person(s), demonstration company, and APO Secretariat after the diagnostic survey of the company.

7. Roles and Responsibilities

STAMEQ

- a. Provide the overall supervision and coordination for implementation of the project in the country through the VSQI.
- b. Monitor closely the process of implementation, particularly the key performance areas.
- c. Submit a final report to the APO Secretariat which documents the entire process of the demonstration project, analyzes the results and impact of the project as well as contributions to productivity improvement, and suggests recommendations for replication in the country utilizing domestic talent, networks, and resources.

VSQI

- a. Coordinate the schedule for implementation of the project in the country.
- b. Guide and assist the demonstration company in planning, coordinating, implementing, monitoring, and documenting project activities in consultation with the resource person(s) and APO Secretariat.
- c. Assign a team in the VSQI to be fully involved in the project and later to be trained as local experts.
- d. Provide, in addition to a coordinator(s), the necessary number of technical experts to work as counterparts to the overseas resource person(s) assigned by the APO Secretariat, if

necessary.

- e. Arrange all logistic requirements relating to the project (e.g., local transportation, discussion room, interpretation, etc.) for the resource person(s) assigned by the APO Secretariat.
- f. Coordinate and supervise the production of a multimedia record such as video/DVD demonstrating the experience of the demonstration company.
- g. Collaborate with the demonstration company in preparing a practical, easy-to-follow manual/guidelines so that similar exercises can be replicated by other organizations in the country.
- h. Conduct dissemination activities such as a workshop, industrial visit, and seminar.

Demonstration Company

- a. Accept and facilitate the training and consultancy services conducted by the resource person(s) assigned by the APO Secretariat and VSQI.
- b. Assign a team and responsible coordinator to work on the project in consultation with the VSQI, resource person(s), and APO Secretariat.
- c. Provide all necessary inputs and information required for the project and extend all necessary local support to the resource person(s), VSQI, and APO Secretariat.
- d. Implement all suggestions and recommendations of the resource person(s) based on feasibility and document the results and outcomes of the improvement plans.
- e. Announce, publicize, and prominently display the APO's presence and involvement in the demonstration company throughout the duration of the project.
- f. Collaborate with the VSQI in preparing a practical, easy-to-follow manual/guidelines so that similar exercises can be replicated by other organizations in the country.
- g. Present the activities and project results during dissemination activities for the benefit of other enterprises.
- h. Collaborate with the VSQI in preparing a comprehensive final report for submission to the APO Secretariat explaining the initiatives taken during the project, their technical details and results, as well as an overall analysis of the benefits and impact of the project.

Resource Person(s)

- a. Perform consultancy and training in the areas specified in the productivity improvement plan.
- b. Monitor and evaluate the performance and progress of the productivity enhancement activities of the company.
- c. Assist the VSQI in developing a training manual and multimedia dissemination materials on the demonstration project.

APO Secretariat

- a. Assign an overseas resource person(s) during specified periods of the demonstration project.
- b. Coordinate communication among the resource person(s), STAMEQ, VSQI, and demonstration company to ensure smooth implementation of the project.
- c. Monitor the progress of project implementation in consultation with STAMEQ, the VSQI, and resource person(s).
- d. Advise STAMEQ, the VSQI, and demonstration company in planning and organizing follow-up activities such as developing promotional materials and/or organizing dissemination workshops or seminars for local participants.

8. Financial Arrangements

To be met by the APO

- a. All assignment costs of the overseas resource person(s).
- b. Up to a total of USD10,000 as local implementation costs for dissemination-related activities. This includes production of a practical manual and multimedia record and holding a dissemination workshop(s)/seminar(s).

The disbursement of expenses will be made at the appropriate time corresponding to the specific activities undertaken and following submission of the necessary supporting documents under the applicable APO rules and regulations for disbursement of project expenses.

To be met by STAMEQ and the VSQI

- a. Expenses for coordinating and implementing the demonstration project such as the assignment of a coordinator and local expert(s) involved.
- b. Partial expenses for dissemination activities (documentation, production of training manual and dissemination materials, dissemination activities, final report, etc.).

To be met by the Demonstration Company

- a. Expenses for logistic arrangements related to the implementation of the project, including the local travel costs of the APO overseas resource person(s) and local experts for transportation between the demonstration company/site and expenses for interpretation.
- b. Costs associated with the purchase, installation, operation, and maintenance of equipment relating to the implementation of the project, if any.
- c. All other expenses for the implementation of the project not covered by the APO, STAMEQ, and VSQI.

9. Accounting Procedures

- a. With regard to the local implementation costs for dissemination-related activities (documentation, video production, dissemination workshop, dissemination material, etc.), the APO share will be reimbursed in exchange for the dissemination materials such as training manual, multimedia record, and final project report with the submission of necessary supporting documents under the applicable APO rules and regulations for the disbursement of project expenses.
- b. For the settlement of expenses, STAMEQ is requested to provide all necessary proof of payment to the APO Secretariat no later than three months after the dissemination event is conducted. The proof of payment, such as bills, payment records, and receipts, should be issued by third parties and must be submitted to the APO Secretariat altogether at one time. The proof of payment should be written in clear English or with an English translation if not originally in English. The original copies of proof of payment should be provided to the APO Secretariat along with an overall list of expenses categorized based on purpose for the production of dissemination materials or holding a dissemination event (an example is attached as Annex 1). The final payment will be made based on the actual expenditure after STAMEQ submits the proof of payment, training manual, multimedia record, and final project report. In general, internal evidence is not accepted as proof of payment and the expenses claimed by it will not be reimbursed.

10. Final Project Outputs

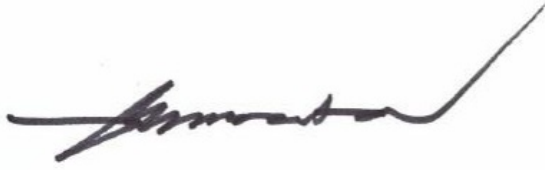
The demonstration company project will be completed with the submission of the following:

- a. A final report prepared by STAMEQ, the VSQI, and demonstration company.
- b. A practical manual for replication (in soft copies and/or printed hard copies) prepared by the

STAMEQ and the VSQI.

- c. A multimedia record such as video/DVD of the experiences of the demonstration company prepared by STAMEQ, the VSQI, and demonstration company.

The APO Secretariat will issue a certificate of completion to the demonstration company upon completion of the project.

A handwritten signature in black ink, appearing to read 'Mochtan', with a long, sweeping flourish extending upwards and to the right.

Dr. AKP Mochtan
Secretary-General