1. TEXT OF ADVERTISEMENT

Government of Himachal Pradesh
Department of Forest
Integrated Development Project of Source Sustainability and Climate Resilient Rain Fed Agriculture.
Forest Road, Solan-173212, H.P.

INVITATION FOR EXPRESSION OF INTEREST

IDP, Solan H.P. invites Request for Expression of Interest (REoI) from Indian consulting agencies for **Hiring of Monitoring and Evaluation Consultant [Firm] for Concurrent and Ex-post Program Evaluations** of the Project.

The REoI Document containing the details of qualification criteria, submission requirement, brief objectives & scope of work and evaluation criteria etc. can be downloaded from the project website www.hpidp.org

Last date for submission of REoI is 24/02/2022 upto 11:00 hrs

8/2/2022

Executive Director
Integrated Development Project,
Forest Road, Solan-173212 (H.P.)

Government of Himachal Pradesh
Department of Forest
Integrated Development Project of Source Sustainability and Climate Resilient Rain Fed Agriculture.
Forest Road, Solan-173212, H.P.

Dear,

Integrated Development Project of Source Sustainability and Climate Resilient Rain Fed Agriculture. Solan, H.P. invites sealed Request for Expression of Interest (REoI) from Indian consulting agencies for **Hiring of Monitoring and Evaluation Consultant [Firm] for Concurrent and Ex-post Program Evaluations** of the Project.

The interested consultants (Firm) may provide information indicating that they are qualified to perform the services. Consultants (Firm) may associate with other firms to enhance their qualification, but should indicate clearly whether the association is in the form of a joint venture and/or a sub consultancy. In case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

The REoI Document containing the details of qualification criteria, submission requirement, brief objectives & scope of work as per Term of Reference and evaluation criteria etc. can be downloaded from the project website www.hpidp.org

Further details, if any, may be obtained from Executive Director, Integrated Development Project, Forest Road, Solan-173212 during working hours.

You may submit your responses in sealed envelopes physically, by post /courier to the undersigned latest by 24/02/2022 upto 11.00 AM.

Queries if any may be referred in writing to the Executive Director at the above mentioned address or Telephone No. 01792 -223004 or at E-mail: idpsolan@gmail.com

Note: Chief Project Director, IDP Solan or any of its designated officer reserves the right to cancel this request for REoI and/or invite afresh with or without amendments, without liability or any obligation for such request for REoI and without assigning any reason. Information provided at this stage is indicative and IDP reserves the right to amend/add further details in the REoI.

8/2/2022

Executive Director,
Integrated Development Project,
Forest Road, Solan-173212 (H.P.)

COUNTRY: INDIA

Loan No./Credit No./Grant No.: IN 9041

Assignment Title: Hiring of Monitoring and Evaluation Consultant [Firm] for Concurrent and Ex-post Program Evaluations.

Reference No. : IN-HPFD-265479-CS-QCBS

1. Integrated Development Project for Source Sustainability and Climate Resilient Raid Fed Agriculture, Solan, H.P. (IDP) has been approved for financing from the International Development and Reconstruction Bank (World Bank). The total size of the project is US $ 100 Million (approx. INR 700 Crores). The Borrower intends to apply a portion of funds to eligible payments under the contract (to be signed) for consultancy for Concurrent and Ex-post Program Evaluations.
2. The Project intends to consider only those consultants (Firm) that have the requisite capability and competency, in terms of required qualifications, technical strengths, expertise in service sector, experience of carrying out similar project and financial stability to address the requirements of this project and to provide the proposed services. Interested Consultants should provide information demonstrating that they have the required qualification and relevant experience to perform the services.
3. The short listing criteria are:
   I. The firm should be in consulting business for the last five years (copies of registration, PAN, TAN, GST or any other relevant registrations etc. to be enclosed)
   II. Scanned documents should be clear and all information should be readable else application will be considered rejected.
   III. The firm should have an average annual turnover of INR 1 Crore in the last three years (audited statement of last three F.Y. from 2018-19, 2019-20, 2020-21 to be enclosed).
   IV. At least 3 similar project experience in conducting studies relating to Concurrent and Ex-post Program Evaluations (relevant contract or work order to be enclosed).
   V. At least two similar contracts of value not less than INR Three Crore each in the last 5 years (completed or ongoing with 80% completion).
   VI. Experience of working with Central or State govt. UN or Multilateral of Development Basis like World Bank or ADB.
   VII. Experience of working in Himalayan States especially HP will be preferred.

4. The attention of interested Consultants is drawn to Section III, paragraphs,3.14, 3.16, and 3.17 of the World Bank's "Procurement Regulations for IPF Borrowers: Procurement in Investment Project Financing(Goods, Works, Non-consulting and Consulting Services), July 2016 setting forth the World Bank's policy on conflict of interest.
5. Consultants may associate with other firms to enhance their qualifications, but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.
6. A Consultant will be selected in accordance with the Selection Based on the Quality and Cost Based Selection (QCBS) method set out in the World Bank Procurement Regulations for IPF Borrowers: Procurement in Investment Project Financing(Goods, Works, Non-consulting and Consulting Services), July 2016

7. The detailed Project Description/Activities and REoI alongwith TOR can be downloaded from the project website www.hpidp.org.in

8. REoI submission and opening:
   (i) REoI submission shall be placed inside a sealed envelope clearly marked "REoI for "**Concurrent and Ex-post Program Evaluations**" addressed to Chief Project Director, Integrated Development Project, Forest Road, Solan-173212 (H.P.) along with the name and address of the consultation (Firm), and with a warning " DO NOT OPEN UNTIL 24th February, 2022, Time: 11.00 hours (IST).
   (ii) REoI must be submitted physically to the address, by registered post/ speed post courier/by hand only.
   (iii) The Project will not be responsible for postal delay for any reason (s).

Critical Dates	**Date**	**Time**
Publishing Date	09.02.2022	
Document Download Start Date	10.02.2022	12.00 hrs
Document Download End Date	23.02.2022	16.00 hrs
REoI Submission End Date	24.02.2022	11.00 hrs

9. Request for Proposal (RFP) Document will be subsequently issued to the short listed consultants only.

8/2/2022

Executive Director,
Integrated Development Project,
Forest Road, Solan-173212 (H.P.)

FORMAT – 1

APPLICANT'S REQUEST FOR EXPRESSION OF INTEREST

To,

Chief Project Director,
Integrated Development Project,
Forest Road Solan-173212 (H.P.)

Sub: **Submission of Request for Expression of Interest for registration as contractor under IDP.**

Dear,

In response to the Invitation for Expressions of Interest (EoI) published on _____ for the above purpose, we would like to express interest to **carry Concurrent and Ex-post Program Evaluations of the Project** in the Project area.

As instructed, we attach the following documents in separately sealed envelopes:

1. General information about the firm/company (Format-1)

2. Detail of implementation experience (Format-2)

Sincerely Yours,
Signature of the applicant
[Full name of applicant]
Stamp.....
Date:
Encl.: As above.
Note: This is to be furnished on the letter head of the organization.

FORMAT-1

GENERAL INFORMATION ABOUT THE CONSULTANT (FIRM)

Firm's Profile	
Organization Profile	Name of Organization:
	Postal Address:
	Contact Numbers:
	Fax/Email/Website:
	Name & Designation of Contact Person with Contact Details:
	Date of Establishment (DD/MM/YYYY):
	Date & Place of Registration:
	Registration Number:
	PAN Number:
	GST Number:
	Any other information which the firm/Agency want to add:
Financial Information *{Please enclose the financial statement of last three financial years}*	
The firm should have an average annual turnover of INR 1 Crore in last three years. (Audited statements of last three FY to be enclosed)	**Provide the turnover on the basis of audited financial statement of past three financial years in Indian Rupees.**

Signature of the applicant
Full name of applicant

Stamp & Date

FORMAT-2

Details of Implementation Experience

	Firm's Experience:									
-	- At least 3 Studies – specific experience in conducting studies related to Concurrent and Ex-Post Program Evaluations									
S. No	Name of the Project/Assignment	Brief details of service provided	Name of Client	Duration of Assignment in months			Value of Contract (in INR)	Relation to IDP Concurrent and Ex-post Program Evaluations.	Weather Contract Closed or Not	Page Number at Which supporting documents are attached in EoI proposal
				From Start Date (DD/MM/YYYY)	To End Date (DD/MM/YYYY)	Total Months				

-	- At least two similar contracts of value not less than INR 3 Crore in last 5 years (Completed or ongoing with 80% completion)									
S.No	Name of the Project/Assignment	Brief details of service provided	Name of Client	Duration of Assignment in months			Value of Contract (in INR)	Relation to IDP Concurrent and Ex-post Program Evaluations	Weather Contract Closed or Not	Page Number at Which supporting documents are attached in EoI proposal
				From Start Date (DD/MM/YYYY)	To End Date (DD/MM/YYYY)	Total Months				

- Experience of working with Central or State Governments, UN or Multilateral Development Banks like World Bank or ADB

S. No	Name of the Project/Assignment	Brief details of service provided	Name of Client	Duration of Assignment in months			Value of Contract (in INR)	Weather Contract Closed or Not	Page Number at Which supporting documents are attached in EoI proposal
				From Start Date (DD/MM/YYYY)	To End Date (DD/MM/YYYY)	Total Months			

- Experience of working in Himalayan states especially Himachal Pradesh will be preferred.

S. No	Name of the Project/Assignment	Brief details of service provided	Name of Client	Duration of Assignment in months			Value of Contract (in INR)	Weather Contract Closed or Not	Page Number at Which supporting documents are attached in EoI proposal
				From Start Date (DD/MM/YYYY)	To End Date (DD/MM/YYYY)	Total Months			

- **The firm must provide the summary description on the core competencies, relevant experience and availability of its qualified experts/technical resources in the field relevant to lead the project assignment.**
- **The firm should not have unsatisfactory track record resulting in adverse action by central/state Governments in India (an undertaking must be submitted)**

Signature of the applicant
Full name of applicant

Stamp & Date

EoI Evaluation marking for short Listing of Firms/Agencies: EoI Evaluation for short listing of Firms/Agencies will be based on obtaining marks regarding the applicant's response in the Expression of Interest (EoI). With this, the firm/agency that is considered most qualified, will be short-listed for issuing of RFP. EoI Evaluation criteria and marks included for the short-listing of firms/agencies are as follows:

Sl.	EoI short listing criteria		
A.	**Eligibility Criteria**		**Marks allocated**
1.	**The firm should be in Consulting Business for the last Five years.**		**Mandatory**
2.	**Overall standing of the Firm (10)**		
	A	Minimum 5 Years	05
	B	6 to 10 years	08
	C	Above 10 years	10
3.	***Average annual Turnover in over a period of last three financial years. (Maximum Marks- 10)***		
3.1	Average Annual Turnover of at least INR 1 Crore in over a period of last three financial years but in any year it should not be less than 50.00 lakh.		5
3.2	Above INR 1 Crore: Additional 1 mark for each additional crore to a maximum of 5 marks.		5
4.	**At least Three studies specifically relating to Concurrent and Ex-post Program Evaluations of the Agriculture/Watershed Projects.** ***(Maximum Marks-35)***		
4.1	At least Three Studies/Projects related to **Concurrent and Ex-post Program Evaluations of the Agriculture/Watershed Projects.**		15
4.2	Above Three Studies: Additional 2 mark for each additional Study to a maximum of 20 marks.		20
5.	**At least two similar contracts of value not less than INR 3 Crore in the last five years (completed or ongoing with 80% completion)** ***(Maximum Marks-30)***		
5.1	Two similar contracts of INR 3 Crore		10
5.2	Above Two Contracts: 4 marks each for each additional contract to a maximum of 20 marks.		20
6.	**Experience of working with Central or State government, UN or Multilateral Development Banks like World Bank or ADB. (Maximum Marks-10)**		
6.1	Experience of working with Central/State Government (UN or Multilateral Development Banks like World Bank or ADB funded projects).		5
6.2	Experience of working with Central Government.		3
6.3	Experience of working with State Government.		2
7.	**Experience of working in Himalayan states especially Himachal Pradesh will be preferred.** ***(Maximum Marks-05)***		
7.1	For single or more projects in Himachal Pradesh		3
	For single or more projects in other Himalayan States.		2
	Total:		**100**

INDIA – Integrated Development Project for Source Sustainability and Climate Resilient Rain-fed Agriculture (IDP)

Terms of Reference for Hiring of Monitoring and Evaluation Consultant [Firm] for Concurrent and Ex-post Program Evaluations

1. Background and Project Description

The Government of Himachal Pradesh (GoHP) is implementing the Integrated Development Project for Source Sustainability and Climate Resilient Rainfed Agriculture (IDP) in the selected Gram Panchayats of the State, with financing from the World Bank. IDP carries forward the ideas and learnings of H.P. Mid Himalayan Watershed Development Project (HPMHWDP). This project started in the year 2005 and completed on 31st March 2017. HPMHWDP exhibited increase in real income by 20.70%, increase in biomass production by 46.25%, increase in yield of Wheat, Maize & Milk by 25.92%, 28.94% and 10.72% respectively. Under Institutional strengthening a total of 3,098 Self Help Groups (SHGs), 6,977, Users Groups and 5,967 Common Interest Groups (CIG) were established. Further details about the project are available at: http://www.hpidp.org/reports.php

The Project will invest in measures in upstream catchment areas to improve sustainable land and watershed management to promote the sustainability of perennial water sources. It will also support continued diversification and commercialization of agricultural value chains in downstream areas by supporting production and value addition including promoting efficient water use thereby increasing the productivity of water in agriculture. It will adopt a spatial approach by (i) applying a landscape approach to individual high-risk micro-watersheds within select river basins in Himachal Pradesh; and (ii) overlaying this with a cluster approach to target value chain investments in specific locations to leverage economies of scale and network externalities. In parallel, the project will develop and demonstrate the application of an analytical evidence base to inform strategic policy choices viz. the trade-offs between alternative water uses and will pilot a new institutional arrangement for addressing complex multi-sectoral concepts such as sustainable landscape management that involves several sectors and multiple Government departments.

2. Project Development Objective(s)

The project development objective of the Integrated Development Project for Source Sustainability and Climate Resilient Rain-fed Agriculture (Project) is "To improve upstream watershed management and increase agricultural water productivity in selected Gram Panchayats in Himachal Pradesh."

Key Results – Proposed PDO –level indicators are as follows:

- Survival rate of seedlings planted with project support (Percentage)
- Share of participating farmers adopting climate smart agriculture practices (Percentage, gender disaggregated)
- Increase in farm area under higher efficiency irrigation in targeted GPs (Percentage)
- Share of target beneficiaries with rating "Satisfied" or above on process and impact of project interventions (Percentage, gender disaggregated) [Citizen Engagement Indicator]

Project Components

Component 1: Sustainable Land and Water Resource Management

3. This component promotes participatory and sustainable land and water management through financing the planning and implementation of upstream investments in selected micro-catchments. Site-specific Gram Panchayat resource management plans (GP-RMPs) will be prepared within each micro-catchment to specify detailed activities by location and GP. In parallel to the GP-RMPs, a network of hydrological monitoring stations will be established within the watershed to monitor the quality and quantity of water on a continuous basis, to assess the potential impact of project interventions, whilst laying the foundation for future water budgeting, and hydrological modeling to identify the highest priority sites for future activities. Hydrological watershed modeling in conjunction with landscape analysis can help identify the most critical sites to prioritize investments to ensure the greatest impact for source sustainability and water quality. The main implementers and beneficiaries will be Himachal Pradesh Forest Department (HPFD) staff and relevant community organizations such as sub-groups of the GP user groups set up (or strengthened, where appropriate) under the project. This support will lead to improved forest cover (and hence carbon capture), increased water and sediment regulation, reduced erosion, and improved community participation (including women, youth, and disadvantaged groups) in and benefits from sustainable land and water management that are expected to serve as a model for other states through the Lighthouse India approach (see Component 3).

Component 2: Improved Agricultural Productivity and Value Addition

4. This component would support interventions in downstream areas where the primary (existing or potential) water use is for irrigation in agriculture. It would seek to augment the use of irrigation as a principle strategy for shifting from low-value cereal production to climate resilient crop varieties, higher-value fruit and vegetable production but would do so with a focus on increasing climate resilience and water productivity to maximize the financial returns for water use. The project will seek to

leverage additional support from other government programs and projects, particularly that of the agriculture, horticulture, and animal husbandry departments. Key interventions include infrastructure to increase high-productivity water utilization (drip and sprinkler irrigation) – essential elements of CSA – plus the necessary primary and secondary distribution systems. This component will also support the identification and development of agricultural value chains. In addition to improving local livelihoods, the proposed activities will reduce pressure on forests and contribute to increased carbon sequestration and reduced erosion.

Component 3: Institutional Capacity Building for Integrated Watershed Management

5. The long-term objective of this component is two-fold: firstly, to support a more comprehensive and holistic approach to managing the state's water resources while recognizing competing uses both within HP and downstream in other states, in particular Punjab; secondly to facilitate better alignment of institutional mandates for Integrated Watershed Management (IWM) and strengthen the HPFD's institutional structure and capacity for improved service delivery. In the short term, this component will focus on building the institutional capacity of the HPFD as the key government institution responsible for managing roughly two-thirds of the state's land area and identifying possible future reforms through a comprehensive IWM institutional assessment. It will also produce and share knowledge on these critical topics through a Lighthouse India approach.

Component 4: Project Management:

6. This component will support the project management function, including key staff and operational costs.

7. **Project Area**

The project area shall cover 428 selected GPs of 32 Nos Development Blocks of the 10 districts of Himachal Pradesh viz; Shimla, Solan, Sirmour, Bilaspur, Hamirpur, Mandi, Kullu, Chamba, Kangra & Una**.** The project area shall be covering three out of the four major agro climatic zones of the State i.e. Shivalik hills, Mid-hills & the High hills.

Agriculture in the project area is characterized primarily by small and marginal farms, and agricultural value chains in the project area are often heavily fragmented, lack processing and logistics facilities, do not sufficiently include vulnerable groups, and are missing critical linkages between producers, agri-business firms, and markets. Access to wholesale and terminal markets continues to be a major challenge for producers in the project area.

8. **Key Stakeholders and Beneficiaries**

Local Communities: The key stakeholder beneficiaries of the project include Gram Panchayats, farmers, and group's cooperatives including women groups, pastoralists and transhumant. The women, BPL, SC & ST population comprises the vulnerable/ disadvantaged section of the local communities. The State has also identified a list of backward (economically disadvantaged) Gram Panchayats, some of which also have been included in the Project area. The stakeholders are primarily engaged in agriculture and horticulture with supplementation from livestock-based activities. The transhumant includes Gaddis & Gujjars who are totally dependent on forest for rearing their livestock.

Government Departments: The Himachal Pradesh Forest Department (HPFD) will be the nodal department along with the line department viz; Agriculture Department (AD), Animal Husbandry Department (AHD), Rural Development (RD)& Panchayati Raj Department (PRD) etc. will also be the main stakeholders from the State.

1. Objective(s) of the Assignment

The objective is to conduct a comprehensive (i) ex-post program impact evaluation; (ii) Support in additional KPIs definition and Theory of Change refinement;(iii) mini-evaluation of the matching grant and irrigation components; and (iv) concurrent evaluation.

2. Duration of the Assignment

The duration of the assignment is 36 months from contract signature. The contract is expected to run from 1st April 2022 to 31 March, 2025.

3. Scope of Services, Tasks (Components) and Expected Deliverables

The scope of services can broadly be broken down in three two Parts, Part A, Part B, and Part C as below:

3.1 Part A : Program Impact Evaluation, KPIs definition and Theory of Change refinement

Scope of Services for Part A of the Assignment

The impact evaluation will include a baseline and endline surveys. The consultant is to do the following:

1. Scope of the program evaluation
    a. Refine the project's theory of change, elaborate the definition and calculation logic of existing RF indicators and KPIs, and propose new RF indicators and KPIs to provide evidence of PDO achievement and evaluate the project's theory of change.
    b. Measure the causal impact of program participation on key outcomes including agricultural water productivity of farmer beneficiaries, net farmer household income, farm production, shift in crop selection, cropping intensity, net irrigated area, farmer satisfaction levels with the interventions and other related indicators as per the theory of change. A matching based quasi-experimental evaluation design is expected, including a comparison between treatment and control units.
    c. Assess suggestive reasons for the attainment or non-attainment of the outcomes.
    d. Measure the baseline values of new Results Framework indicators agreed with IDP, verify that the baseline values of the existing Results Framework Indicators (See Annex B) of the project are zero, and measure all of them at endline.
    e. Discuss with IDP to refine and add other evaluation questions of interest.
2. Prepare a detailed design document including sampling design and size, methodology to identify treatment and control units, method analysis questionnaires and respondent types to interview
3. Conduct qualitative interviews at baseline, and endline to inform the questionnaire design of other stakeholders such as program staff, Community Resource Persons, Technical Support Agencies, trainers and others.
4. Prepare computer-assisted personal interviewing (CAPI) questionnaires with validity checks for internal consistency, skip patterns, response range checks and interviewer guidance, and translate into local language and pilot test the instruments.
5. Conduct initial listing, and then the baseline and endline survey data collection.
    a. Prepare a detailed plan for the data collection, including quality assurance measures, resource allocation and work plan
    b. Conduct high quality data collection by preparing a training guide and using this guide to train enumerators, supervisors and field managers on the questionnaires, conduct mock and field pilot tests, supervise the enumerators through accompaniments, data range and validation checks and 10% back checks.
    c. Develop jointly data transmission and storage protocols for sharing with PMU.
6. Clean, process and analyze the data set using STATA statistical analysis software.
7. Prepare baseline report with descriptive statistics and prove that variables representing pre-intervention outcomes, determinants of outcomes and program participation are balanced between control and treatment units to prove that the control units are a valid counterfactual. Prepare endline reports answering the scope items above.

Method for Part A of the Assignment

This is an impact evaluation to measure causal effects of program participation on farm and farmer household-level outcomes. A critical step is to identify a control group that is a valid

counterfactual to the treatment villages and households. The treatment and control villages would be identified using matching techniques on pre-treatment outcomes and their determinants and the determinants of program placement and program participation and other characteristics that would be similar to the watershed and irrigation treatment areas in terms of geology, agro-climatic zone, climate, altitude, soil type, soil moisture, crops grown, levels, trends of soil moisture and vegetative indices from satellite data, etc. The control villages should not have other specialized interventions similar to this project's interventions.

Matching variables will be sourced from existing secondary data such as census, remote sensing and from other government administrative sources. The control and treatment households would be over-sampled at baseline and any imbalances in critical variables between the two groups would be rectified by matching again using the baseline data to arrive at the final balanced set of sample households. Since the program participants will not be known at the time of the baseline, it is expected that a census/listing of households in the sampled villages will be conducted to identify households that are most likely to become program participants based on the eligibility criteria to become a program participant. The average number of households per village in Himachal Pradesh is 60 as per census 2011. Then a sample of these households will be selected randomly in each village with the expectation that some of them become program participants.

Econometric analysis using the difference-in-differences approach will be used to arrive at the causal impact of program participation on the outcomes listed. Both Intent-to-Treat and Average Treatment Effects on the Treated should be measured.

Sample size

The number of households to be surveyed is 8034 at baseline comprising half control and half treatment units. They will be sampled from 334 (control plus treatment) census villages with 16 households sampled per village. At endline the number of households sampled will be 5344 (due to attrition and over-sampling explained below).There will be a listing of households to select the sample households in a representative manner. These 334 census villages will be spread across 428 selected GPs of 32 Development Blocks of the 10 districts of Himachal Pradesh.

Assumptions for the sample size calculations for household income: take-up rate of program participation among sampled households: 50%; Baseline to endline correlation: 0.2; MDE: 20%; ICC from IHDS-II: 0.02; Mean trimmed HP rural household income from IHDS-II: Rs.137,836; Std. dev. of income: Rs. 124,626;Respondent attrition from baseline to endline: 5%; Over-sampling for household level imbalance at baseline: 30%.

Tasks for Part A of the Assignment

1. Conduct detailed requirements gathering workshop with IDP to document a refined set of specific requirements.
2. Prepare an inception plan with a detailed work plan.
3. Visit the field and speak to PMU and 2 district units, conduct qualitative interviews with project staff, beneficiaries and other stakeholders to understand the project and to inform the instruments to be developed.
4. Then develop a detailed design document and survey instruments for approval by IDP.
5. Conduct a listing of eligible households in sampled villages and choose the final household sample.
6. Conduct baseline, and endline survey collection.
7. Clean and analyze data and submit data sets and STATA code used for data processing and analysis.
8. Prepare baseline report with descriptive statistics and prove that variables representing pre-intervention outcomes, determinants of outcomes and program participation are balanced between control and treatment units to prove that the control units are a valid counterfactual. Prepare endline report addressing the scope items above.
9. Ensure all quality measures such as training manual, training and testing and accompaniment, data scrutiny and monitoring visits.

Deliverables for Part A of the Assignment

1. Inception report.
2. Detailed scope and design document and sample.
3. Survey instruments in CAPI.
4. Data collection plan and quality assurance protocols for each round of data collection including training guide and quality assurance/control and supervision plan for the data collection monitoring.
5. Cleaned data sets, with data quality report and code.
6. Baseline and endline reports.

3.2 Part B: Mini evaluation of matching grant and irrigation components

Scope of Services for Part B of the Assignment

The mini evaluation will include baseline and endline surveys. The consultant is to do the following:

1. Scope of the mini evaluation
    a. This mini evaluation will compare "treatment" households that receive a Matching Grant for investing in irrigation plus the remaining suite of production and value chain interventions with "control" households that receive only the remaining suite of production and value chain interventions.
    b. Measure the causal impact of matching grant an irrigation on key outcomes including agricultural water productivity of farmer beneficiaries, net farmer household income, farm production, shift in crop selection, cropping intensity, net irrigated area, and other related indicators. The evaluation design will include randomized assignment of treatment (explained in the methods section below) and an econometrics based comparison between treatment and control units.
    c. Assess suggestive reasons for the attainment or non-attainment of the outcomes.
    d. Discuss with IDP to refine and add other evaluation questions of interest.
2. Prepare a detailed design document including sampling design and size, methodology to identify treatment and control units, method of econometric analysis, survey questionnaires
3. Prepare computer-assisted personal interviewing (CAPI) questionnaires with validity checks for internal consistency, skip patterns, response range checks and interviewer guidance, translate into local language and pilot test the instruments.
4. Conduct initial listing, and then the baseline, and endline survey data collection.
    a. Prepare a detailed plan for the data collection, including quality assurance measures, resource allocation and workplan
    b. Conduct high quality data collection by preparing a training guide and using this guide to train enumerators, supervisors and field managers on the questionnaires, conduct mock and field pilot tests, supervise the enumerators through accompaniments, data range and validation checks and 10% back checks.
    c. Develop jointly data transmission and storage protocols for sharing with PMU.
5. Clean, process and analyze the data set using STATA statistical analysis software.
6. Prepare baseline report with descriptive statistics and balance tests of variables between control and treatment units. Prepare endline report answering the scope items above.

Method for Part B of the Assignment

This mini evaluation is being conducted to compare "treatment" households that receive a Matching Grant for investing in irrigation plus the remaining suite of production and value chain interventions with "control" households that receive only the remaining suite of production and value chain interventions. This is being done because: (a) The program evaluation design in Part A has technical limitations. (b) the irrigation component is expected to produce substantial impact on project participants' outcomes.

The identification strategy is as follows. Based on the GPRMPs, in all or most of the GPs, selected farmers are expected to be offered irrigation. Eligible and technically qualified farmer project participants in all 428 GPs will be invited to submit applications to apply for a matching grant intended to subsidize their investments into availing irrigation facilities offered by the project. Due to the limited project budget per GP, it is anticipated that there will be substantially more qualified and eligible applicants than can be approved. Additionally there are a number of other interventions in inputs and knowledge transfer on improved farming and livestock production practices, value chain and other services, that are either universal or will be offered to large numbers of eligible farmers. Matching Grant and irrigation will be offered twice in a year and seasonality dependent respectively

The consultant will work in close coordination with the state and district project management units to identify sample GPs which have the highest potential for excess demand for irrigation, and collate all matching grant applications approved by the project teams and randomly assign some (as per the target defined for that GP based on budget availability) to receive the matching grant and irrigation. These will form the "treatment group". The rejected applicants will form the control group. They along with the treatment group are potentially equally eligible to receive the remaining project interventions. The consultant will provide technical guidance to the selection process for both control and treatment groups and recommendations for determining between individual applications accordingly, but responsibility for the final decision will rests with the project in line with the procedures set out in the Matching Grant Manual.

The control and treated project participant households will then be administered a baseline survey similar to that in Part A though at a different time. An endline survey will be administered along with that in Part A.

Sample size

The total number of households to be surveyed at baseline is 2004 and 1884 at endline after accounting for respondent attrition. They will be sampled from 100 GPs with 20 households sampled per GP. These 100 GPs will be spread across 428 selected GPs of 32 Development Blocks of the 10 districts of Himachal Pradesh. It is assumed that there may be 10 extra technically qualified and eligible applicants per GP who will be rejected for the Matching Grant over and above the planned target of around 50 applicants that will be approved per GP.

Assumptions for the sample size calculations are: Outcome: household income, take-up rate of program participation among sampled households: 90%; Baseline to endline correlation:

0.2; MDE: 20%; Mean untrimmed HP rural household income from IHDS-II: Rs.145983; Std. dev. of income: Rs. 160875; Respondent attrition from baseline to endline: 6%;

Tasks for Part B of the Assignment

1. Conduct detailed requirements gathering workshop with IDP to document a refined set of specific requirements.
2. Prepare an inception plan with a detailed work plan.
3. Visit the field and speak to PMU and 2 district units, conduct qualitative interviews with project staff, beneficiaries and other stakeholders to understand the project and to inform the instruments to be developed.
4. Then develop a detailed design document and survey instruments for approval by IDP.
5. Carefully coordinate with IDP teams and identify 100 GPs for this mini evaluation. Coordinate with IDP to collect and digitize applications that are technically qualified and eligible and randomly assign 10 per GP to control. Record these sample households and ensure adherence to randomization protocols in future.
6. Conduct baseline, and end line survey collection.
7. Clean and analyze data and submit data sets and STATA code used for data processing and analysis.
8. Prepare baseline report with descriptive statistics and prove that key variables are balanced between control and treatment units. Prepare endline report addressing the scope items above.
9. Ensure all quality measures such as training manual, training and testing and accompaniment, data scrutiny and monitoring visits.

Deliverables for Part B of the Assignment

1. Inception report.
2. Detailed scope and design document and sample.
3. Survey instruments in CAPI.
4. Data collection plan and quality assurance protocols for each round of data collection including training guide and quality assurance/control and supervision plan for the data collection monitoring.
5. Cleaned data sets, with data quality report and code.
6. Baseline and end line reports.

a. Part C : Concurrent Evaluation

Scope of Services for Part C of the Assignment

Biannual surveys

Conduct biannual (twice a year) farmer surveys and interviews with other stakeholders to measure selected output, intermediate outcome and satisfaction indicators based on the interventions that have been implemented by the project in the time preceding a particular survey round. The objective is to assess if intermediate indicators are progressing well to ensure achievement of the final outcomes of water use, productivity, income and conservation intended by the project. There will be a total of 5 rounds 1 per year in 2022, and 2 per year in 2023 and 2024.

In each of the five rounds the following will be done:

1. Identify indicators and questions of interest by using the Theory of Change, the interventions that have been completed and through discussions with the project teams and the World Bank (WB).
2. Design a sampling plan to identify a set of farmer beneficiaries such that they are representative of the project's interventions in each round.
3. Design a survey instrument to measure the above indicators.
4. Collect data and conduct descriptive analysis of the indicators.
5. Follow up with qualitative interviews with farmers, project staff, community, GP and other stakeholders to understand the reasons for high or low values of the indicators measured and accordingly present actionable recommendations for the project to consider.
6. Prepare a report and make a presentation to IDP and WB. The performance of the consultant firm will be gauged by the number of recommendations implemented by the project after each round.

Thematic studies

In 2025, the concurrent evaluation will produce four reports comprising four separate and short 15 page thematic study reports on (i) Sustainability assessment of the interventions (ii) The manner and extent to which the project has specifically helped women participants (iii) The manner an extent to which the project has been inclusive (iv) Another related topic that will be decided based on project realities.

Methods for Part C of the Assignment

The sample will be representative of the participants and the interventions that have been conducted. It is expected that 300 farmers will be interviewed in each of the five biannual rounds comprising 10 farmers stratified by intervention type and socio-economic category per village covering 30 villages in each round. This sample size is computed based on responses to yes/no questions, assuming ICC of 0.05 for a margin of error of 7.4%.

The specific indicators will be based on key links in the theory of change such as on the awareness of project details by beneficiaries, their extent of participation and satisfaction with the processes, inclusiveness and other perceptions, receipt and usage of project outputs, feedback on quality of services, change in knowledge, attitudes and adoption of recommended institutional and farming practices, self-reported benefits.

Qualitative interviews with relevant project stakeholders will be done to arrive at reasons for the performance measured in the farmer surveys.

For thematic studies, FGDs and Key Informant Interviews are expected to be used, further augmented by the last biannual survey and the endline impact survey data.

Tasks for Part C of the Assignment

In each of 5 biannual rounds:

1. Discuss with project teams and prepare a list of indicators to measure and a sampling plan.
2. Prepare questionnaires, test them, translate in local language in CAPI format and institute and follow other quality assurance (QA) processes as in the impact evaluation section.
3. Conduct interviews.
4. Submit draft and final reports.
5. Make a presentation on each report.

Deliverables for Part C of the Assignment

Five rounds of surveys will be conducted, in 2022, 2023 and 2024. In each round the following deliverables are to be produced. Hence the following deliverables will be repeated five times.

1. Set of indicators and questions of interest.
2. Sampling design.
3. Questionnaires in CAPI format and qualitative interview guides for qualitative interviews.
4. QA, staffing and field workplan.
5. Data collected in STATA format.
6. Draft and final reports and presentation.

For the final concurrent evaluation round in 2025, a single report comprising of 4 separate, short 15-page thematic study reports on:

1. Sustainability assessment of the interventions

2. The manner and extent to which the project has specifically helped women participants
3. The manner an extent to which the project has been inclusive
4. One more topic that will determined in due course

7. Team Composition and Qualification Requirements for the Key Experts (and any other requirements which will be used for evaluating the Key Experts under Data Sheet 21.1 of the ITC)

IDP will assess the demonstrated experience and capacity of interested consulting firms applying for this assignment. The assignment requires a firm with experience/background in [i] carrying out rigorous M and E or similar assignments; [ii] designing experimental and quasi-experimental impact evaluation designs; [iii] experience of developing community based monitoring systems and tools development in agriculture, watersheds or livelihoods sectors; and [iv] supervise large household surveys covering around 5,000 households of Government or any other externally-aided projects, etc.

The selected firm will be expected to deploy sufficient amount of manpower required to successfully deliver the tasks. An indicative manpower requirement for the assignment of entire 36 months must include key and non-key experts of suitable qualifications and experience for the key positions tabulated below.

S. No.	Key Position and Indicative Role	Nos.	Minimum Qualification and Indicative Professional Experience Desired	Indicative Estimated Person Months
K1	Team Leader Lead the assignment; participate in meetings with client Take overall responsibility for requirements, timely completion of deliverables and quality	1	At least 8 years of total experience in managing impact evaluations Experience of leading at least 5 previous similar evaluations At least one prior evaluation of a watersheds project At least one prior evaluation of a farm livelihoods project At least one prior evaluation of a minor irrigation project Local language skills is required Master's degree in agriculture and socio-economics related discipline Previous experience in conducting evaluations in Himachal Pradesh is preferred Previous experience in collecting farmer level income data of sample	21 months 90% at home base and 10% in field or client offices

S. No.	Key Position and Indicative Role	Nos.	Minimum Qualification and Indicative Professional Experience Desired	Indicative Estimated Person Months
			size more than 4000	
K2	Evaluation specialist Design, analysis and report writing of impact evaluation baseline and endline reports. Co author thematic studies and contribute to process monitoring design.	1	At least 5 years of experience in design and analysis of causal impact evaluations using quasi-experimental methods. Demonstrated experience in sample size determination, econometric analysis using STATA and report writing as author in at least 3 evaluations in rural development. Master's degree in Economics/ Agriculture Economics/Agriculture Statistics/Statistics or related discipline. Evaluation experience in at least 2 projects in watersheds, minor irrigation or agriculture.	18 months 80-90% at home base and 10%-20% in field or client offices
K3	Analysts Prepare survey instruments, supervise data collection, process and analyse data, report writing, conduct qualitative interviews	3	At least 3 years of experience in supporting data collection through instrument development, field monitoring and data analysis in a program evaluation. At least 3 projects experience in supporting data collection through instrument development, field monitoring and data analysis in a program evaluation. Masters degree in a social field Local language skills is required Preferably at least 1 prior project in a rural livelihoods project.	36 months per Analyst 90% in field or client offices
K4	Watersheds and Irrigation Expert Participate in client meetings, provide domain knowledge to rest of team in evaluation and questionnaire design.	1	At least 5 years of experience in implementing or studying watersheds and rural livelihoods projects. Master's degree in Watershed Management/Hydrology/Agriculture Engineering/ME/M.Tech in Civil Engineering or related discipline.	3 months 80% in home base and remaining at PMU and field.
K5	Data Collection	1	At least 5 years of total experience	36 months

S. No.	Key Position and Indicative Role	Nos.	Minimum Qualification and Indicative Professional Experience Desired	Indicative Estimated Person Months
	Manager Lead and supervise all survey data collection in impact and concurrent evaluation including field team management, quality, training and translation of instruments.		in managing rural socio economic surveys Managed at least 3 surveys of sample size more than 4000 Local language skills is required Master's degree in Computer Science/Computer Engineering/Economics/ Agriculture Statistics/Statistics or related discipline.	90% at districts and PMU
K6	Concurrent Evaluation Leader Lead the concurrent evaluations; lead requirements gathering, design of each round, supervise data collection, analysis, report writing and presentation.	1	At least 8 years of total experience in concurrent evaluation or process monitoring of watersheds and farming projects. Experience of leading at least 5 previous concurrent evaluations At least one prior evaluation of a watersheds project At least one prior evaluation of a farm livelihoods project At least one prior evaluation of a minor irrigation project Local language skills is required Master's degree in agriculture and socio-economics related discipline.	28 months 90% located at PMU with travel to districts
NK1	Field Investigator	20	Experience of field data collection in similar nature assignment. A local language skill is required. Master's degree in Economics/Agriculture economics or related discipline	36 months per Field Investigator
NK2	Field data collection supervisors	4	At least 3 years of total experience in managing rural socio economic surveys Supervised at least 2 surveys of sample size more than 4000 Local language skills is required	36 months per supervisor

S. No.	Key Position and Indicative Role	Nos.	Minimum Qualification and Indicative Professional Experience Desired	Indicative Estimated Person Months
			Master's degree in Economics/Agriculture Economics/Statistics or related discipline	

8. Reporting Requirements and Time Schedule for Deliverables

	Deliverable	No. of hard copies	Date of submission	Amount to be paid Upon Acceptance of Deliverable by the Client
1	Contract Signature		T	10 %
2	Inception report acceptable to the Client Detailed design including sampling and matching approach; sample villages for evaluation.	5	T+ 2 months	10%
3	Baseline survey work plan, and QA plan, instruments, training materials Questionnaire for census survey. KPI, RF indicators and Theory of Change refinement		T + 3 months	5%
4	Finalized baseline report and code and data set on census and baseline surveys	5	T + 6 months	10%
5	Concurrent evaluation report 1	5	T + 0.5 year	5%
6	Concurrent evaluation report 2	5	T + 1 year	5%
7	Concurrent evaluation report 3	5	T + 1.5 year	5%
8	Concurrent evaluation report 4	5	T + 2 year	5%
9	Concurrent evaluation report 5	5	T + 2.5 year	5%
10	Mini evaluation design document and sample	2	T + 1 year	5%
11	Mini evaluation baseline survey data and report	5	T + 1 year	5%
12	Mini evaluation endline survey	5	T + 3 years	15%

	data and report			
13	Endline survey work plan, supervision/QA plan, instruments, training materials Cleaned data set, code and Endline report (expected to be undertaken towards the end of the project period) 4 Thematic Study Reports	5	T + 3 years	15%

It may be noted that payments shall be released upon acceptance of deliverable and up to the satisfaction of the competent authority at PMU (CPD/ED) by the Client. Should there be a need to improve/re-visit the report/deliverable, the same shall be communicated to the selected consultant firm within 15 days of submission by the Client, based on which this shall be updated/revised/amended as required.

It may further be noted that the Project shall be the owner of all the reports, data, and materials pertaining to these TOR. The consultant will have no right of claim to the assignment or its outputs. Any background documents, including statistics and data obtained by the consultant during the execution of this ToR, shall be transferred to PMU upon completion of work. All data collation and storage shall be Compliant with relevant privacy and data protection laws of India and procedures of the World Bank. The Consultant shall not use or replicate any report or the contents of the documents without the explicit prior written consent of the PMU.

9. Client's Input and Counterpart Personnel

(a) *Services, facilities and property to be made available to the Consultant by the Client/Professional and support counterpart personnel to be assigned by the Client to the Consultant's team*:

These are as below:

- The PMU will assign an M&E Specialist with time dedicated as a focal point to coordinate with the selected consultant firm for this assignment. It will designate domain experts from the PMU to explain the project interventions to the firm, review survey instruments and guide the evaluation design.
- The PMU shall guide the consultants through discussions to help them understand the project and interventions, arrange for field visits, facilitate interviews with program participants and staff, make available access to MIS data on outreach and other project intervention and progress documents. The PMU shall appoint a steering committee to guide the firm in identifying specific areas of enquiry in the biannual concurrent evaluation rounds and to accept insights gleaned in each round and the actionable

recommendations made by the firm.(PMUs role will be of a facilitator to M&E activities undertaken by the consultant)

- The PMU will provide relevant documents and organize regular feedback sessions where interaction between the concerned officials and the consultant will be undertaken. All project documents, which are not classified documents, will be made available to the selected consultant firm for the purpose of assignment.
- PMU will facilitate cooperation from the concerned departments on prior intimation from the consultant. Access to relevant official documents will also be facilitated throughout the period of contract.(However the collection of the requisite data is the sole responsibility of the consultant)

10. Composition of Review Committee to Monitor Consultants Work

The consultant will work as part of the PMU under the supervision and guidance of a Chief Project Director (CPD), and the Executive Director (ED), IDP, Solan for the attainment of project's goals. The consultant will report to the ED, IDP for day to day management/progress. The Chief Project Director (CPD) or authority designated by the CPD shall be responsible for review and monitoring the progress of the assignment.

The performance of the selected consultant firm would be judged on the basis of work done against the agreed work plan,. The selected consultant firm will generate one short summary report of its key achievements at the end of each year under contract. A review committee consisting of thematic specialists from within and outside IDP, as deemed appropriate, shall undertake a review of the work produced by the selected consultant firm from time to time. A review committee has been constituted by the CPD to monitor the progress and interact with the consultant under the Chairmanship of the Chief Project Director (CPD)/Executive Director, which is as follows:

I.	Dy. Director (Admin.), IDP, Solan	Member
II.	Dy. Controller (F&A.), IDP, Solan	Member
III.	Dy. Director (Planning), IDP, Solan	Member
IV.	Executive Engineer, IDP, Solan	Member
V.	Subject Matter Specialist (Agriculture), IDP	Member
VI.	Subject Matter Specialist (AH), IDP	Member
VII.	Subject Matter Specialist (Social), IDP	Member
VIII.	Subject Matter Specialist (Environment), IDP	Member
IX.	Subject Matter Specialist (M&E), IDP	Member

Annex A

Key Interventions/activities

A	**Component 1-Sustainable Land and Water Resource Management**
A1.1	**Gram Panchayat Resource Management Plans (Preparation of GPRMP)**
a)	Workshops etc
A1.2	**Forestry and Land Management**
A1.2.1	Nursery Development (Normal)
	Model Nursery
A1.2.2(i)	Nursery Seedling Production
(ii)	Maintenance of Nursery (March to June)
(iii)	Maintenance of Nursery (July to March)
A1.2.2(iii)	Raising of Seedling (Agri, Silvipastoral)
A1.2.2(iv)	Purchase from SHG/Private Nursery
A1.2.3	**Forestry Planting and Fencing (New Plantations)**
a)	Along Drainage Line (1100 plants with. 80 ballies/ Fence Posts/ha)
b)	Along Drainage Line (1100 plants with. 370 ballies/ Fence Posts/ha)
c)	Re-afforestation in open Forest (800 plants per ha).
d)	Enrichment (400 plants /ha) Medium Density Forest
A1.2.3(i)	**Forestry Planting and Fencing (Maintt. 1st Year)**
a)	Along Drainage Line (1100 plants per ha.)
b)	Re-afforestation (in open Forest 800) plants per ha.
c)	Enrichment (400 plants /ha) Medium Density Forest
A1.2.4	**Soil and Water Conservation**
a)	Contour Trenching in plantation area
b)	Contour Trenching out side plantation area

c)	Grass Seed sowing on burm of Contour Trenches (Plantation+Non Plantation area)
d)	Planting of grass tufts along Drainage Line
A1.2.5	**Drainage Line Treatment**
a)	Vegetative Check Barriers
b)	Dry Stone Check Barriers
c)	Crate Wire Check Barriers
d)	Cement Concrete Check Barriers
A1.2.7	**Spring Development**
a)	Renovation of Water Bauries (on the basis of actual estimate)
b)	Plantation around the Water bauries 1/2 ha per ha
A1.2.8	**Management of Invasive Species (Lantana etc)(New)**
i)	Clearing of Lantana infested upto 25%
ii)	Clearing of Lantana infested upto 25% to 50%
iii)	Clearing of Lantana infested upto 50% to 75%
iv)	Clearing of Lantana infested upto 75% to 100%
A1.2.8 (i)	**Management of Invasive Species (Lantana etc)(Maintt. 1st Year)**
i)	Clearing of Lantana infested upto 25% 1st. year
ii)	Clearing of Lantana infested upto 25% to 50% 1st. year
iii)	Clearing of Lantana infested upto 50% to 75% 1st year
iv)	Clearing of Lantana infested upto 75% to 100% 1st year
A1.2.8(ii)	**Management of Invasive Species (Lantana etc)(Maintt. 2nd Year)**
i)	Clearing of Lantana infested upto 25% .2nd. year
ii)	Clearing of Lantana infested upto 25% to 50% 2nd. year
iii)	Clearing of Lantana infested upto 50% to 75% 2nd year
iv)	Clearing of Lantana infested upto 75% to 100% 2nd year
A1.2.9	**Forest Seed Management**

i)	Inventrary of plus trees
ii)	Seed Bank
iii)	Seed Testing Lab
iv)	Procurement of Seed
A1.3	**Primary Water Harvesting & Storage**
a)	Ponds (Mannual Excavation)
b)	Ponds (Mechanical Excavation)
c)	Renovation of old Community Ponds
d)	CC Check Dams
e)	Earthen Check Dams
f)	Masonary Check Dams
g)	Sub Surface Dykes (Mackhowal)
h)	CC Water Harvesting Structure/CC Gravity Check Dams
i)	Large Storage Structure
	Intake Structures
i)	Sump Wells Tank
ii)	Community Roof Rain Water Harvesting Tanks
A1.4	Water Monitoring and modeling
A1.5	Adoption of best practices in NRM
A1.6	Fire danger rating system consultancy
A1.9	**Fire Management and awareness**
i)	Community Incentives
ii)	Mass awareness and education programme
B	
B1	**Sub Component 2A Improved Water Productivity**
B1.1	Promotion of Water User Groups (WUGs)

B1.2	**Procurement of Primary Water Infrastructure-Following the plan in Comp-1.**
i)	G.I. Pipes
ii)	HDPE Pipes
iii)	Pumps
B1.3	**Procurement of Secondary Water Infrastructure.**
i)	Tanks for gravity Schemes
ii)	Tanks for lift schemes
iii)	Renovation of old Community Tanks (as identified under GPRM preparation Process)
iv)	**Roof Rain-Water Harvesting Individual(To be financed under MGS)**
	Vulnerable
	Others
v)	**Roof Rain-Water Harvesting Community(To be financed under MGS)**
	Vulnerable
	Others
vi)	Lining of traditional irrigation Channels
B1.4	High Efficiency Micro Irrigation (To be financed under MGS)
B2.				
B2.1				
I)	**Diversifications**
a)	**Rabi**
i)	Wheat (Demonstration under Rainfed Conditions
b)	**Kharif**
i)	Maize (Demonstration under Rain-fed Conditions
II)	**High Value Crops**
a)	**Rabi**
i)	Mash (Demonstration under Rainfed Conditions
b)	**Kharif**
i)	Rajmash (Demonstration under Rainfed Conditions

ii)	Cucumber
iii)	Bittergourd (Karela)
iv)	Bottlegourd
III)	**Vegetables and Spices**
a)	**Rabi**
i)	Cauliflower
ii)	Cabbage
iii)	Broccoli
iv)	Garlic
v)	Peas
b)	**Kharif**
i)	Tomato
ii)	Capsicum
ii)	Chillies
iii)	Gingeer
iv)	Turmeric
v)	French Beans
vi)	Elephant foot yam (Jimikand)
IV)	Medicinal Aromatic Plants & Floriculture
V)	Pre & Post Harvest Technology
B2.1.1	
i)	Production (Crops/horticulture) and other HY varieties
ii)	Improved agronomic practices
iii)	Pest Management
iv)	Soil Fertility Management
v)	Agro-bio diversity (Conservation of genes and traditional crops)
vi)	Vermi Compositing
vii	
a)i	**Rabi**
	Sorghum (Chari)
	Millet (Bajra)

	Barseem
ii)	**Kharif**
	Maize
	Oats (Jai)
b)	**Chaff Cutters**
	Vulnerable
	Others
c)	**Crop Residue Treatment (Demonstration)**
d)	**Drum Silage Technique (Demonstration)**
e)	**Manger Construction**
	Vulnerable
	Others
f)	**Hydroponics Unit**
	Vulnerable
	Others
viii)	**Zero Based National Farming (indigenous Cows)**
	Vulnerable
	Others
ix)	**Climate Resilient Indigenous Live Stock Breeds**
a)	**Small Ruminants (Got Unit 2+1)**
	Vulnerable
	Others
b)	**Large Ruminants**
	Vulnerable
	Others
c)	**Poultry Birds (Unit of 25 birds)**
	Vulnerable
	Others
d)	Veterinary Awareness Camps
e)	Live stock shows

B2.1.2					
i)	Community Mobilization				
ii)	Compressive need assessment and FFS establishment (Two day event) package of activities				
iii)	Cross learning visits (Inter FFS)				
B2.1.3					
i)	On -station studies on special topics, climate smart technologies, Chemical and antibiotic residue management ,establishing scientific basis of traditional bio pesticides and fertilizer				
ii)	Validation Trail in FFS				
iii)	Varietal Testing (Crop and Vegetables)				
iv)	Agronomic Practices				
v)	Soil Fertility Management				
vi)	Forage Varieties/Nurseries				
vii)	Distribution of improved seed kits including forage seeds for wider adoption				
B3	**Supporting Value Chain Development**				
B3.1	**Strengthening of Existing /Formation of Producer Groups and Capacity Building**				
i)	Organizing /Strengthning existing producer groups, Self help marketing group, cooperatives and private sectors in crops, Vegetables and livestock businesses.				
ii)	Training needs assessment of target beneficiaries by subsector and type of organization (Cooperative and farmer groups)				
iii)	Development of master trainers agri. business (ToT) for local facilators				
iv)	Providing one week training on entrepreneurship development for PGs/FPOs/micro and small enterprises(business plan, financial management including book keeping and marketing etc.)				
v)	Thematic round table stakeholders meeting/interaction engaging micro and small entrepreneurs and procedure groups (One day) through farmer organization/ cooperatives coalition and synergies with other projects (HPHDPE/SHIVA etc)				
vi)	Multi Stake holders, cluster workshop along specific value chain of specific commodities				
B3.2.					
B3.2.1	**Provision of Small matching grants in individuals/groups/GPs**				
i)	**Provision of small matching grant s to individuals**				
	Vulnerable				

	Others
ii)	**Provision of small grant**
	Vulnerable
	Others
a)	**Community A (Individual head)**
	Vulnerable
	Others
b)	**Community A (Individual head)**
	Vulnerable
	Others
c)	**Community A (Individual head)**
	Vulnerable
	Others
iv)	**Provision of small grant for GPs to undertake Operation and Maintenance of community SLWN infrastructure (OMF-Section 3..7.11 of PIP)**
	Vulnerable
	Others
v)	Orientation session for generating awareness on MG under the project
vi)	Monitoring of small projects implemented in the project districts
B3.3	
i)	Identification of areas (Based on value chain /Economic feasibility Studies)
ii)	Consultation Workshops (Planning and Implementation Stages)
iii)	Construction of Foot Bridges
iv)	Construction of Rope ways
B3.4	
a)	Training & Exposure Visit
b)	Provision of medicines to the Nomads of project area (with A.H. Department)
c)	Sheep Dip Tank

d)	**Equipments Procurement- Cost sharing as per the /Grant Manual**
d.1	Tarpaulins
d.2	Drenching Guns
d.3	Castrators
d.4	Sheep Shearing Unit
d.5	Light weight tent with one sleeping bag & one mat
d.6	Rucksack bag.
d.7	Solar Mobile Charger
d.8	Others
e)	Emergency medical kit for Flock Management
f)	**Procurement/Provision of genetically improved animals**
f1	Buffalo Bull for breeding
f2	Rams for breeding
f3	Bucks for breeding
g)	Livelihood development of the transhumant communities (as specified in GPRMP)
B3.5	Farmer Field School
C	**COMPONENT -3-Institutional Capacity Building for Integrated Watershed Management**
C3.1	Knowledge Management and Communications
C3.2	Printing and Publication
C3.3	Training and Capacity Building
i)	Training to skill enhancement for off farm employment such as repair and maintenance of tool and equipment, agrovet, AI services, fresh vegetables etc (Operational head)
ii)	Orientation training o ESF to beneficiaries of the small grant and other project activities (3days)
iii)	Inter GPs visit and experience sharing among producer group/cooperative members
iv)	Preparation of guidelines, Mannuals and learning material for production, Livelihood Enhancement in key commodities

v)	Cluster Level review meeting (Trimester)
vi)	Organise annual workshops for knowledge sharing,dissmination good practices and experiences including findings of the annual survey
C3.4	Project Outreach and Collaboration
C3.5	Interactive Extension/Communication Campaigns
i)	Organization of domestic campaigns
ii)	Organization of Weekly shows
iii)	Organization of Workshops for information dissemination
iv)	Procurement of IEC material
v)	Procurement of services relevant charts and brouchers
D	COMPONENT -4- Project Management

Annex B

Results Framework

Project Development Objective: To improve upstream watershed management and increase agricultural water productivity in selected Gram Panchayats in Himachal Pradesh.

Project Development Objective (PDO) Indicators

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
To improve upstream watershed management in selected Gram Panchayats (GPs) in Himachal Pradesh.							
Land area under sustainable landscape management practices (CRI, Hectare(Ha))		0.00	5,000.00	10,000.00	10,000.00	11,000.00	12,000.00
Description: The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land. **Frequency/Data Source/Methodology/Responsibility for Data Collection:** Continuous. PMIS. Land survey using GPS geo-fencing (Linked to GIS files). DPO and aggregated at PMU. Additionally ground-truthing in midterm and endterm evaluation by M&E Agency.							
Area managed for improved soil (Hectare(Ha))		0.00	0.00	200.00	500.00	1,000.00	1,200.00
Description: This is a supplemental indicator that will measure the area under all soil conservation investments, including physical investments (check dams, contour bunds, etc.) and improved farming practices that increase soil quality and/or reduce erosion. **Frequency/Data Source/Methodology/Responsibility for Data Collection:** Continuous. PMIS. Land survey using GPS geo-fencing (Linked to GIS files). DPO and aggregated at PMU. Additionally ground-truthing in midterm and endterm evaluation by M&E Agency.							
Number of reforms recommended by the institutional assessments that are implemented (Number)		0.00	0.00	0.00	1.00	3.00	5.00
Description: This indicator will measure progress towards institutional and policy reform based on the completion of reforms identified in the Forest Department Functional Review and the Integrated Watershed Management Institutional Review. These reforms may include inter alia the (a) development and implementation of a comprehensive HPFD IT and knowledge strategy that integrates all relevant applications on a common geospatial platform and allows for watershed-level planning; (b) development and implementation of a comprehensive HPFD M&E system; (c) establishment of a centralized staff performance monitoring system; and (d) development of regulatory and management standards for pastures. **Frequency/Data Source/Methodology/Responsibility for Data Collection:** Continuous. PMIS. As reported by PMU/HPFD.							
To increase agricultural water productivity in selected Gram Panchayats (GPs) in Himachal Pradesh.							
New farm area brought under higher efficiency irrigation		0.00	0.00	50.00	100.00	150.00	200.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
through project support in targeted GPs (Hectare(Ha))							
Description: This is an outcome-level PDO indicator that will measure the new farm area brought under higher efficiency irrigation systems in the GPs targeted by the project. Higher efficiency irrigation systems include drip, sprinkler, and other water storage, distribution, and delivery systems with efficiencies higher than traditional flood irrigation. This indicator measures the short-term (2 years) behavior-change outcome of greater adoption of higher efficiency irrigation systems, which will be influenced by project investments in improved extension and partial funding for group and household-level water infrastructure. In the medium term (by end of project, EOP), the combined adoption of these improved irrigation systems and higher-value crops is expected to lead to improved agricultural water productivity, and in the longer-term (beyond EOP) these outcomes are expected to lead to improved farmer incomes and greater climate resilience. **Frequency/Data Source/Methodology/Responsibility for Data Collection:**Continuous. PMIS. Self-reported farm land data by farmers. APO and AEO will collect data; DPO monitors. Groundtruthed in mid-term and endline evaluation by M&E Agency.							
Share of participating farmers adopting climate smart agriculture practices (Percentage)		0.00	0.00	15.00	30.00	40.00	50.00
Description: This is a medium-term outcome-level indicator that will measure behavior change by farmers project participants in terms of sufficient adoption of recommended CSA practices. This is driven by project investments in improved extension and access to finance for inputs required to adopt CSA technologies. "Project participants" is defined as all farmers that are provided with any Component 2 activity, including trainings, demonstrations, inputs, marketing, and grants. In the longer-term, it is expected that adoption of CSA practices will lead to increased agricultural water productivity, increased carbon sequestration, and increased climate resilience. **Frequency/Data Source/Methodology/Responsibility for Data Collection:**1 per rabi and 1 kharif in each year. PMIS. Mid-term and endline and possibly process monitoring. Sample basis. APO staff. Process monitoring agency is preferable. Midterm and endline evaluation by M&E Agency.							
Share of participating farmers adopting climate smart practices that are female (Percentage)		0.00	0.00	10.00	15.00	20.00	30.00
Frequency/Data Source/Methodology/Responsibility for Data Collection:1 per rabi and 1 kharif in each year. PMIS. Mid-term and endline and possibly process monitoring. Sample basis. APO staff. Process monitoring agency is preferable. Midterm and endline evaluation by M&E Agency.							
Share of participating farmers who give a rating of “Satisfied” or above on process and realized benefits of project interventions (Percentage)		0.00	0.00	30.00	50.00	70.00	75.00
Description: This is a citizen engagement indicator to measure beneficiaries' satisfaction with the project’s interventions. This may be composite indicator derived from several ratings of inclusiveness and participation. **Frequency/Data Source/Methodology/Responsibility for Data Collection:**Mid-term and endline. Mid-term and endline surveys. Sample survey. M&E Agency.							
Share of participating female farmers who give a rating of “Satisfied” or above on		0.00	0.00	30.00	50.00	70.00	75.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
process and realized benefits of project interventions (Percentage)							
Description: This indicator will measure the level of satisfaction with the project of female beneficiaries. This may be composite indicator derived from several ratings of inclusiveness and participation **Frequency/Data Source/Methodology/Responsibility for Data Collection:**Mid-term and endline. Mid-term and endline surveys. Sample survey. M&E Agency.							

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Component 1. Sustainable Land and Water Resource Management							
Survival rate of seedlings planted with project support (Percentage)		0.00	60.00	65.00	70.00	80.00	80.00
Description: Survival rate of seedlings relates to the PDO objective to improve management of upstream forests and pasture areas in accordance with resource management plans because good seedling survival is a prerequisite for successful plantations. This is an outcome-level indicator that stems from project investments in improved nursery development, training, and grazing/fire management in plantations under Component 1 and capacity building for the HPFD and communities under Component 3. This indicator measures a short-term outcome directly attributable to the project that will lead to longer-term project impacts, including improved forest cover and carbon sequestration. **Frequency/Data Source/Methodology/Responsibility for Data Collection:**Annually in March. PMIS. Census in each round; denominator is the number of plants planted in that scheme and will get replanted. APO.							
Percentage of women signatories engaged in approving GP-RMPs (Percentage)		0.00	20.00	30.00	30.00	30.00	30.00
Description: This indicator will measure the closure of a gender gap related to women's roles as planners and decision-makers related to natural resources in their communities. Percentage of women signatories will be monitored for every targeted GP."GP-RMP" refers to the Gram Panchayat Resource Management Plan, which will be the primary planning process used to inform project investments. **Frequency/Data Source/Methodology/Responsibility for Data Collection:**Ongoing for GPRMPs (year 1). PMIS. Extension officers record from GPRMP Gram Sabha minutes. APO/DPO with PMU aggregating.							
Component 2. Improved Agricultural Productivity and Value Addition							
Farmers reached with agricultural assets or services (CRI, Number)		0.00	0.00	8,000.00	12,000.00	18,000.00	20,000.00
Description: This indicator measures the number of farmers who were provided with agricultural assets or services as a result of World Bank project support. "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber, and non-timber forest products. Assets include property, biological assets, and farm and processing equipment. Biological assets may include animal agriculture breeds (e.g., livestock, fisheries) and genetic material of livestock, crops, trees, and shrubs (including fiber and fuel crops). Services include research, extension, training, education, ICTs, inputs (e.g., fertilizers, pesticides, labor), production-related services (e.g., soil testing, animal health/veterinary services), phyto-sanitary and food safety services, agricultural							

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
marketing support services (e.g., price monitoring, export promotion), access to farm and post-harvest machinery and storage facilities, employment, irrigation and drainage, and finance. Farmers are people engaged in agricultural activities or members of an agriculture-related business (disaggregated by men and women) targeted by the project. **Frequency/Data Source/Methodology/Responsibility for Data Collection:**Continuous. PMIS. Outreach by intervention of aggregated numbers per village per output will be recorded at individual level by gender, aggregated number of households. Extension officers of APO, aggregated at DPO and PMU. May be verified by mid-term and end-term evaluation.							
Farmers reached with agricultural assets or services - Female (CRI, Number)		0.00	0.00	1,000.00	3,000.00	4,280.00	4,280.00
Frequency/Data Source/Methodology/Responsibility for Data Collection: Continuous. PMIS. Outreach by intervention of aggregated numbers per village per output will be recorded at individual level by gender, aggregated number of households. Extension officers of APO, aggregated at DPO and PMU. May be verified by mid-term and end-term evaluation.							
Farmers reached with agricultural extension or training – Male (Number)		0.00	0.00	0.00	2,000.00	5,000.00	10,000.00
Frequency/Data Source/Methodology/Responsibility for Data Collection: Continuous. PMIS. Outreach by intervention of aggregated numbers per village per output will be recorded at individual level by gender, aggregated number of households. Extension officers of APO, aggregated at DPO and PMU. May be verified by mid-term and end-term evaluation.							
Farmers reached with agricultural extension or training – Female (Number)		0.00	0.00	0.00	1,000.00	2,000.00	3,000.00
Frequency/Data Source/Methodology/Responsibility for Data Collection: Continuous. PMIS. Outreach by intervention of aggregated numbers per village per output will be recorded at individual level by gender, aggregated number of households. Extension officers of APO, aggregated at DPO and PMU. May be verified by mid-term and end-term evaluation.							
Farmers adopting improved agricultural technology (CRI, Number)		0.00	0.00	1,000.00	3,000.00	5,000.00	10,000.00
Description: This indicator measures the number of farmers (of agricultural products) who have adopted an improved agricultural technology promoted by operations supported by the World Bank. NB: "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber and non-timber forest products. Adoption refers to a change of practice or change in use of a technology that was introduced or promoted by the project. Technology includes a change in practices compared to currently used practices or technologies (seed preparation, planting time, feeding schedule, feeding ingredients, postharvest storage/ processing, etc.). If the project introduces or promotes a technology package in which the benefit depends on the application of the entire package (e.g., a combination of inputs such as a new variety and advice on agronomic practices such as soil preparation, changes in seeding time, fertilizer schedule, plant protection, etc.), this counts as one technology. Farmers are people engaged in farming of agricultural products or members of an agriculture related business (disaggregated by men and women) targeted by the project. **Frequency/Data Source/Methodology/Responsibility for Data Collection:**1 per rabi and 1 per kharif. PMIS and mid-term and endline evaluation survey. Possibly also process monitoring. Sample basis. APO staff. Process monitoring agency preferable. Also mid-term and end-term evaluation M&E Agency.							
Farmers adopting improved agricultural technology - Female (CRI, Number)		0.00	0.00	300.00	1,000.00	2,000.00	3,000.00
Frequency/Data Source/Methodology/Responsibility for Data Collection:1 per rabi and 1 per kharif. PMIS and mid-term and endline evaluation survey. Possibly also process monitoring. Sample basis. APO staff. Process monitoring agency preferable. Also mid-term and end-term evaluation M&E Agency.							
Farmers adopting improved agricultural technology - male (CRI, Number)		0.00	0.00	700.00	2,000.00	5,000.00	7,000.00
Frequency/Data Source/Methodology/Responsibility for Data Collection:1 per rabi and 1 per kharif. PMIS and mid-term and endline evaluation survey. Possibly also process monitoring. Sample							

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
basis. APO staff. Process monitoring agency preferable. Also mid-term and end-term evaluation M&E Agency.							
Area provided with new/improved irrigation or drainage services (CRI, Hectare(Ha))		0.00	0.00	500.00	1,000.00	1,500.00	1,500.00
Description: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). **Frequency/Data Source/Methodology/Responsibility for Data Collection:**Continuous. Self reported farm land data by farmers (census). APO and AEO will collect data; and aggregated DPO and PMU.Groundtruthed in mid-term and endline evaluation.							
Area provided with new irrigation or drainage services (CRI, Hectare(Ha))		0.00	0.00	500.00	1,000.00	1,300.00	1,300.00
Frequency/Data Source/Methodology/Responsibility for Data Collection: Continuous. Self reported farm land data by farmers (census). APO and AEO will collect data; and aggregated DPO and PMU.Groundtruthed in mid-term and endline evaluation.							
Area provided with improved irrigation or drainage services (CRI, Hectare(Ha))		0.00	0.00	50.00	100.00	150.00	200.00
Frequency/Data Source/Methodology/Responsibility for Data Collection: Continuous. Self reported farm land data by farmers (census). APO and AEO will collect data; and aggregated DPO and PMU.Groundtruthed in mid-term and endline evaluation.							
Share of user groups for agriculture extension services with female treasurers (Percentage)		0.00	0.00	0.00	10.00	20.00	30.00
Description: This is a gender indicator to track the closure of a key gender gap related to women's leadership. **Frequency/Data Source/Methodology/Responsibility for Data Collection:** Continuous. PMIS. Inspection of registers (census). APO and AEO will collect data; and aggregated by DPO and PMU.Groundtruthed in mid-term and endline evaluation.							
Component 3. Institutional capacity building for integrated watershed management							
Technical staff of participating line departments trained on integrated watershed management (Number)		0.00	50.00	100.00	150.00	300.00	400.00
Description: This is an output-level indicator measuring the number of technical staff of line departments participating in the project (including project staff) that have been trained by the project. Each person that has participated in any training supported by the project will be counted only once. **Frequency/Data Source/Methodology/Responsibility for Data Collection:**Collected at each training. PMIS. Actual count in training (census). APO and AEO will collect data; and aggregated by DPO and PMU.Groundtruthed in mid-term and endline evaluation.							