

# PROJECT INFORMATION SHEET

PIP No :

1237

(To be allocated by MOP)

## PART A : BASIC PROJECT INFORMATION

(Must be completed in all cases)

1. PROJECT NAME: **Biosafety Monitoring: “Building a robust yet effective genetic modified organism (GMO) crops/products monitoring system based on scientific evidence in Cambodia”**
2. PROJECT DATES:
- PROJECT START: **1/1/2022**
- ESTIMATED COMPLETION: **12/31/2024**
3. TOTAL PROJECT COST: **\$420,065**
4. RESPONSIBLE MINISTRY: **Ministry of Environment**
- RESPONSIBLE UNIT: **Laboratory, General Department of Environmental Protection, Ministry of Environment**
- អង្គភាពទទួលខុសត្រូវ: **មន្ទីរពិសោធន៍ នៃក្រសួងបរិស្ថាន**
5. PROJECT STATUS: **Deleted**

## DETAILED PROJECT INFORMATION

6. TYPE OF PROJECT: **Free-standing technical assistance**
7. SOURCE OF PROJECT FUNDING: **Donor Sought**
8. THE POLICY AREA OF THE PENTAGON STRATEGY PHASE I THAT THIS PROJECT FALLS UNDER:V  
**Side 3. Strengthening of Public-Private Partnerships**
9. THE CONTRIBUTION OF THE PROJECT TO ACHIEVE THE ABOVE POLICY:  
**Building up the National Laboratory Capacity and Strategy for protecting domestic species of crops from degradation/extinction from GM product flow and inform the public about species of GM product/crop. Plus, the project will also contribute to a support on healthy economic growth and environmental well-being based on biosafety GMO scientific data.**
10. SUPPORT TO CAMBODIA INDUSTRIAL DEVELOPEMENT POLICY:  
Does this Project support to the implementation of the Cambodia Industrial Development Policy? **Yes**
- Four Key Concrete Measures (Energy, Transport, and Transport Policy and Management)**
11. SECTOR:  
**Environment and Conservation (includes Forestry sector)**
12. PROJECT LOCATION: (Describe the location of the project and its components.)  
**Banteay Meanchey, Phnom Penh, Kampong Cham, Takeo,**
13. PROJECT OBJECTIVE: (Describe the major purpose of the project.)
- 1) To protect domestic generic species of crops from degradation or extinction from cross-border GM product invasion.**  
**2) To support healthy economic growth and environmental well-being based on well-informed biosafety GMO scientific data.**
- Sub-objective:**  
**(1) To evaluate the presence of GMO, its traits and measure it quantitatively using RT-PCR method on transboundary and domestic crops/products.**  
**(2) To operationalize the practice of GMO detection at MOE biosafety unit on a regular basis.**
14. PROJECT DESCRIPTION: (Provide a description of the project and all its components.)

**- Project input:**

- a) experts: assist to direct concept plan and provide technical assistance such as training and going to field to showcase a case study or related practical activities.
- b) assistants: Technical assistants on GMO detection to train and assist MOE laboratory staff on routinely work for specified period.
- c) Training: Training is needed because we lack experiences and expertise in biosafety management and GMO detection.
- d) Seminars: Seminars are also important to spread biosafety and GMO crops species knowledge to line stakeholders in order to effectively control biosafety operation across areas.
- e) Joint research: Needed to identify transboundary GMO crops trade between Thailand and Cambodia; also, it is also used as an enabling platform for building scientific research skills for MOE laboratory staffs after the project finishes.

**f) equipment needed:**

**No. Description of Equipment Quantity**

- 1 Real Time Thermal Cycler (for RT-PCR) 1
- 2 Biosafety hood (for genetic purification) 1
- 3 Grinding equipment (for sample processing: crop grinder, leaf digestion) 2
- 4 UV sterilizing workstation (for transferring chemical/reagents processing sensitive to contamination) 1
- 5 Deionized water distiller (for deionized distilled water required for genetic processing) 1
- 6 Auto single-channel micro-pipettes and auto multi-channel adjustable micro-pipettes (for transferring sample and reagents) 5each
- 7 Pipette tips 100 boxes (size 1ml; micro tips)
- 8 Electronic scale 1
- 9 Testing Reagents & other needed appliances (See attached for list of required reagents) See appendices.

**- Sampling, sample size & Detection approach:**

At least 10 genetic traits of GMO are to be monitored on trading and domestically grown crops/products from the 4 designated areas of interest using Real Time-Polymerase Chain Reaction (RT-PCR) method for genetic detection. Approx. 15 species of crops/products from each targeted province will be collected/sampled every 2 months upon lab operationalization.

**- Reference materials and documentation preparation:**

- +Establish and compile detection procedures and sampling guidelines and schedules for laboratory.
- +Prepare a documentation of detection reagents and apparatus, necessary for sustained implementation.

**- Awareness raising to relevant stakeholders:**

Propagation of GMO information and knowledge to the relevant stakeholders to keep cooperated and be aware across provinces/areas of authority (such activities will be done through seminars and workshops)

**- Training required:**

Provide a training to laboratory staff, follow-up, and transfer the duties to the laboratory.

**- Reporting:**

Provide a report for GMO/LMO status in Cambodia with regard to trading and domestically grown crops/products.

**- Establish monitoring system:**

- +Based on detection report, monitoring locations are evaluated among targeted provinces and proposed for scheduled monitoring for further work with a possibility of scaling up such work scope.
- +Establish a network with relevant stakeholders and line ministries to work on GMO/LMO detection and monitoring.
- +Upon the research result, target species of crops/ products are determined/assigned for further scheduled samplings and applicable channels are also determined for sample transport/transfer to the designated laboratory.

**15. PROJECT JUSTIFICATION: (Give reasons why this particular project is considered worthwhile.)**

Phnom Penh is now experiencing a dramatic economic growth, so trading on alien crop species existed across the country. Possibly it may invade and degrade domestic generic species with a probability into species extinction as well as potentially exposes to human health risk in extending period. In contrast, GMO products help fulfil the rising consumption demand of selective products of high quality and taste. Therefore, there is high demand of GMO crop species monitoring to ensure biosafety—the quality and quantity of GMO within the specified limit for sustained development, and possibly with other countries. The scientific data can inform the public about the status of GM product/crop in Cambodia and meet the market demand of GMO identification for trading purpose.

**16. BENIFITS: (Who will benefit, directly and indirectly, from the project?)**

- a- Construction of biosafety monitoring system for GMO detection in Cambodia.
- b- Laboratory staffs are able to detect and identify the quality and quantity of GMOs traits on different species of crops using RT-PCR approach.
- c- Scientific evidence for GMOs status for Cambodia
- d- Relevant stakeholders become aware of inbound and outbound GMO crops and products.
- e- Contribution of GMO detection on transboundary crops/products between countries, in particular Thailand and Cambodia.

**17. FEASIBILITY STUDY**

Is a Feasibility Study for the project required? **No**

If YES, has it been carried out? **Not yet**

18. SOCIAL & ENVIRONMENT IMPACT: (Briefly describe the effects of the project, if any, on the people and the surrounding environment. Will the project assist in alleviating poverty?)

**This project is directly and indirectly beneficial for preventing local generic crop species from deterioration/depletion and inform the public about specified types of crops with GMO/LMO for awareness of food consumption and integrity to avoid over-exposure/health risk from GMO crops/products in their diets over extending period. Plus, this project also contributes to specification of trading transboundary GM crops/products, which also comply with international trade pact on allowable quantification of GMO/LMO.**

19. CLIMATE CHANGE

a. Is any activity or output of the project related to Climate Change? **No**

b. How is the project relevant to Climate Change?

Please select a Climate Change related sector of the project and fill up the contribution of the climate change related expenditure compared to the total project cost.

Climate Change-Related Sector	Percentage	Climate Change Relevance
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20. DISASTER RISK REDUCTION

Is any activity or output of the project related to Disaster Risk Reduction? **Yes**

If Yes, please indicate **Mitigation**

21. GENDER ANALYSIS: (How does the project affect the roles of the men and women in the project area? Will women be actively involved in the implementation of the project?)

**Gender role can be taken into account through selection of related stakeholders into the project at any stage from trainees, awareness raising, etc.**

22. CAPACITY TO IMPLEMENT: (Does the Ministry have the skills and experience required to implement the project?)

**There is enough experience and ability to run this project. However, we require technical assistance to operationalize biosafety laboratory and set up necessary document and procedures for GM crop/products monitoring system.**

23. STATUS OF PROJECT IMPLEMENTATION: (Provide a brief update on the progress of the project to date. Discuss any major problems causing delays in project implementation.)

**The project proposal has already been submitted and waited for approval and implementation. There will be a process of decision making for the approval from TICA, CDC and MOE. The proposal grant of details for the project would be determined later after a complete analysis of current market price.**

24. PROJECT PRIORITY: (Please indicates the priority ranking of the project decided by the ministry/agency.)

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25. DONOR INVOLVEMENT: (Provide any information on current or potential donor involvement in the project.)

**The main donor is expected from Thailand International Cooperation Agency (TICA). Perhaps the government of Cambodia can get involved to ensure sustainability.**

**PART B : PROJECT COSTS AND FUNDING SOURCES**  
(In US\$'000)

INVESTMENT COST	2023		2024 Budget	2025 Estimate	2026 Estimate	2027 Estimate	3yr Total 2025-2027	Recurrent Cost Est.
	Budget	Actual						
<b>Operational Expenditure</b>	0.0	0.0	0.0	104.4	104.4	104.4	313.2	0.0
Salaries	0.0	0.0	0.0	99.6	99.6	99.6	298.8	0.0
Materials + Admin	0.0	0.0	0.0	2.3	2.3	2.3	6.9	0.0
Other	0.0	0.0	0.0	2.5	2.5	2.5	7.5	0.0
<b>Capital Expenditure</b>	0.0	0.0	0.0	85.3	18.6	3.0	106.9	0.0
Construction	0.0	0.0	0.0	65.6	0.0	0.0	65.6	0.0
Consultancy (i.e. TA) + Admin	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equipment+ Furniture	0.0	0.0	0.0	4.1	0.0	0.0	4.1	0.0
Training	0.0	0.0	0.0	15.6	15.6	0.0	31.2	0.0
Other	0.0	0.0	0.0	0.0	3.0	3.0	6.0	0.0
<b>TOTAL COST</b>	0.0	0.0	0.0	189.7	123.0	107.4	420.1	0.0
FUNDING SOURCES	2023		2024 Budget	2025 Estimate	2026 Estimate	2027 Estimate	3yr Total 2025-2027	
	Budget	Actual						
<b>Project Revenue</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Government Funding</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Cash Input	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other Resources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Donor Funding</b>								
<b>TOTAL COMMITTED FUNDING</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>FUNDING REQUIRED</b>	0.0	0.0	0.0	189.7	123.0	107.4	420.1	
(Total Cost - Funding Available)								

**Seen and Approved by  
Minister**

(Signature)

Date :