



**ASEAN AUSTRALIA DEVELOPMENT COOPERATION PROGRAM (AADCP)  
PHASE II**

**TERMS OF REFERENCE  
FOR**

***Assessment of post-harvest losses and post-harvest loss reduction technologies  
and practices for a seasonal fruit with high export value and/or export potential  
in Cambodia, Lao PDR, Myanmar, Viet Nam (CLMV) countries***

The ASEAN Secretariat and the Australian Government, through AADCP II, invite applications from consultants for the above-referenced project.

**I. Background**

Post-harvest loss can either be qualitative – a reduction in nutrient value or undesirable changes to taste, texture, or colour of food – or quantitative, through a decrease in the weight or volume of food after harvest. Post-harvest losses in Southeast Asia remain a persistent problem, and are very high in CLMV countries; estimates of Myanmar suggest that post-harvest loss can be up to 50 percent for mangoes. Post-harvest losses impact food security by reducing the quantity and quality of food available – the Asia-Pacific region is home to 536 million undernourished people – and weaken income of farmers, particularly smallholders.

Reducing post-harvest losses in fruits in CLMV countries is particularly important as CLMV countries export a large proportion of their seasonal fruits (e.g., mangoes from Cambodia, Lao PDR, and Myanmar; dragonfruit and lychees in Viet Nam). Access to post-harvest reduction technologies and/or practices which could help to improve the total volume and value of exports, directly benefiting farmers

Post-harvest losses in fruits can occur throughout the post-harvest process. The table below illustrates the various operations and the potential losses at each stage:

<b>Post-harvest operations</b>	<b>Potential qualitative and quantitative losses</b>
<b>Harvesting</b>	Direct exposure to sunlight; absence of maturity index
<b>Handling</b>	Sap burn; impact bruising
<b>Sorting and cleaning</b>	Lack of awareness on standards; poor sorting process
<b>Packaging</b>	Poorly ventilated containers
<b>Storage/ transport</b>	Pest infestation; moisture migration; discolouration; rotting; poorly secured product
<b>Processing</b>	Poor drying facilities, weak cold chain infrastructure

Improvements to the handling and processing of seasonal fruits along the post-harvest value chain could significantly reduce post-harvest losses and improve overall quality and quantity of produce. There have been several promising initiatives in CLMV countries to reduce qualitative and quantitative post-harvest losses. However, a few major challenges persist:

- **Data.** Accurate estimates of post-harvest loss in seasonal fruits with high export value and/or export potential are not readily available. Data from most CLMV country is either outdated or based on small scale studies. This reduces the overall efficiency of interventions along the value chain.
- **Implementing appropriate post-harvest technology.** Most farmers in CLMV countries are smallholders with farm sizes averaging between one to three hectares. It is neither operationally nor financially feasible for them to adopt practices and technologies from larger farms (e.g., sanitising mangoes using chlorine or quaternary ammonia to kill microbes on clean surfaces, using hydro-coolers post washing in mangoes and dragonfruit).
- **Scale.** While there have been several initiatives from donors as well as the government to introduce new technology and/or practices to reduce post-harvest losses in fruits, the majority of programmes have been ad-hoc and did not include a plan to introduce the technology and/or practice more extensively at a national level.

CLMV countries would benefit from a project which examines current post-harvest losses in a seasonal fruit of common importance and identifies hands-on training on low cost technologies/practices to reduce losses. This project will first determine the type of seasonal fruit to be assessed, then assess post-harvest losses along the value chain and identify the capacity building and technical assistance requirements of CLMV countries to implement low cost and easy-to-use technologies and/or practices to reduce post-harvest losses in the selected fruit.

## II. Needs and Objectives

The goal of this project is to minimise post-harvest losses in high-value seasonal fruits in CLMV countries. It is expected that the project will improve understanding on the post-harvest losses in production of selected high-value seasonal fruits in CLMV countries.

## III. Outputs

The outputs of this project include the following:

**Output 1. An assessment report** of each CLMV country in the following areas, at a minimum:

- Measurement and sampling method to select seasonal fruit(s) and measure post-harvest losses;
- Reasons to support the selected seasonal fruit(s), preferably one common high value seasonal fruit for all four (4) countries or alternatively a maximum of three high value seasonal fruits with similar characteristics in production and value chain;
- Description of post-harvest losses along the value chain in each country, and analysis of the magnitude and frequency of post-harvest losses in each part of the value chain;
- Inventory of existing practices and technologies used to reduce post-harvest losses in the seasonal fruit(s) in each of the CLMV country;
- Recommendations to develop an intervention programme to introduce a low cost post-harvest practice and/or technology at specific sites (with an emphasis on farmers)

**Output 2. Draft project concept** for the next phase of the project.

In addition, the consultant will be required to produce an Inception Report and a Project Completion Report (see Section V below).

Activities to be undertaken for the production of outputs and reporting may include the following:

- Drafting an Inception Report outlining the overall approach, conceptual framework, work plan, management plan and budget. The report should also include the selected fruit justified through a simple assessment of the export value/potential of the fruits considered;
- Desk review and phone interviews with relevant government officials;
- Preparation and conduct of national consultations in each CLMV country;
- Preparation of first draft of Assessment Report;
- Preparation and conduct of regional workshop to verify assessment findings and agree on recommendations;
- Finalisation of Assessment Report;
- Preparation and submission of draft Project Concept(s) for the next phase of the project based on the recommendations of the Assessment Report; and
- Preparation and submission of the Project Completion Report.

#### IV. Tasks/Activities

The following activities will need to be undertaken to achieve the outputs presented above. The bidder should provide details on its approach to each activity in its bid and is free to recommend additional activities.

	Output	Activity	Person working weeks**	Completion Date	Person(s) responsible
1	<b>Inception Report</b>	Setting expectations on the project with consultant and preparation and submission of inception report, including justified selection of a common fruit for the purpose of the assessment;	2 weeks	4 weeks after signing of a Special Services Agreement (SSA)	Consultants to draft the report, with inputs from ASEAN Secretariat and AADCP II
		<i>Approval of Inception Report by ASEAN Secretariat (3 working weeks)</i>			
2	<b>Assessment Report of each CLMV country</b>	Desk review and phone interviews with relevant government officials	5 weeks	Week 10	Consultant
		Preparation and conduct of national consultations in each CLMV country	2 weeks	Week 14	Consultant and CLMV countries
		Preparation of first draft of assessment report	2 weeks	Week 18	Consultant
		Preparation and conduct of regional workshop to verify assessment findings and agree on recommendations.	1 weeks	Week 22	Consultant and IAI&NDG Division
		Finalisation of assessment report	1.5 week	Week 26	Consultant
<i>Approval of CLMV Assessment Reports by ASEAN Secretariat (3 working weeks)</i>					
3	<b>Draft Project Concepts for the next phase of the project</b>	Preparation and submission of draft Project Concepts for the next phase of the project based on the recommendations of the assessment report	1 week	Week 33	Consultant and IAI&NDG Division
		Preparation and submission of a Project Completion Report	0.5 week	Week 33	Consultant

*Approval of Draft Project Concepts and Project Completion Report by ASEAN Secretariat (3 working weeks)*

*\*\* The number of person working weeks is intended to indicate the amount of relative effort required to deliver the corresponding outputs. The calculation is based on assumption of 5 person days per week. Actual time will be agreed in negotiation with the successful bidder.*

## V. Reporting

The consultant is expected to produce the following report in accordance with Section III and IV above. The timing of delivery is indicative and can be adjusted when the consultant's work plan is developed, subject to mutual agreement.

No.	Reports	Target Delivery Date
1	<b>Inception Report</b> This would detail the consultant's approach to the project, and provide a detailed description of methods, tools/techniques, and work plan.	4 weeks after contract signing
2	<b>Project Completion Report</b> This would establish a record of the project achievements against the project's original intended purpose and outputs. It is intended for recordkeeping and to assist in assessing impact, draw out conclusions and lessons learned that may be valuable in designing new related initiatives. It should include detailed record of the conduct of all project activities e.g. workshops/consultations.	At the submission of the final deliverable(s)

All reports will be submitted based on AADCP II Guidelines for Contractors in draft format to the ASEAN Secretariat, IAI and NDG Division (with a copy to AADCP II) and, following ASEAN Secretariat approval, in final form. All outputs and reports must be suitable for publication, although the decision on publication lies with the ASEAN.

The contractor will also provide regular (bi-weekly or as agreed with ASEAN Secretariat) summation of activities undertaken and issues that have arisen. These will be submitted to IAI & NDG Division and AADCP II via email.

Financial reports will be submitted at invoicing in line with a payment schedule to be specified in the Special Services Agreement (SSA).

## VI. Project Management

The project will be funded by the ASEAN-Australia Development Cooperation Program II and managed by the IAI & NDG Division of the ASEAN Secretariat. The consultant should be responsible for organising and conducting the scheduled activities in collaboration with the host countries and the ASEAN Secretariat.

## VII. Scope of Services

The consultancy will be undertaken over a **continuous effective period of 9 calendar months** with approximately **15 person weeks** of professional services. Work will commence immediately after contract signing.

## VIII. Qualifications

In its proposal the bidder should demonstrate experience in:

- In-depth knowledge and proven experience in postharvest systems management, postharvest technologies, fruits production systems and process, as well as supply chain management;
- Extensive and relevant work experience in post-harvest management in CLMV countries;
- Experience in the analysis, design, implementation and evaluation of strategies, programmes and projects related to post-harvest management;
- Proven competency and extensive experience in quantitative and qualitative data collection and analysis;
- Proven experience in facilitating discussions/consultations amongst high-level government officials and stakeholders in multiple countries;
- Extensive knowledge and experience in project development; and
- Excellent use of the English language – both spoken and written.

## IX. Bidding

Interested consulting firms are invited to submit a proposal in response to these Terms of Reference. This proposal should be in two parts: **Technical** and **Financial components**.

The Technical component should present the following information:

- A brief discussion indicating the bidder's understanding of the needs of the project;
- A brief analysis of key issues;
- A methodological discussion of how the bidder proposes to address those needs including assessment of key issues, analytical strategies that will underlie the project, specific tools/ methods/ techniques to be utilised, and practical discussion of possible limitations in carrying out the project;
- A detailed work plan that specifies activities to be undertaken, expected outputs and deliverables, resources to be utilised and timing;
- Staffing and management plan;
- A discussion on how measures to ensure the future sustainability of the outcomes of the project will be addressed;
- CVs of all proposed experts;
- Brief discussion of firm's past experience in undertaking similar work and brief summaries of all projects undertaken.

The Financial component should specify:

- 1) Professional fees of expert(s);
- 2) Management and/or operational fees (if any), which include all costs incurred by the person/entity/company for internal coordination, communication, travels and any other associated project management cost;
- 3) Applicable taxes such as VAT, GST, PPN. See Section XI point 3 for an additional note on tax liability.

All costs must be quoted in United States (US) dollars. Activity costs for experts and participants such as reimbursable expenses for airfare, other travel costs and daily subsistence allowance for workshops, meetings, and all other agreed activities do not need to be included in the Financial Component. These items will be discussed with the preferred contractor during the finalisation of the scope of services, based on prevailing ASEAN Secretariat rates.

## **X. Submission of Application**

Applicants should send their application with a cover letter, materials specified in Section IX above and other supporting documents with “**Assessment of the post-harvest losses and post-harvest loss reduction technologies and practices in CLMV**” as the subject via email to [tender@aadcp2.org](mailto:tender@aadcp2.org), no later than **22 June 2018 at 05:00pm Jakarta time**. Applicants should also mail/courier 4 (four) copies of the above mentioned documents to ASEAN-Australia Development Cooperation Program Phase II, ASEAN Secretariat 2<sup>nd</sup> floor, Jl. Sisingamangaraja 70A, Jakarta 12110, Indonesia, within 5 (five) working days of the submission deadline.

For Frequently Asked Questions (FAQ), please visit <http://aadcp2.org/aadcp-ii-tender-frequency-asked-questions/>

Any queries on the TOR should be sent to [contact@aadcp2.org](mailto:contact@aadcp2.org) with the subject line:” **Query: Assessment of post-harvest losses and post-harvest loss reduction technologies and practices in CLMV**”.

## **IX. Additional Notes on Terms and Conditions of the Project**

1. Any future studies/reports/analysis in any form of intellectual property rights (including but not limited to patents, copyright and any related rights) submitted by the Contractor to ASEAN arising out of or in connection to the services performed by the Consultant to ASEAN shall belong to ASEAN Secretariat under the name of **ASEAN** only;
2. Successful bidder shall agree to be bound and sign the Special Services Agreement (SSA) with all requirements under the terms and conditions provided therein, including but not limited to the AADCP II Guidelines for the Contractors attached to the SSA.
3. As an intergovernmental organisation, ASEAN shall not be responsible for any tax(es), levy, tax claim or any tax liability which may be imposed by any law in relation to any amount payable by the ASEAN Secretariat.