TERMS OF REFERENCE

Consulting Firm for Baseline, Progress and Project-end Assessment Studies

Project: Cambodia Agricultural Sector Diversification Project (CASDP)

Duty station: Ministry of Agriculture, Forestry and Fisheries, Phnom Penh, Cambodia

Section/Unit: MAFF

Contract/Level: Consulting Firm

Supervisor: Project Director

Mode of Contract: 4 years contract, with yearly performance evaluation

1. General Background

The CASDP project has received the World Bank's board approval on January 31, 2019 for a period of 6 years, and became effective on June 5th, 2019, with the closing date will be on January 31st, 2025. CASDP is designed to enhance market opportunities through an inclusive, beneficiary-led, market-driven approach, leading to enhanced competitiveness and increased capacity to manage climate risks. The Project Development Objectives of the **CASDP** are *"to facilitate the development of diversified agriculture value chains in selected geographical areas in Cambodia and to provide immediate and effective response in case of an eligible crisis or emergency"*. The project aims to support (i) facilitating integrated agribusiness investment; (ii) investing in farm-level organizations and farm productivity; (iii) expanding value chain linkages; (iv) stimulating agribusiness innovation; (v) investing in critical public goods which provide the supportive environment; and (vi) identification and provision of key economic infrastructure to remove constraints to diversified agriculture development. The key results the project expects to achieve are (a) Increase in the volume and value of gross sales at benefitting farms (percentage); (b) Increase in the value of gross sales of benefitting agribusinesses (percentage); (c) Share of non-rice production area of participating farmers. The main beneficiaries of the project are: (i) farmers in selected project regions, both rural and peri-urban; (ii) agribusinesses (entrepreneurs and workers) participating in identified value chain development; (iii) general population in rural project areas; and (iv) project implementing agencies (IAs) at national and sub-national level.

The project consists of four main components (i) Enabling Agriculture Diversification; (ii) Supporting Public Infrastructure; (iii) Improving Agriculture Information System and Quality Control Management; (iv) Project Management, Coordination, Monitoring & Evaluation; and (v) Contingent Emergency Response. The first two components are closely linked and represent the largest part of the investments and are modular and scalable and adaptable to geographical areas and commodity/value chains. The third component focuses on institutional strengthening and seeks to enhance the impact of the investments made under the first two components in the medium and long term, ensuring sustainability and possible expansion of benefits across the country. The fifth component has been activated and approved by the World Bank in October 2020 to support the request from the Royal Government of Cambodia in responding to outbreak of the COVID-19 in the country, in particular the target areas of the CASDP implementation.

CASDP is geared towards the compilation of value chain support, including extensive technical assistance (TA), productive infrastructure, and financial support services. In particular, Component 1 emphasizes the linkages between direct support to farmers, producer organizations (POs), and small and medium agribusinesses (SMAs). Component 2 complements component 1 by concentrating on public investments in roads and irrigation infrastructure. All public infrastructure investments of Component 2 will be prioritized and implemented according to selected diversification plans (DPIs) to be prepared under Component 1, applying new civil works codes that reduce vulnerability to climate risks.

2. Overall Project Management.

As an executing agency (EA), the Ministry of Agriculture, Forestry and Fisheries (MAFF) is responsible for overall project management/coordination and for the implementation of all four components. MAFF works in close cooperation with technical units of the Ministry of Rural Development (MRD), the Ministry of Economy and Finance (MEF) and the Ministry of Water Resources and Meteorology (MoWRAM) as implementing partners that will take responsibility for the

construction/rehabilitation of rural infrastructure. A MAFF-led Project Coordination Office and implementation unit has been established, which has been supported by the Secretariat of the Technical Working Group on Agriculture and Water (TWG A&W). The project will operate in 12 targeted of potential provinces and in Phnom Penh. The provinces have been chosen for their suitable agroecological conditions for high-value products, with Phnom Penh as the location of many potentially participating SMAs. Provincial locations are Kampong Chhnang, Battambang, Siem Reap, Preah Vihear, Stung Treng, Ratanakiri, Mondulkiri, Kratie, Tboung Khmum, Kampong Cham, Kandal, and Kampong Speu.

3. Objective of the Assignment

The objective of the assignment is to assist project management with quantitative and qualitative data and information to assess project achievements, i.e. changes and improvements in the socio-economic wellbeing of participating farming households and small and medium agribusinesses. The assignment will also provide timely assessments of the factors that led to observed changes, providing project management with information to adjust activities if and as necessary.

Sampling Strategy

The Baseline and Progress Assessment Studies will employ the following sampling strategy:

1. The sample population will consist of farmers who are in POs/ACs and SMA in the 13 provinces beginning in 2021 and 2022. Therefore, there will be two cohorts.
2. There is no separate "control group." However, the staged approach to sampling the two cohorts will allow exogenous trends (changes over time due to factors other than project activities) to be identified and differentiated from project impacts.
3. The sample for the 2021 baseline will be drawn from the full list of POs/ACs and SMA. In the subsequent years, sample households and POs/ACs and SMA will be drawn only from the 2021 and 2022 of POs/ACs and SMA target.
4. A random sample of 780farmers of POs/ACs and SMA (10hh/AC or PO) will be drawn from the 2021 cohort and 720 farmers of POs/ACs and SMA from 2022 cohorts.
5. Each sample farmer will be interviewed two times, once at the beginning of his/her participation in CASDP (baseline) and once after three years of activities (end-line).

The baseline and end line studies will be conducted on a rolling annual basis to assess the Producer groups of farmer supported through contracting arrangements formed in each of the years over the period 2021 to 2022 (cohorts) within Project Provinces. End line studies will be conducted three years later (2024 to 2025) to coincide with the end of the CASDP activities for each annual round of POs/ACs and SMA's farmers and compared to the respective baseline (illustrated by the solid line below).

The staged approach to sampling will allow comparative analysis between cohorts i.e. comparison of results between the first and second baseline.

Once the first and second baseline and end lines are completed the consultant is expected to assess key differences between cohorts and highlight possible reasons (illustrated by the dashed lines below).

Stage	2021	2022	2023	2024	2025
Cohort 2021	Baseline			End-line	
Cohort 2022		Baseline			End-line

The data analysis requirements are illustrated below and further described in Attachment A.

4. Duties and Responsibilities

The firm is expected to work under the supervision of the MAFF-EA, and MAFF-EA in supervision of all phases of data collection for the household surveys and ex-post analysis of the datasets and in close collaboration with the implementing agencies (including MAFF and its implementing departments, MEF/ARDB, MRD and MoWRAM). The expected tasks for the firm should be performed in accordance with a mutually agreed schedule.

The main responsibilities are:

A. Sampling Design

Key activities:

- Develop the sample plan based on the design provided in Attachment A in collaboration with the MAFF-EA, and PCO.
- Establish the list of specific households drawn from the sample frame provided for the POs target.
- Briefing note on the survey sampling methodology.

The sampling frame for each cohort will be provided by the MAFF-EA at the start of each round of survey and is expected to consist of the list of farmers in POs.

Each annual sample will be drawn from the sampling frame in two stages: (i) selection of clusters/POs; and (ii) selection of households. Ten farmers will be sampled in each cluster/POs. Therefore, 150 clusters/POs (1,500 farmers) will be sampled in 2021 and 2022. The follow-up survey will include 150 clusters/POs (1,500 farmers) in 2024 and 2025.

The firm will prepare a robust sampling strategy based on these requirements and will produce a short note (3 to 5 pages in length) describing the sampling strategy. This note will be presented in the Inception Report and will be discussed and agreed with the MAFF-EA and PCO. The sampling strategy note, as finalised, will become part of the final report for each round of the survey.

B. Survey Questionnaire

The questionnaire will be developed to capture all the information required to address relevant Project Operational Manual (POM) indicators as well as project level information that is needed to inform planning and ongoing review.

Key activities:

- Developing the household questionnaire
- Piloting the household survey instrument
- Finalizing, translating (into local language(s)) and printing of questionnaires

The questionnaire will include the following modules:

- Agricultural production. The question should cover the share of non-rice production area of participating farmers.
- Financial services. The firm should seek insofar as possible to cover the questions on farmer households, Producer Organizations (POs)/Agricultural Cooperatives (ACs), and SMA access to financial services through banking transactions.
- Public rural infrastructure. The firm should seek insofar as possible to cover the questions on agricultural irrigation schemes/drainage services and rural roads/farm to market roads in supporting to farmer households, Producer Organizations (POs)/ Agricultural Cooperatives (ACs); and SMA.

The questionnaire is estimated to take between 60 and 90 minutes depending on responses and wait times.

The specific locations for survey piloting are left to the discretion of the firm but may not be in primary sampling units to be used in the actual survey (the potential farmer households, Producer Organizations (POs)/Agricultural Cooperatives (ACs); and SMA identified by relevant MAFF implementing departments, i.e. GDA, GDAHP, DAI and PDAFF) where the

project will be supported) but must be within the 13 project provinces. After pilot testing the survey instruments, the firm will debrief with enumerators, send an electronic copy of survey responses to the MAFF-EA, and make proposals for change in order to improve the survey instruments.

The firm will also be responsible for translating the questionnaire. The firm will produce and print final questionnaires in Khmer and English and local language(s), subject to the approval of the CASDP-PCO.

C. Trained Enumerators and Staff

Key activities:

- Recruitment, contracting, and payment of survey enumerators, data entry technicians and supervisors
- Preparation of training materials and detailed interviewer manual (and supervisor manual if necessary)
- Facilitation of supervisor and interviewer training

Knowledge of local languages will be required of survey enumerators and supervisors. Preference in selection will be given to experts who have experience with quantitative data collection in rural Cambodia, namely on the themes of the questionnaire.

The field supervisors will travel with survey teams and be responsible for day-to-day supervision and logistics, including contacting community leaders in enumeration areas, and arranging appointments with respondent households. The field supervisor will also perform quality controls on the information collected by his/her team, including randomly attending some interviews, randomly re-interviewing households on specific modules or overall questionnaires, and randomly reviewing questionnaires. The field supervisor will further be responsible for organizing and tracking the daily supply of completed questionnaires to the data entry operators.

The firm will be responsible for the preparation, organization and implementation of enumerator training activities to achieve quality data collection. The firm will prepare detailed training manuals for the survey field teams in English and Khmer.

Data entry clerks will enter the data at a facility provided by the consultant in a timely fashion to allow for field checking of unclear or incomplete responses. Data entry supervisors will also be responsible for developing the data entry software, and for monitoring and overseeing the daily data logging of field activities. Data entry clerks will enter the household questionnaires. Appropriate double data entry protocols will be implemented by the data supervisor.

D. Management of Equipment and Logistics

Key Activities:

- Securing office and computer equipment for survey management and data entry
- Arranging transportation and equipment related to household survey interviews
- Ensuring proper maintenance and functionality of all vehicles and equipment
- The firm will prepare all field supplies required for field staff. The firm will also make appropriate transportation arrangements to conduct field work. The firm can use its own vehicles or hire a car service – this is left to the firm's discretion

E. Data Collection

Key activities:

- Prepare field schedule
- Verify households to be interviewed are in accordance with the sample design
- Conduct household interviews

The MAFF-EA, and PCO will secure administrative approval for the survey from the necessary authorities and will also ensure close support to the survey work by the provincial and local authorities.

Data collection of households will be done by interviewer teams according to a specified schedule. The POs 2021 are expected to be evaluated in the first quarter of 2021 so the first survey should take place during the second or third quarter 2021. Subsequent surveys (baselines in 2021 and 2022 and end-lines 2024-2025) should take place at the same time of year to ensure responses are not affect by seasonality.

Identification of the locations of survey households and their plots (along with necessary approvals for this information) will be the responsibility of the firm. In addition, the firm is responsible for correct identification of households.

The firm will ensure that data collection is performed without significant delay. To the extent possible, the data collection schedule will take into consideration the regional agricultural calendars of rural Cambodia to avoid household re-visits and/or missing household observations.

F. Data Management

Key activities:

- Development and implementation of a double-entry data entry system
- Supervision and verification of data entry process
- Ensure processes in place to deliver a clean baseline dataset according to standard methodologies

The firm will be responsible for the computer program to be used for data entry. Specific responsibilities include providing field teams and data entry clerks with necessary computer equipment and ensuring that equipment remains in working order throughout the duration of the survey and data entry process, developing the system for data entry, and constructing data labels.

All questionnaires will be double entered and verified for accuracy. Discrepancies should be rectified by the data entry supervisors. The data entry will be done by data entry clerks in a location provided by the consultant and then checked for inconsistent or illogical answers by the supervisor. All issues should be rectified in the field before the teams move on to the next commune and/or district.

The cleaned data sets will be copied to MAFF-EA which may conduct independent checks of data accuracy and may require corrections / additional data collection if obvious errors are identified.

The final data sets must be compiled and consistency checks performed to the approval of the MAFF-EA. Data must be submitted in STATA, SPSS or SAS formats.

G. Data Analysis and reporting

Key activities:
- Development of report structure in collaboration with the MAFF-EA
- Data analysis using STATA or equivalent software
- Presentation of main conclusions in final draft reports as per structure agreed
- Include changes/extra analysis following comments on draft report

The firm will be responsible for submitting a final report structure based on the objectives of the project, the data for the key impact indicators and other information to be collected through the baseline survey. This structure will be agreed by MAFF-EA and then used for the final report writing.

Following each round of data collections, the firm will undertake analysis (including descriptive statistics of key impact variables and other as per structure agreed with the MAFF-EA) and submit a draft report.

The major findings should be presented in the report with technical details from the survey presented in tabular and graphical format (where relevant) in an attachment to the report. The report should list the relevant results for each of the key performance indicators along with analysis of the component that contribute to the generation of the indicator.

The staged approach to implementation will also allow comparative analysis between cohorts i.e. comparison of results between the first and second baseline. The consultant will identify any key differences between cohorts and the possible reasons for these differences.

More detail on Data Analysis is provided in Section 2 of Attachment A.

The draft reports will be reviewed by CASDP PCO team, led by the Project Director and the Chair of the PCO, MAFF and the firm should then incorporate changes and conduct extra analysis if required before submitting a final draft.

5. Assessment of Proposal:

The evaluation of proposals will include assessment of evidence of access to required personnel and qualifications required to achieve the specified deliverables.

A. Minimum Qualification Requirement of Consulting firm:

The selected firm shall possess the following qualifications:

- At least 5 years of experience in conducting baseline and endline survey
- Have experience in managing at least one large survey with sample size at or more than 700 samples
- Strong knowledge in at least two of the following software programs: CS-Pro, SPSS, Stata, SAS
- Have experience in conducting at least one survey with qualitative and quantitative data analysis
  Preference will also be given to the following qualifications:

- Experience conducting household survey work in Cambodia
- Strong background in statistics and econometrics
- Previous experience in impact evaluation is preferred

B. Minimum Requirement of Key Personnel

The firm's technical proposal must demonstrate the availability of required personnel with appropriate qualifications to undertake the following roles. Minimum professional required are:

1. One International study coordinator: advanced degree in Economics, Agricultural Economics or related field. At least five years relevant experience in large quantitative survey design implementation and analysis, experience in household and agricultural data collection and analysis required, ability to coordinate teams and ensure timely reporting.

2. One National expert in Questionnaire Design: advanced degree in Economics, Agricultural Economics or related field. At least five years' experience in experience in designing household and agricultural surveys required. Preferably with experience in multi-topic surveys and exposure to Cambodia.

3. One National expert in survey implementation and field supervision: Minimum five years' experience with large survey implementation, experience in implementing household and agricultural surveys required. Preferably with previous experience in conducting surveys in Cambodia.

4. One National socio-economic researcher: advanced degree in Economics, Agricultural Economics or related field, at least five years' experience in analysing survey data using SPSS/STATA or equivalent software. Strong background and experience in statistics and econometrics is required. Ability to write clearly and concisely in English. Previous experience in impact evaluation is preferred.

5. Two National computer specialists in data entry and data bases: Minimum experience of three years with large survey data sets and data entry software required.

6. One National field work experts: Minimum experience of three years in large household level surveys required. Familiarity and experience with field data entry procedures and enumerator training and supervision is required.

All survey team personnel must be able to work collaboratively with the MAFF-EA and PCO.

Key support staff positions that will also need to be hired include:

7. Survey enumerators: Minimum of twenty-five enumerators should be hired. Minimum qualifications include knowledge of local language. Preference should be given to candidates with experience in quantitative data collection in rural Cambodia, namely on the themes of the questionnaire.

Data entry technicians: Minimum qualifications include knowledge of local language and advanced computer skills. Preference should be given to candidates with experience in quantitative data entry and/or previous experience in survey work.

C. Deliverables Schedule:

The firm will produce the following deliverables:

No	Deliverables	Target Due Date
1	Inception report with detailed study design based on information provided and discussions with the MAFF-EA and PCO an outline of the baseline report format	Q4/2021
2	Training manual(s) for field staff in Khmer and English	Q4/2021
3	Final household questionnaires in Khmer and English, which reflect any/all changes from piloting	Q4/2021
4	Completed household questionnaires for all households interviewed (electronically or scanned paper version)	Q4/2021, Q3//2022, Q1//2024 and Q1/2025
5	Two completed Baseline data sets (to be completed in stages in line with annual establishment of groups) in electronic format (Stata, SPSS or SAS)	Q4/2021 and Q4/2022
6	Two completed End-line data sets in electronic format (Stata, SPSS or SAS).	Q1/2024 and Q1/2025
7	**Updated Methodology Statements** (letter format) summarising any changes agreed to sampling strategy and / or survey instrument before commencement of the second and subsequent rounds of data collection	Q3/2022 and Q1/2025
8	**Interim Report 1** after the first round of data collection, including description of the survey methodology and baseline data for the 2021 cohort in Khmer and English;	Q4/2021
9	**Interim Report 2** after the second round of data collection, including baseline data for the 2022 cohort and cross-comparison to the other cohorts in Khmer and English;	Q4/2022
10	**Baseline Final Report,** consolidating and cross-comparing Two rounds of baseline data collection in Khmer and English;	Q4/2022
11	**Interim Report 3**, with end line data and analysis for the 2024 cohort in Khmer and English;	Q1/2024
12	**Interim Report 4**, with end line data and analysis for the 2025 cohort and cross-comparison to between all cohorts in Khmer and English	Q1/2025
13	**Final Survey Report,** including a full description of the survey methodology and consolidating all data and findings from all cohorts and cross comparisons in Khmer and English	Q2/2025

All materials are to be delivered to the MAFF-EA in electronic format. Reports should also be provided in 3 hard copies. All reporting is to be provided in in Khmer and English.

6. Reporting Obligations

The firm shall report to the CASDP Project Director or his delegate for these activities. Final deliverables should be submitted according to a schedule agreed upon given the limits for the contract duration (see maximum contract duration and tentative schedule for deliverables below). Deliverables are subject to agreement by the MAFF-EA and should therefore be submitted by the firm in time (providing a minimum of fifteen days) that allows for comments and if required some changes to be introduced by the firm.

7. Duration and Payment of the Consultancy

The consultancy should tentatively start 2021.

The payment will be made up on completion of each output defined in below table.

No	Deliverables	Percentage of Payment.
1	Inception report with detailed study design based on information provided and discussions with the MAFF-EA and PCO an outline of the baseline report format	10%
2	Training manual(s) for field staff in Khmer and English	5%
3	Final household questionnaires in Khmer and English, which reflect any/all changes from piloting	
4	Completed household questionnaires for all households interviewed (electronically or scanned paper version)	40%
5	Two completed Baseline data sets (to be completed in stages in line with annual establishment of groups) in electronic format (Stata, SPSS or SAS)	5%
6	Two completed End-line data sets in electronic format (Stata, SPSS or SAS).	5%
7	**Updated Methodology Statements** (letter format) summarising any changes agreed to sampling strategy and / or survey instrument before commencement of the second and subsequent rounds of data collection	5%
8	**Interim Report 1** after the first round of data collection, including description of the survey methodology and baseline data for the 2021 cohort in Khmer and English;	5%
9	**Interim Report 2** after the second round of data collection, including baseline data for the 2022 cohort and cross-comparison to the other cohorts in Khmer and English;	5%
10	**Baseline Final Report,** consolidating and cross-comparing Two rounds of baseline data collection in Khmer and English;	5%
11	**Interim Report 3**, with end line data and analysis for the 2024 cohort in Khmer and English;	5%

12	**Interim Report 4**, with end line data and analysis for the 2025 cohort and cross-comparison to between all cohorts in Khmer and English	5%
13	**Final Survey Report**, including a full description of the survey methodology and consolidating all data and findings from all cohorts and cross comparisons in Khmer and English	5%

8. Future Use of the Data

The completed dataset will be the property of MAFF. However, the firm may use the data for specified research purposes if they seek and received the written consent of the MAFF-EA.

Attachment A:

1. Sample Design

The general goal of all sampling methods is to obtain a sample that is representative of the target population. For the purposes of this ToR, the sampling frame will be determined by the POs from the target provinces to receive GDA, GDAHP, DAI and other relevant

Therefore, the sampling frame for each stage will be based on the cohort of newly registered farmer participants in project activities for the years 2021 and 2022.

Data collection (through household surveys) will be conducted in three stages for both the baseline and end line to reflect these annual enrolments. To allow analysis of the impacts of the extension activities across years, the 2021 and 2022 samples will be drawn from comparable members of PO. As such:

- The 2021 sample will be randomly selected from the full list of members of PO in target provinces
- The 2022 the based on list of POs selected to join with project.
- Planning estimates are 150 POs and 1,500 farmers for 2021 and 2022 (10 farmers/PO)

As sub-project activities are expected to be delivered over three years, the collection of end-line data will be held to reflect this timeframe; for example, for farmers registered and baseline conducted in 2021, the end-line will be undertaken in 2024.

Rollout	2021	2022	2023	2024	2025
Cohort 2021	Baseline			End-line	
Cohort 2022		Baseline			End-line

Impact Evaluations a geographic clusters/POs sampling (with a standard segment design sample of 1,500 Households) approach will be applied for both the baseline and the follow up review (end-line).

The MAFF-EA will provide the survey firm with list farmer participants of POs in each cohort including names, locations and basic household information. These lists will form the sampling frame. The survey firm should ensure that the sample is drawn at random from the sampling frame - the important characteristic of simple random sampling is that the person doing the selecting has no control over which households are selected.

Sampling Approach: Baseline	2021 Cohort	2022 Cohort	Total Cohort
Primary Cluster: Village	N/A	N/A	A/N
Clusters or POs	78	72	150

The first stage of selection involves choosing the geographically defined units while the last stage involves selecting the specific households. For MAFF-EA this requires the survey firm to:

- Randomly select the primary sampling units (MAFF-EA) each year ; and
- Based on the list of MAFF-EA's randomly select 10 households.

The end-line survey will be conducted on a panel basis, i.e. the Cohort 2021 farmers will be interviewed again in 2024, the Cohort 2022 farmers in 2025. To offset possible sample loss from registered members dropping out after the baseline year the sample size has been adjusted by 10%.

Where possible, those households that have dropped out should be surveyed to allow for comparative analysis to those that remain members. This will be used to assess factors that influence whether members remain active and barriers to ongoing involvement. The dataset for "drop outs" should be maintained and identifiable separately to ongoing members. Only the later will be included for the end-line assessment of the log-frame indicators. Contingencies and procedures for stand-by households at the baseline (for any households not available) should also be included.

2. Data Analysis
Baseline Analysis: Each of the three baseline reports (Deliverables 8-10) should provide analysis of the responses from the survey questions and findings that are relevant to the context and design of CASDP and may impact on the longer term achievement of the programme objectives.

The key performance indicators (refer to Section 3 and Attachment B) should be clearly presented and elaborated in detail, indicating the data elements and interpretation including any components that may need further assessment or exploration. Results should be assessed against the relevant household demographic and socio-economic factors (including gender).
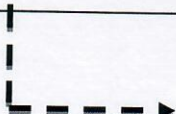
Analysis will include testing of assumptions re the characteristics of self-selecting smallholder (land holdings, production and investment capacity), other issues such as identified needs of registered smallholders, and issues/constraints faced that may impact on the project design. The MAFF-EA may make specific requests for data analysis and tabulation in the reports according to the need to analyse specific issues relating to programme design and implementation. The major findings should be presented in the report with technical details from the survey data presented in tabular and graphical format (where relevant) in an attachment to the report.

Comparison of Baseline and End line: For each cohort the end line results must be compared to the baseline to investigate the effectiveness of the activities on registered smallholders (illustrated by solid line below – included in Deliverables 11-13). Changes should be examined, and where possible results triangulated to secondary data to interpret the results over the three years.

Comparative Analysis across cohorts: In addition, the phased approach to registration will allow comparative analysis across the cohorts (e.g. 2021 cohort to 2022 cohort) to test if the baseline and end line results generated reflect those of the previous cohorts(s) (illustrated by the dashed lines below) and highlight trends and/or possible reasons for differences. As such the consultant is expected to:

- Compare the baseline information: the 2021 and 2022 baseline reports (included in Deliverables 9 and 10).
- Compare the end line results: once the end line on the 2021 and 2022 cohorts are completed (in 2024 and 2025 – included in Deliverables 12 and 13) an assessment of whether there are significant differences in the results across the cohorts and possible drivers of the differences should be provided (included in deliverables 12 and 13).

Stage	2021	2022	2023	2024	2025
Cohort 2021	Baseline			End-line	
Cohort 2022		Baseline			End-line

Attachment B : Project Results Framework and Monitoring

Project Development Objectives(s)

The proposed Project Development Objectives are to facilitate the development of diversified agriculture value chains in selected geographical areas in Cambodia, and to provide immediate and effective response in case of an eligible crisis or emergency.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets		End Target
			1	2	
Increased revenues/profitability and diversified agriculture production					
Increase in the value of gross sales at benefitting farms (Percentage)		0.00	5.00	15.00	30.00
Increase in the value of gross sales at benefitting female owned farms (Percentage)		0.00	5.00	15.00	30.00
Increased in the volume of gross sale of benefitting farms (Percentage)		0.00	5.00	15.00	30.00
Increased in the volume of gross sales of benefitting female owned farms (Percentage)		0.00	5.00	15.00	30.00
Increase in the value of gross sales of benefitting agribusinesses (Percentage)		0.00	5.00	15.00	30.00
Increase in the volume and value of gross sales of benefitting female owned agribusinesses (Percentage)		0.00	5.00	15.00	30.00
Share of non-rice production area of participating farmers (Percentage)		0.00	20.00	45.00	65.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Component 1: Enabling Agriculture Diversification							
1) Number of diversification proposals submitted and evaluated (Number)		0.00	50.00	100.00	150.00	150.00	150.00
2) Number of business plans under implementation (Number)		0.00	20.00	70.00	120.00	200.00	200.00
3) Number of nutrition sensitive business plans under implementation (Number)		0.00	4.00	10.00	15.00	20.00	20.00
4) Beneficiaries reached with financial services (CRI, Number)		0.00	3,000.00	5,000.00	9,000.00	13,000.00	17,000.00
5) Number of SMAs with a line of credit. (Number)		0.00	5.00	10.00	20.00	30.00	40.00
6) Number of female-owned SMAs with a line of credit. (Number)		0.00	2.00	4.00	8.00	12.00	16.00
7) Percentage of previously unbanked adults reached with transaction accounts - female. (Percentage)		0.00	5.00	10.00	20.00	40.00	60.00
8) Beneficiaries that feel project investments reflected their needs (Percentage)		0.00	60.00	65.00	70.00	75.00	75.00
Component 2: Supporting Public Infrastructure							
Area provided with new/improved irrigation or drainage services (CRI, Hectare(Ha))		0.00	2,000.00	4,000.00	6,000.00	10,000.00	12,000.00

Indicator						
Area provided with improved irrigation or drainage services (CRI, Hectare(Ha))	0.00	2,000.00	4,000.00	5,000.00	8,000.00	10,000.00
Area provided with new irrigation or drainage services (CRI, Hectare(Ha))	0.00	0.00	0.00	1,000.00	2,000.00	2,000.00
Roads rehabilitated (CRI, Kilometers)	0.00	0.00	50.00	100.00	200.00	250.00
Roads rehabilitated - rural (CRI, Kilometers)	0.00	0.00	50.00	100.00	200.00	250.00
Component 3: Improving Agriculture Information Systems and Quality Control Management						
Number of users of agriculture information system (Number)	0.00	2,000.00	5,000.00	8,000.00	10,000.00	10,000.00
Users satisfied with information quality (Percentage)	0.00	30.00	40.00	50.00	60.00	65.00
Number of producers and processers trained in GAP implementation rules (Number)	0.00	500.00	1,500.00	2,500.00	3,000.00	3,000.00
Producers and processers trained in GAP implementation rules - Female (percentage) (Percentage)	0.00	30.00	40.00	40.00	40.00	40.00
Number of quality controls confirmed GAP compliance (Number)	0.00	50.00	100.00	120.00	150.00	150.00
Component 4: Project Management, Coordination, and Monitoring & Evaluation						
Percentage of complaints solved by the Grievance Redress Mechanism of the project (Percentage)	0.00	20.00	80.00	90.00	90.00	90.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Increase in the value of gross sales at benefitting farms	Gross sales at participating farming households; averages at benefitting POs assessed (disaggregated by crops / livestock, and disaggregated by gender of household head) (percentage);	Annually	Baseline survey; yearly sample survey. Target are expected at the intermediate target date.	Baseline survey, yearly updated by sample surveys assessing amounts and values of farm sales	MAFF Project Team
Increase in the value of gross sales at benefitting female owned farms	Gross sales at participating farming households; averages at benefitting POs assessed (disaggregated by crops / livestock, and disaggregated by gender of household head) (percentage)	Annually	Baseline survey; yearly sample survey. Target are expected at the intermediate target date.	Baseline survey, yearly updated by sample surveys assessing amounts and values of farm sales	MAFF Project Team
Increased in the volume of gross sale of benefitting farms	Sales volumes at participating farming households; averages at benefitting POs assessed (disaggregated by crops / livestock, and disaggregated by gender of household head) (percentage)	Annually	Baseline survey; yearly sample survey. Target are expected at the intermediate target date.	Baseline survey , yearly updated by sample surveys assessing amounts and values of farm sales	MAFF Project Team
Increased in the volume of gross sales of benefitting female owned farms	Sales volumes at participating farming households; averages at benefitting POs assessed (disaggregated by crops / livestock, and disaggregated by gender of household head) (percentage)	Annually	Baseline survey; yearly sample survey. Target are expected at the intermediate target date.	Baseline survey, yearly updated by sample surveys assessing amounts and values of farm sales	MAFF Project Team
Increase in the value of gross sales of benefitting agribusinesses	Gross sales (revenues) of participating/benefitting SMAs are measured through their accounting systems (for tax purposes). (gender-disaggregated according to	Annually	Small and Medium Agribusinesses Account (SMAA)	Review Annual Financial Statement	MAFF Project Team

	business ownership) (percentage)				
Increase in the volume and value of gross sales of benefiting female owned agribusinesses	Gross sales (revenues) of participating/benefitting SMAs are measured through their accounting systems (for tax purposes). (gender-disaggregated according to business ownership) (percentage)	Annually	Small and Medium Agribusinesses Account (SMAA)	Review Annual Financial Statement	MAFF Project Team
Share of non-rice production area of participating farmers	Cultivated area of the products produced at participating farms. (percentage)	Annually	Baseline survey; yearly updated by sample survey	Baseline survey, yearly sample surveys, assessing production value (including subsistence/home consumption amounts)	MAFF Project Team

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Number of diversification proposals submitted and evaluated	Number of diversification proposals submitted by producer organizations and/or SMAs, and complying with formal requirements.	Semi-Annually	Semi-Annual Progress Report	Counting compliant business proposal	MAFF and MEF Project Team
Number of business plans under implementation	Number of business plans, elaborated and accepted for funding; with first planned activities being implemented.	Semi-Annually	Yearly Progress Report	Survey among POs and SMAs	MAFF Project Team
Number of nutrition sensitive business plans under implementation	Among those business plans with first planned activities being implemented, the number that are nutrition sensitive according to the MAFF guidelines	Semi-Annually	Semi-Annual Progress Report	Survey among POs and SMAs. MAFF will develop a list of priority nutrition-sensitive value chains based upon the nutrient gaps outlined in the Fill the Nutrient Gap analysis and the crops/products that can contribute to closing these for the domestic population. The indicator will be a count of the number of plans under implementation that meet the nutrition sensitivity criteria.	MAFF Project Team
Beneficiaries reached with financial services		Semi-Annually	Semi-Annual Progress Report	Survey. This indicator measures the number of farmers, POs, and SMAs that gain access to financial support (loans, matching grants) under the project. (gender-disaggregated numbers)	MEF and MAFF Project Team
Number of SMAs with a line of credit.	Number of agribusinesses that benefit from a line of credit provided by the project.	Semi-Annually	Semi-Annual Progress Report	Survey: This indicator measures the number of SMAs that gain access to financial support (loans) under the project. (gender-disaggregated numbers)	MEF and MAFF Project Teams
Number of female-owned SMAs with a line of credit.	Number of female-owned agribusinesses that benefit from a line of credit provided by the project.	Semi-Annually	Semi-Annual Progress Report	Survey	MEF and MAFF Project Teams

Indicator	Definition	Frequency	Data Source	Description	Responsibility
Percentage of previously unbanked adults reached with transaction accounts - female.	Percentage of female project beneficiaries who opened their first bank account facilitated by the project.	Semi-Annually	Semi-Annual Progress Report	Survey: This indicator measures the percentage of farmers that open their first bank account - female. (gender-disaggregated percentage: 60% are women)	MEF and MAFF Project Teams
Beneficiaries that feel project investments reflected their needs	Percentage of beneficiaries that express satisfaction with services and infrastructure that provided by the project.	Annually	Progress reports	Beneficiary sample survey	MAFF Project Team
Area provided with new/improved irrigation or drainage services	This indicator measures the total area of land provided with irrigation and drainage services under the project, including in (i) the area provided with new irrigation and drainage services, and (ii) the area provided with improved irrigation and drainage services, expressed in hectare (ha).	Annually	Annual Progress Report	This indicator measures the total area of land provided with irrigation and drainage services under the project, including in (i) the area provided with new irrigation and drainage services, and (ii) the area provided with improved irrigation and drainage services, expressed in hectare (ha).	MoWRAM and MAFF Project Team
Area provided with improved irrigation or drainage services	Measures in hectares the total area of land provided with new or improved irrigation or drainage services in operations supported by the World Bank.	Annually	Annual Progress Report	This indicator measures the total area of land provided with irrigation and drainage services under the project, including in (i) the area provided with new irrigation and drainage services, and (ii) the area provided with improved irrigation and drainage services, expressed in hectare (ha).	MoWRAM and MAFF Project Team
Area provided with new irrigation or drainage services	Measures in hectares the total area of land provided with new or improved irrigation or drainage services in operations supported by the World Bank.	Annually	Annual Progress Report	This indicator measures the total area of land provided with irrigation and drainage services under the project, including in (i) the area provided with new irrigation and drainage services, and (ii) the area provided with improved irrigation and drainage services, expressed in hectare (ha).	MoWRAM and MAFF Project Team
Roads rehabilitated		Annually	Annual Progress Report	This indicator measures the length (km) of rural roads that are rehabilitated under the project. Expected road length includes an estimated 250km (170km of DBST and 80km of laterite)	MRD Project Team
Roads rehabilitated - rural		Annually	Annual Progress Report	MRD Records: This indicator measures the length (km) of rural roads that are rehabilitated under the project.	MRD Project Team

Number of users of agriculture information system	Number of users accessing online information services at MAFF's AIS websites	Semi-Annually	Semi-Annual Progress Report	Evaluating website statistics	MAFF Project Team
Users satisfied with information quality	Satisfaction rate of online users of AIS (gender-disaggregated) (percentage)	Semi-Annually	Semi-Annual Progress Report	Short online satisfaction survey amongst online users	MAFF Project Team
Number of producers and processers trained in GAP implementation rules	Number of participants in training courses (gender-disaggregated; disaggregated according to topics)	Semi-Annually	Semi-Annual Progress Report	Training course records, participant lists	MAFF Project Team
Producers and processers trained in GAP implementation rules - Female (percentage)	Percentage of participants in training courses (gender-disaggregated; disaggregated according to topics)	Semi-Annually	Semi-Annual Progress Report	Training course record, participant lists	MAFF Project Team
Number of quality controls confirmed GAP compliance	The indicator measures the number of documented quality controls conducted by GDA and confirming compliance with GAP standards	Semi-Annually	Semi-Annual Progress Report	Evaluating MAFF GDA records	MAFF Project Team
Percentage of complaints solved by the Grievance Redress Mechanism of the project	This indicator measures the percentage of complaints that have been solved by the project's Grievance Redress Mechanism of the project.	Semi-Annually	Semi-Annual Progress Report	Progress review on all complaints	MAFF Project Team