

Govt. of Jharkhand
Rural Development Department
Jharkhand State Livelihood Promotion Society
2nd Floor, JSAMB Building, Itki Road, Hehal, Ranchi - 834005, Jharkhand
Phone No. 0651-2951915/2951916
Email – joharjharkhandproc@gmail.com, Website – www.jslps.in

No: JSLPS/1621

Date: 08.07.2022

Proc. Ref. No. : IN-JSLPS-303079-CS-QCBS

REQUEST FOR EXPRESSION OF INTEREST (REOI)
for Consultancy Services for Endline Evaluation Survey under JOHAR Project

Jharkhand State Livelihood Promotion Society invites "Expression of Interest" from the eligible registered consultancy agencies to submit their interest for providing consulting services for "**Endline Evaluation Survey**" under JOHAR Project in Jharkhand.

Interested agencies may submit their "Expression of Interest" in a sealed envelope clearly superscripted as "**Expression of Interest for Endline Evaluation Survey under JOHAR Project**" latest by **15.30 hours on 01st August'2022**. Interested agencies may obtain further information and procedures for submitting "Expression of Interest" by downloading the REOI document from *Procurement* → *Services* section of the official website of JSLPS i.e. www.jslps.in.

Sd/-
Chief Executive Officer
JSLPS

Govt. of Jharkhand
Rural Development Department
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REQUEST FOR EXPRESSION OF INTEREST (REOI)
(CONSULTING SERVICES – AGENCY SELECTION)

Assignment Title: - Consultancy Services for “Endline Evaluation Survey” under JOHAR Project

The project titled **Jharkhand Opportunities for Harnessing Rural Growth (JOHAR)** being implemented by Jharkhand State Livelihood Promotion Society under the aegis of Rural Development Department, Government. of Jharkhand with financing from the World Bank towards the project implementation cost and intends to apply part of the proceeds for hiring of an agency to provide consulting services.

The consulting services (“the Services”) include hiring of an agency for undertaking the **Consultancy Services for Endline Evaluation Survey under JOHAR Project** for a period of 9 months subject to extension of further period based on the requirement of JSLPS and performance of the agency. The details activities are mentioned in the draft Terms of Reference (*Annexure – B*).

Jharkhand State Livelihood Promotion Society (JSLPS), now invites eligible consulting agencies to indicate their interest for providing the services. Interested agencies should provide information demonstrating that they have the required qualifications and relevant experience to perform the services.

The short-listing criteria are as follows.

- a) The agency should have an independent legal existence, registered under the applicable Act. [Submit proof of Registration Certificate, Articles and Memorandum of Association].
- b) The agency should have minimum 3 (three) years of experience in the relevant field of large-scale surveys.
- c) The agency should have an average annual turnover of Rs. Four Crore or more during last three financial years and preferably have a positive net worth. Out of the total turnover, at least Rs. Two Crore should be from similar assignment i.e., large scale surveys. [Relevant documents viz, audited financial statements and a certificate from Chartered Accountant in support of satisfying the criteria should be submitted].
- d) The agency should have prior experience and have successfully completed at least 3 similar assignments since FY 2019-20 in sectors specific to that of the proposed assignment. Experience in Government sector especially related to

externally aided projects shall be preferred. Apart from aforementioned, work experience in Jharkhand in similar type of assignment shall be an added advantage. [Submit proof of Successful Completion].

- e) The agency should have a well-qualified and sufficiently experienced team, in house, or should be in a position to commit about their own network/association.

Interested agencies may submit their application expressing interest in the prescribed Performa annexed herewith [Annexure – A & Annexure – A (1)] in sealed envelope with each page of the application signed by an authorised signatory, including the pages comprising the annexure.

The attention of interested agencies is drawn to paragraph 1.9 of the World Bank's *Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers* (January 2011 revised July 2014) ("Consultant Guidelines"), setting forth the World Bank's policy on conflict of interest. In addition, please refer to the following specific information on conflict of interest related to this assignment: conflict between consulting activities and procurement of goods, works or non-consulting services; conflict among consulting assignments; and relationship with Borrower's staff.

The Consultants may associate with other agencies in the form of a joint venture or a sub consultancy to enhance their qualifications. The submission should clearly indicate the type of association whether a joint venture (JV) or sub consultancy.

A Consultant will be selected in accordance with the Quality & Cost Based Selection (QCBS) method set out in the Consultant Guidelines.

Expressions of interest (in prescribed format) must be delivered in a written form only to the address below by person or through postal/courier services latest by **15.30 hours of 01st August'2022** by super-scribing/marketing the envelope as **"Expression of Interest for Endline Evaluation Survey under JOHAR Project"** at the following address. Please note that EOIs shall be accepted by the aforesaid methods only within the stipulated period of submission.

Address:

The Chief Executive Officer,
Jharkhand State Livelihoods Promotion Society
2nd Floor, JSAMB Building, Itki Road,
Hehal, Ranchi - 834005, Jharkhand
Phone No. 0651-2951915/2951916
Email – joharjharkhandproc@gmail.com

Sd/-
Chief Executive Officer
JSLPS

Annexure-A

Attachment 1: Format for Submission of Information to JSLPS, Ranchi to provide consultancy services for Endline Evaluation Survey under JOHAR Project.

Submission Requirements

A – Consultant Company’s Profile [Maximum 2 Pages]																									
1.	Organizational	<p><i>Provide a brief description of the background and organization of your firm/entity. The brief description should include:</i></p> <ul style="list-style-type: none"> <i>Ownership details</i> <i>Date and place of incorporation of the firm,</i> <i>Objectives of the firm,</i> <i>Availability of appropriate skills among staff.</i> <i>Name, designation, address, mobile no., email-id of contact person authorized for submission of EOI & RFP for this assignment</i> 																							
2.	Financial: (Minimum average annual turnover of Rs. Four Crore during the last three financial years required.	<p><i>Provide the turnover on the basis of the audited accounts of the previous three financial years in Indian Rupees.</i></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 33%; padding: 2px;">2018-19</th> <th style="width: 33%; padding: 2px;">2019-20</th> <th style="width: 33%; padding: 2px;">2020-21</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"></td> <td></td> <td></td> </tr> </tbody> </table>				2018-19	2019-20	2020-21																	
2018-19	2019-20	2020-21																							
B – Consultant Agency’s Experience [Maximum 15-20 pages]																									
1.	<p>Experience of working on government, externally aided, or livelihoods sector projects in India. At least 3 years of experience required. <i>Please provide details of up to 10 such assignments (you may add more rows).</i></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <thead> <tr> <th style="width: 15%; padding: 2px;">Name of Project</th> <th style="width: 25%; padding: 2px;">Services provided</th> <th style="width: 15%; padding: 2px;">Client and Country</th> <th style="width: 15%; padding: 2px;">Duration of Assignment</th> <th style="width: 30%; padding: 2px;">Value of Contract (Rs)</th> </tr> </thead> <tbody> <tr><td style="height: 20px;"></td><td></td><td></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>					Name of Project	Services provided	Client and Country	Duration of Assignment	Value of Contract (Rs)															
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2.	<p>Experience in providing consulting services in the relevant field (Minimum 2 similar nature of assignment:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-left: 20px;"> <thead> <tr> <th style="width: 15%; padding: 2px;">Name of the Client (GoI/Externally Aided Project)</th> <th style="width: 15%; padding: 2px;">Nature of the assignment</th> <th style="width: 15%; padding: 2px;">Location and coverage (entire state, country, etc.)</th> <th style="width: 15%; padding: 2px;">Duration of Assignment (In month)</th> <th style="width: 40%; padding: 2px;">Value of Contract (Rs. Lakh)</th> </tr> </thead> <tbody> <tr><td style="height: 20px;"></td><td></td><td></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>					Name of the Client (GoI/Externally Aided Project)	Nature of the assignment	Location and coverage (entire state, country, etc.)	Duration of Assignment (In month)	Value of Contract (Rs. Lakh)															
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Please enclose copy of the contract/completion certificate as evidence																									

3.	<p>Two Experts to be proposed with experience Development Sector or Externally Aided Project in the areas of similar nature of works at-least for a period of 3 years. Both experts proposed should have experience in government, externally aided, or livelihoods sector projects and specifically with leading similar nature of assignment in accordance with the draft TOR at-least for a period of 3 years. Detailed CVs are not required at REOI stage, it should be submitted if the agency qualifies for RFP stage.</p> <p>Among other information, the brief CVs should include the following information in the following format:</p>			
	Name of the proposed Expert			
	Designation			
	Experience of 3 years in Development Sectors or any externally aided projects			
	Name of Project	Experience in Executing Large Scale Surveys	Client and State	Duration of Assignments (In month)

If the Consultant has formed a consortium, all the above details of each member of the consortium and the name of the lead partner, shall be provided.

Annexure – A(1)

Declaration

Date: __/__/____

To whom so ever it may be concern

I/We hereby solemnly take oath that I/We am/are authorized signatory in the firms/ Agency/ Institute/ Company and hereby declare that "Our firms/ Agency/ Institute/ Company do not face any sanction or any pending disciplinary action from any authority against our firms/ Agency/ Institute/ Company or partners." Further, it is also certified that our firm has not been blacklisted/debarred by any government or any other donor/partner organization in past.

In case of any further changes which effect of this declaration at a later date; we would inform the JSLPS accordingly.

Authorized Signatory
(with seal)

ANNEXURE – B

Draft Terms of Reference (ToR) for the hiring of Consultancy Services for “Endline Evaluation Survey” under JOHAR project

1. BACKGROUND:

Jharkhand State Livelihood Promotion Society (JSLPS) is an autonomous society constituted in the year 2009 under the aegis of Department of Rural Development, Government of Jharkhand. The society is created to serve as a special purpose vehicle for smooth implementation of poverty alleviation schemes and programmes in the state. The society has its own Governing Body, chaired by the Hon'ble Minister of Rural Development Department, Government of Jharkhand and Executive Committee, chaired by the Principal Secretary / Secretary of Rural Development Department, Government of Jharkhand. Currently, the society is implementing multiple poverty alleviation programs supported by Govt. of India, state's own fund and funds from other agencies. The major programs implemented by JSLPS are – National Rural Livelihood Mission (NRLM), MKSP, Initiative for Horticulture Intervention by Micro Drip Irrigation supported by Japan International Cooperation Agency (JICA), and the Jharkhand Opportunities for Harnessing Rural Growth (JOHAR) project. The core strength of the society lies in its team of professionals and thematic experts deployed at State, District, Block and cluster level who have strived to build up strong and vibrant community institutions at village level.

2. JOHAR PROJECT:

Govt. of Jharkhand with financial assistance from the World Bank is implementing the JOHAR project across 68 blocks of 17 districts, which is a livelihoods programme being layered on the existing community base of SHGs supported by JSLPS, through the NRLM project. The JOHAR project aims to bring transformative change in the lives of the targeted families. The project development objective is to enhance and diversify household income (real) in select farm and non-farm sectors for target beneficiaries (about 200,000 unique households) in project areas.

The key areas of interventions under JOHAR are: a) High Value Agriculture (HVA) development b) Irrigation system development c) Livestock development c) Fishery development d) Non-Timber Forest Produce (NTFP) development e) Skills, jobs, and enterprise development f) Promotion of pro-poor agricultural finance systems, and g) Promotion of market access and private player participation. Adopting a value chain approach, JOHAR intends to promote rural producer collectives that will include producer groups and larger producer organizations. This six-year project has commenced in September 2017 with an approximate budget outlay of Rs. 928 Crore. However, the project is designed to leverage significant additional funding from the existing schemes of allied departments through convergence.

JSLPS will manage and be responsible for implementation and outcomes of the JOHAR project, and for this purpose, the society has deployed a committed team of professionals at all levels, and established a JOHAR specific State Project Management Unit (SPMU), at the state level. The project also draws on the strength of the existing government departments and schemes, and the SPMU leverages the expertise and capacity of senior government officials from allied departments. Among the NRLM intensive blocks, JOHAR has identified clusters wherein it will target around two lakh households. Further, the JOHAR project is underpinned by a solid monitoring, learning, and evaluation system, which feeds

into the decision-making systems at JSLPS. A technical agency named Oxford Policy Management Limited (OPML) was hired to provide technical Monitoring and Evaluation (M&E) services for the JOHAR project and was responsible for designing the impact evaluation for JOHAR with input and review by JSLPS and World Bank team for JOHAR.

3. RATIONALE FOR ENDLINE EVALUATION SURVEY:

The main objective of JOHAR is “Enhanced and diversified household income in select farm and non-farm sectors for targeted beneficiaries in the project area.” To measure the objective following key indicators have been identified:

- (a) Percentage increase in the real average annual household income of the targeted households in the project area.
- (b) Percentage increase in proportion of real income from select livelihood sources
- (c) Number of project beneficiaries that are Scheduled Caste or Scheduled Tribe
 - a. Percentage of female beneficiaries
- (d) Number of farmers reached with agricultural assets or services
 - a. Number of female farmers

A rigorous quantitative impact evaluation has been designed and a baseline survey was carried out in 2018 to estimate the precise impact of the JOHAR project interventions. The JOHAR impact evaluation was designed¹ and baseline survey² was carried out to only include the High Value Agriculture (HVA) sub-component of the JOHAR project. Therefore, along with the endline evaluation, a thematic evaluation³ needs to be conducted to capture progress and impact in other value chains as well, specifically livestock. The current assignment is specific and restricted to conducting the survey fieldwork for the above mentioned endline evaluation, including thematic evaluation under quantitative impact evaluation for the JOHAR project. Impact evaluation design is attached at **Annexure-1**, in which the names of sampled Gram Panchayats and their random assignment have been removed and will be shared with the selected agency prior to survey fieldwork beginning.

4. OBJECTIVES OF ASSIGNMENT:

JSLPS seeks to identify a survey agency or a consortium of organizations (hereinafter referred to as agency) to programme the survey instruments, pre-test and refine the survey instruments, collect, in an efficient and reliable manner, quantitative data at the household and village level, and finally clean the data for the JOHAR project’s thematic and endline evaluation. The survey tools developed for the quantitative data collection will capture data on the pathways to impact, intermediate indicators identified for the project, as well as the indicators that measure impact in terms of the overall JOHAR project development objective.

5. SCOPE OF WORK:

The survey will be carried out in 150 Gram Panchayats (GPs)⁴ across about 50 blocks⁵ of Jharkhand and sample 7,500 households⁶. This sample includes

¹ Designed by OPML

² Carried out by Kantar Public

³ 5,874 households across 89 Gram Panchayats were covered in the JOHAR baseline survey, and 420 households across 28 Gram Panchayats were covered in an analytical study, covering a total of 1,200 households, to measure sales volume. This group of 420 households across 28 Gram Panchayats will form the sample for the thematic evaluation to study the livestock sub-component along with the overall sample of 5,874 households that form the sample for the impact evaluation.

⁴This includes 89 GPs that were visited at baseline, 28 GPs that were visited in livestock programme areas for the analytical study, and 33 GPs for the thematic evaluation’s enhanced sample

households that were covered during the project's baseline survey (5,874), households covered during an analytical study (420) conducted post mid-term, and households (1,206) for an enhanced sample that forms the thematic evaluation. The households covered during the baseline survey are lesser than the sample size stated in the impact evaluation design document, since some sampled clusters were dropped due to operational reasons, resulting in the proposed sample of 6,000 being reduced to 5,874 at baseline. In addition to the impact evaluation design in annexure 1, the list of districts and blocks that form the additional control group for the impact evaluation (quasi-experimental design) are provided in annexure 2, and a list of districts and blocks covered for the livestock component of the analytical study are provided in annexure 3. The survey agency will be required to programme, pre-test, and refine survey instruments, prepare for and conduct quantitative data collection, including verification and checks to ensure data quality and integrity, as per the sample indicated, to provide and submit an analysis plan, raw data collected in desired format, and submit a cleaned dataset also in desired format. Preparation for data collection will include survey tool refinement and translation, development of CAPI tool, field team recruitment, survey tool field testing, and field team training. In addition to this the scope of work includes fielding the survey, quality assurance and quality control, and cleaning data. An advisory committee may be constituted by JSLPS to oversee and ensure quality of the assignment.

6. DETAILS OF TASKS TO BE CARRIED OUT:

The general responsibility of the survey agency will be to conduct the survey for the quantitative endline evaluation, including the thematic evaluation as evaluation design. The agency will work in close collaboration with the JSLPS and Oxford Policy Management Limited (OPML) teams in the field testing and refinement of survey tools, CAPI development and data management, survey field team training, fielding the survey, supervision of all phases of data collection for the quantitative baseline survey, and cleaning of the data set. The data collection will be conducted with the use of technology platforms such as hand-held electronic devices for data capture and real-time data transfer and digital servers for data storage (popularly called computer-assisted personal interviewing, or CAPI).

The agency will be expected to propose an in-house Software Development and Data Management team for programming and data management. The questionnaires for the survey will need to be programmed in a software which is compatible for installation and use in hand-held electronic devices, such as tablets. The agency will be responsible for software development for data collection, from paper-based survey tools provided to them by JSLPS. The completed surveys will have to be uploaded on to a back-end server. The agency must also possess capacity and experience of handling the required server. Real-time access to data being uploaded on the servers will be provided to JSLPS. The agency will be responsible for the following aspects of the survey.

7. REFINE, TRANSLATE, PRE-TEST, PROGRAMME, PILOT, AND FINALISE SURVEY INSTRUMENTS:

The agency will be provided with pre-final versions of the survey tools in English and Hindi, and would be required to refine and finalise the necessary tools (Hindi and English) required for the survey in close collaboration with JSLPS, as necessary this will require field testing as well.

Preparation of computer-assisted version of the questionnaires to enable CAPI. The agency shall be responsible for development of CAPI programme for the survey. A

⁵ This includes 26 blocks that were visited at baseline, 10 blocks that were visited in livestock programme areas for the analytical study, and 14 blocks for the thematic evaluation's enhanced sample

⁶ This includes 5,874 households that were visited at baseline, 420 households that were visited for the analytical study, and 1,206 households for the thematic evaluation's enhanced sample

commonly used software⁷ and platform should be used, such as SurveyCTO, CS-Pro, Survey Solutions, Blaise, or SurveyBe.

With translated survey instruments and CAPI software uploaded into the hand-held devices, the agency will pilot draft survey tools with at least 30 households and related surveys at other levels (such as Village survey questionnaire) in 6 villages of 3 blocks in at least two districts. The pilot survey will be conducted in two rounds and specific locations for the pilot survey will be provided by the M&E team of JSLPS. The pilot survey will also test the equipment to be used in the survey, the data management and transfer methods, and field supervision arrangements.

After field testing, the agency will debrief the field team, examine the data sets, and make any proposals for changes. After discussion with the JSLPS team, final versions of the questionnaires will be prepared and translated as needed and finally the data collection software updated accordingly. JSLPS team will provide final approval prior to roll-out and training⁸ beginning. The survey modules will need to include GPS and time stamps as decided by the JSLPS team. The evaluation agency will be required to develop, and change as required and requested, a back check module as well. All survey instruments, including the back check instrument must be approved by JSLPS prior to beginning field team training and fieldwork.

8. DEPLOYMENT OF FIELD TEAM AND TRAINING:

A suitable field team must be deployed with necessary buffer, experience in the region, conducting agriculture, rural livelihoods, and living standards measurement surveys. Knowledge and awareness of local context and customs is necessary, which will need to be covered in the training as well. JSLPS may ask the evaluation agency to replace field team members who are found to be inadequate in carrying out this fieldwork or meeting eligibility requirements. The evaluation agency will require to prepare sufficient and necessary training material, a field manual, and plan for adequate training including field session up to 10 days, which will include 10 people deployed by JSLPS. The evaluation agency will be necessarily required to conduct a structured debriefing at Ranchi or another location, agreed to with JSLPS, on completion of the first 5 to 7 days of fieldwork after training has been satisfactorily completed.

9. DATA COLLECTION FIELDWORK:

JSLPS will provide the evaluation agency with the sample list prior to training, and the field team will be responsible for providing detailed field plans to conduct the fieldwork which includes finding the correct households as per the sample list, conducting the survey⁹ as per protocols, and uploading surveys with fieldwork conducted in adherence to a field plan shared and agreed to with JSLPS in advance. Fieldwork must be carried out using CAPI on devices supplied by the evaluation agency for its field team, including adequate buffer and 10 devices must be made available to a team deployed by JSLPS.

10. DATA CLEANING

The agency will clean the data collected through the survey to resolve duplicates, outliers, errors, discrepancies, and inconsistencies. On completion of cleaning the

⁷ JSLPS may not agree to or allow the agency to conduct the survey in a proprietary software

⁸ A final round of changes may be made in consultation with JSLPS during training period as well

⁹ Conducting the surveys includes administering household surveys which are estimated to last 3 to 3.5 hours each and village surveys (one per village sampled) which is estimated to last 0.5 hours each.

data, JSLPS will accept and approve the raw dataset, clean dataset, data from back checks and error or variance reports¹⁰.

11. STAFFING REQUIREMENT:

The evaluation agency must deploy a suitable team to undertake this assignment, which includes a core team and a field team.

I. Key Experts

SL. No.	Position	Qualification & Experience	Key responsibility	Time input (Man-days)
01	TECHNICAL LEAD-01	The technical lead must have a post-graduate degree, preferably a doctoral degree, in economics, public policy, agriculture, statistics, rural development from a recognized university. A degree in economics or statistics is preferred. S/he must have more than twelve years of experience relevant to this assignment, have been part of the core team of at least 3 impact evaluations which use data from a household survey of more than 3,000 households. Further, s/he must be adept in evaluation design, statistical methods, quantitative analysis, report writing, and be fluent in both English and Hindi		24
02	PROJECT MANAGER-01	The project manager must have a post graduate degree in social sciences, public policy, development studies, agriculture, or related discipline from a recognised university. S/he must have more than 8 years of relevant experience, of which more than 5 years should be in surveys and impact evaluations or field-based research studies, and s/he should have been part of the core team of at least 1 impact evaluation which used data from a household survey of more than 3,000 households. Further, s/he must be adept in project management, client engagement, team management, be familiar with research and evaluations, and be fluent in both English and Hindi.		48
03	DATA ANALYST-01	The data analyst must have a post graduate degree in economics, statistics, public policy, agriculture, rural development, or related social sciences from a recognized university. A degree		32

¹⁰ The agency will be required to submit weekly error and variance reports based on quality control protocols carried out, and include reports based on back checks carried out by the agency as well as by a team deployed by JSLPS.

		in economics or statistics is desirable. S/he must have more than 3 years of relevant experience, which includes managing large data sets, supervising surveys, and fieldwork. Further, they must be adept in statistical methods, quantitative analysis, report writing, be advanced users of a common statistical package such as STATA, R, or SPSS, and be fluent in English and Hindi		
04	PROGRAMMER AND DATA MANAGER-01	The programmer and data manager must have a degree in computer science, computer applications, or a discipline related to information technology and social sciences. A post graduate degree is preferred. S/he must have more than 5 years of relevant experience which includes designing CAPI surveys, managing large scale survey data set and field-based research studies. Further, s/he must be adept at programming, be advanced users of common CAPI platforms, and be fluent in English and Hindi.		28
05	TRAINING MANAGER-01	The training manager must have a post graduate degree in social sciences with more than 5 years of relevant survey training experience which includes surveys and field-based research studies including significant experience in agriculture, rural livelihoods, and living standards measurement surveys. Further, s/he must have trained and managed field teams of at least 50 people in at least 3 surveys or studies that use data from surveys of more than 3,000 households. Experience in Jharkhand is preferred		24
06	FIELD MANAGER-01	The field manager must have a degree in social sciences with more than 5 years of relevant experience which includes large scale surveys and field-based research studies including significant experience in agriculture, rural livelihoods, and living standards measurement surveys. Further, s/he must have managed field teams of at least 50 people in at least 3 surveys or studies that use data from surveys of more than 3,000 households. Experience in Jharkhand is preferred.		80
Non-Key Experts				
01	FIELD COORDINATOR-02	All field team members must have a degree at minimum with more than 2 years of experience and having completed at minimum 2 rural household surveys. A post graduate degree is preferred for coordinators. Further, all field team members must be		148

		adept at using CAPI devices, available for the entire duration of the fieldwork, have attended the training fully, and be fluent in Hindi and at least one other language spoken in Jharkhand. Balance of male and female should be maintained among enumerator. Experience and local teams of Jharkhand is preferred.		
02	FIELD SUPERVISOR-16	Same as above.		1,184
03	ENUMERATOR -64	Same as stated above.		4,736
04	BACK CHECKER-08	Same as stated above.		592

12. EQUIPMENT AND LOGISTICS:

The evaluation agency will provide and make available the required number of good working condition hand-held devices and other tools necessary for data collection using CAPI to all field team members and a team of 10 persons deployed by JSLPS. All devices must have access to all survey instruments, with devices and tools provided to the JSLPS team having access to the back check modules as well. It will be the agency's responsibility to ensure any repair, maintenance, and replacement of devices that are not functioning as required, to ensure smooth operations during the fieldwork phase. The hand-held CAPI devices should have no physical or internal damage and have the following minimum specifications:

- (i) Android version 8.0
- (ii) Seven inches diagonal screen size
- (iii) 2 Giga Bytes of Random Access Memory
- (iv) 16 Giga Bytes of Read Only Memory
- (v) 4,000 mAh battery

In addition to hand-held devices as mentioned above, each survey team must have access to and carry power banks, field manuals, authorisation letters (provided by JSLPS), identity cards, mobile phones with contract numbers available to JSLPS, village and household lists, wifi or hot spot devices, surge protectors, adapters and chargers, notebooks, and pens or pencils.

13. QUALITY CONTROL:

The agency will be responsible for monitoring to ensure that the field survey is of high quality, yielding accurate and verifiable data and conducted in accordance with the field plan approved by JSLPS. These quality controls and monitoring activities include:

a) **BY TEAM OF SUPERVISORS IN EVERY SAMPLED LOCATION:**

- (i) Confirming that the locations of field work are in accordance with the field plan approved by JSLPS
- (ii) Confirming that the field protocols provided by JSLPS are implemented
- (iii) Conducting spot checks (visual observation) of at least one interview of each enumerator on each and any given day

- (iv) Conducting timely and random quality checks in the field to ensure proper administration of the survey and data collection
 - (v) Re-visits to a randomly selected sample of at least 10 percent of the households visited by each enumerator, to double-check the data recorded in key variables
- b) **BY TEAM OF BACK CHECKERS IN EVERY SAMPLED LOCATION:**
- (i) Deployment in field to confirm the veracity and quality of data collected. A back-checker will require to visit each village, after completion of data collection and CAPI questionnaires are provided, to verify the data collected and ensure that interviews were conducted as per field protocols
 - (ii) Field some modules of the questionnaires and match responses to check for fraudulent or erroneous data for 10% of the sample.
- c) **BY DATA MANAGEMENT TEAM:**
 Back-end data scrutiny of all uploaded questionnaires to ensure that all information recorded is clear and consistent and, where deemed necessary, to clarify with respondents any inconsistencies in their answers with that of the enumerator.

JSLPS may deploy its own team, of 10 personnel, for quality control in the field through the duration of the baseline survey, and at any point request the Agency to show a log of data checks performed, errors rectified and demonstrate back-end data checks.

The Agency will share, with JSLPS weekly, the data collected by their team of back checkers, as well as back checkers deputed by JSLPS. Errors of more than 5% in the data collected will invite a penalty of 5% of the total payment on the Agency.

The agency will report any field errors that they may notice and (a) provide feedback on the instruments to JSLPS and (b) trouble shoot any data system errors that may occur during data collection.

14. DATA MANAGEMENT AND SECURITY:

The agency will be responsible for developing a data entry programme and carrying out consistency checks and provide raw data as well as the final cleaned dataset to JSLPS. The agency will provide access to internet or other platforms through which data can be transferred from hand-held devices to the server. The final cleaned dataset will be provided in STATA and ASCII formats. The agency is required to provide copies of the datasets and data entry error reports/logs that show the frequency of discrepancies noted and actions taken to rectify to JSLPS. The agency will scrutinize all errors and inconsistencies detected during data entry and consistency programs by revisiting households if major errors are detected. Should the JSLPS team notice more than 5% errors in data entry, the agency must be prepared to make corrections.

Further, the Agency will provide module with link to FTP site for back up to JSLPS server, in addition to maintaining its own back up, and will submit daily off-line as well.

The JSLPS team will verify a 5% random sample of households against the data entered through checks. In cases of errors found, there will be penalties deducted from the final tranche payment in accordance with the severity of errors. JSLPS has the right to cancel the contract and make no further payments or request the work to be done again (including the field work) without any additional costs.

The agency will provide the raw data and final clean copies of the datasets along with a complete codebook to JSLPS within one week of completion of field work.

JSLPS retains the right to the complete data set, with complete access to all names, addresses, survey data for individuals, households and others surveyed through this exercise.

15. DELIVERABLES AND TIMELINE OF KEY ACTIVITIES:

Table 1 below lists the activities that will be carried out by the evaluation agency throughout this assignment, with its corresponding deliverables and a timeline.

Table 1: Activities, deliverables, and timeline

#	Activity	Deliverable	Timeline
1	Deployment of manpower	Core team deployment	Week 1
2	Background work and inception phase	Inception report	Week 2
3	Refine, translate, pre-test, programme, and pilot survey instruments	Survey instruments	Week 5
4	Prepare for field team training	Training material, logistics, and plan	Week 6
5	Mobilise field team	Field team deployment	Week 7
6	Field team training	Field manual, training report, and fieldwork plan	Week 8
7	Data collection fieldwork	Weekly progress update and error/variance report	Week 8 to 18
8	Data collection fieldwork wrap up	Fieldwork report	Week 18
9	Data cleaning	Clean data	Week 20

16. INSTITUTIONAL ARRANGEMENTS:

The evaluation agency will work under the overall supervision of JSLPS which will provide the coordination mechanisms necessary for the agency to work effectively and as needed. Additionally, an advisory committee may be instituted by JSLPS to oversee and ensure quality of the assignment.

18. PAYMENT FOR SERVICES:

Table 2 below is the payment schedule for this assignment. Payment for services will be made in four tranches, as detailed below.

Table 2: Payment schedule

#	Amount (% of total contract price)	Deliverable	Timeline
1	Nil	Submission of inception report	Week - 2
2	30%	Deployment of core team and field team, submission and acceptance of final CAPI and PAPI version of survey instruments, training material, field manual, training report, and fieldwork plan.	Week - 9
3	40%	Submission and acceptance of weekly progress reports, error and variance reports, final fieldwork report and raw data.	Week- 20
4	30%	Submission and acceptance of clean data (with variable names), and a complete codebook.	Week- 24

19. DURATION OF THE ASSIGNMENT:

The total duration of this assignment is for a period of 9 months from the date of signing the contract. However, the contract may be extended based upon requirement of JSLPS and performance of the consultant.

20. OWNERSHIP AND FUTURE USE OF DATA:

The data collected in this assignment and any products resulting from this assignment are the express property of JSLPS and the JOHAR project. The agency may not use the data or any products resulting from this assignment as well as any derivatives from the data or products for its own research purposes, nor license the data to be used by others without the written consent of JSLPS.

21. MONITORING AND REPORTING ARRANGEMENTS:

The assignment will be monitored by a review committee constituted by JSLPS. The agency will report to the Project Coordinator – Monitoring & Evaluation of JOHAR for day-to-day operations and for periodical review. The PC- M&E shall also be responsible to oversee the progress against deliverables.

Jharkhand Opportunities for Harnessing Rural Growth Project

Impact Evaluation Design

1 INTRODUCTION:

1.1 PURPOSE AND STRUCTURE OF THIS DOCUMENT

The purpose of this document is to provide a brief description of the Jharkhand Opportunities for Harnessing Rural Growth (JOHAR) project and explain the design of its impact evaluation for review by stakeholders and experts, and for reference by the Jharkhand State Livelihoods Promotion Society's (JSLPS) senior management, project implementation teams and their partners.

The document begins with a brief background and the rationale for the JOHAR project, its objectives and our understanding of the JOHAR project and its intervention components. The later part of this document goes on to state the role and purpose of the impact evaluation and explain how it was developed, followed by the technical design aspects, which include scope, a timeline of activities, the approach and sampling strategy. Finally, survey instruments that will be administered are listed.

1.2 RURAL LIVELIHOODS IN JHARKHAND

Amongst states in India, Jharkhand has the second highest level of poverty in the country, with poverty incidence at 37%. This is in spite of having the largest share of mineral resources and impressive economic performance during the 12th five year plan from 2012 to 2017. More than half of Jharkhand's labour force is dependent on the agriculture and allied sectors, and a large portion of the farming community is comprised of small and marginal farmers, 18% and 63 % respectively, who practice rain fed single crop subsistence farming. Access to irrigation is critical and leads to lower income levels since it limits crop choice, yield, and cropping intensity. Further, poor market access and an underdeveloped financial sector limit the options and incomes of small producers, persistent gender gaps in agriculture limit the access and control of women, and skill development in the agriculture and allied sectors lags behind the growing demand for agriculture production and enterprise.

1.3 DEVELOPMENT OBJECTIVES OF THE JOHAR PROJECT

The World Bank supported National Rural Livelihoods Project (NRLP), which is a part of the National Rural Livelihoods Program (NRLM), along with programmes of PRADAN and the Tata Trusts have been implemented in Jharkhand over the past several years, and have built a robust platform of community institutions that include women's Self-Help Groups (SHGs) and their federations that provide a base and conducive environment to deliver a focused package of interventions to enhance the incomes of farmer households.

The Jharkhand Opportunities for Harnessing Rural Growth (JOHAR) Project's development objective is to use this community institutions base of women's SHGs and their federations to enhance and diversify household income in select farm and non-farm sectors for targeted beneficiaries in project areas. The key indicators to assess the impact of JOHAR on its development objective are;

1. Per-cent increase in real average annual household income of target households
2. Per-cent increase in proportion of real income from select livelihoods sources
3. Number of project beneficiaries that are scheduled caste or scheduled tribe
 - a. Per-cent of female beneficiaries
4. Number of farmers reached with agricultural assets or services
 - a. Number of female farmers

1.4 OUR UNDERSTANDING OF THE JOHAR PROJECT

The JOHAR project plans to achieve its development objective by;

1. Mobilizing and aggregating rural producers including women and men from Scheduled Caste, Scheduled Tribe, and smallholder households into producer groups (PGs) and producer organizations (POs), with focus on diversification and / or intensification of their current production system, and improving their participation higher up in the value chain.
2. Strengthening the competitive advantage of target rural producers by transfer of climate-resilient production techniques, enhanced opportunities for value addition and effective market linkages.
3. Improving access to financing, including innovative financial products, through the community institutions platform and formal financial institutions.
4. Establishing partnerships with the private sector, including rural entrepreneurs, for effective forward and backward linkages with producers.
5. Supporting skill development and financing modalities to facilitate jobs and entrepreneurship with a focus on the value chain and agribusiness.

Total cost budgeted for the project is US\$ 142.81 million, which is being financed by a loan of US\$ 100.02 million from the International Bank for Reconstruction and Development and a budget allocation of US\$ 42.79 million from the Government of Jharkhand.

Project beneficiaries will primarily be from rural households, majority of whom will be women SHG members (including Scheduled Caste, Scheduled Tribe, smallholder, and landless households) in selected blocks across rural Jharkhand. Households with an actual or potential ability to generate a marketable surplus production will be selected.

JOHAR project interventions will be implemented in sixty eight blocks spread across seventeen districts of the state, which have been identified based on geographical spread, incidence of poverty, and marginalized groups (Scheduled Tribes). Some of these are early stage NRLM blocks, where the community institutions platform is yet to attain the level of maturity required for layering of livelihoods interventions. Since the project will be implemented in a phased manner, these blocks will receive the programme interventions in project year three. The project's interventions will reach about 200,800 households, with the High-Value Agriculture (HVA) and irrigation interventions reaching about 150,900 households, livestock interventions reaching about 51,000 households, the fisheries interventions reaching about 34,500 households, and the Non-Timber Forest Produce (NTFP) interventions reaching about 58,400 households. Most households will be mapped to at least two of these sub-sectors, causing some overlap in the target numbers of households

The implementing agency for JOHAR is the Jharkhand State Livelihoods Promotion Society (JSLPS), which is a registered autonomous society, under the aegis of the Rural Development Department (RDD), Government of Jharkhand (GoJ), for implementation of poverty reduction programmes in the state. JSLPS is designated as the special purpose vehicle (SPV) for implementation of the JOHAR project. JSLPS has a governing council with the Minister for Rural Development, GoJ being its chairperson and the Principal Secretary, RDD, GoJ being its President, and with participation from line departments and the National Bank for Agriculture and Rural Development (NABARD). In addition to the governing council, JSLPS also has an Executive Committee, whose chairperson is the Principal Secretary / Secretary, RDD, GoJ. The JSLPS has its own Finance, Human Resources, and Procurement policies and manuals, and the society also implements the NRLP under NRLM, the Mahila Kisan Sashaktikaran Pariyojna (MKSP), the Sanjivani project and the Pradhan Mantri Aadrash Gram Yojna. JSLPS will be responsible for the overall outputs and outcomes of the JOHAR project, as well as for mobilizing co-financing through convergence and for sourcing required technical support through partnerships. For the JOHAR project, the JSLPS will partner with the Department of Agriculture, which encompasses the directorates of horticulture, animal husbandry, fisheries and soil conservation, and the Department of Forest, Environment, and Climate Change.

The institutional arrangements, from the community institutions level to the state level, for implementation of the JOHAR project are briefly described below.

At the community institutions level, the JOHAR project will work with community institutions supported by the NRLM, which includes women's SHGs and their federations (Cluster Level Federations and Block Level Federations). In addition, small producers will be aggregated around key sub-sectors to form Producer Groups (PGs) and larger Producer Organisations (POs) (companies or co-operatives). About thirty five hundred PGs and twenty five POs will be formed or supported across the various sub-sectors. At the community institutions level, there are various community cadre who have specific functions for project implementation.

At the Block level JSLPS' Block Mission Management Unit (BMMU) will manage and oversee the project with the Block Project Manager (BPM) responsible for outcomes and outputs in that block. The BPM will be assisted by other block level officers, field thematic coordinators and community coordinators.

At the District level JSLPS' District Mission Management Unit (DMMU) will manage and oversee the project with the District Project Manager (DPM) responsible for outcomes and outputs in that district. The DPM will be assisted by other district level officers including thematic officers.

At the State level the project will be steered by a high level steering committee headed by the Chief Secretary and comprising of the Principal Secretaries / Secretaries of relevant Departments. JSLPS' State Mission Management Unit (SMMU) will guide and provide support to the project, and a specific JOHAR State Project Management Unit (JOHAR – SPMU) will be responsible for planning, implementation, and review of the JOHAR project. The Chief Executive Officer (CEO) of JSLPS will head the JOHAR SPMU and will be assisted by a specific Project Director for JOHAR. The JOHAR SPMU will also house state level thematic officers who will lead respective thematic areas.

In addition to these arrangements, various partnerships will be leveraged for project implementation, such as working in close coordination with the NRLM, entering in to partnerships with relevant national level missions, research institutes, Non-Government Organisations, and financial institutions.

1.5 DESCRIPTION OF THE JOHAR PROJECT INTERVENTION COMPONENTS

The project is structured in to three primary components, as under;

1. Diversified and resilient production and value addition
 - a. Rural producer collectives
 - b. High Value Agriculture (HVA) development
 - c. Livestock development
 - d. Fisheries development
 - e. Non-Timber Forest Produce (NTFP) development
 - f. Irrigation system development (implemented along with the HVA sub-component)
2. Promoting market access, skill development and pro-poor finance systems
 - a. Market access and private sector participation
 - b. Skill, jobs and enterprise development
 - c. Pro-poor agricultural finance systems
3. Project and knowledge management

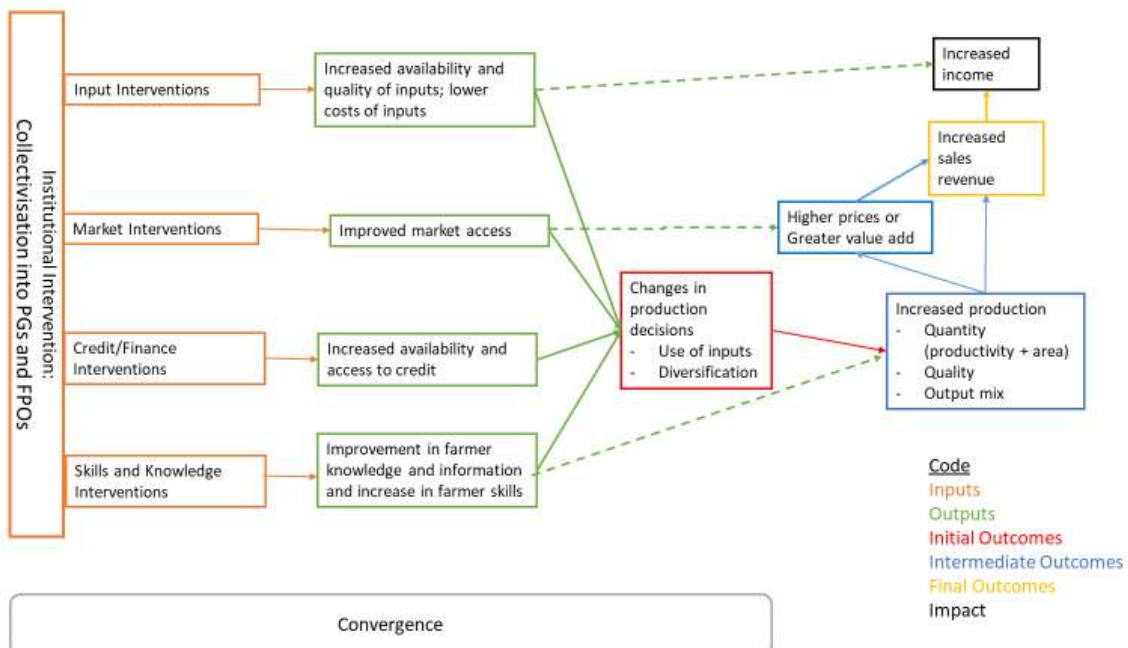
Whilst the JOHAR project has complex impact pathways with multiple intervention components, an overall theory of change to describe the project and movement along impact pathways can be simplified into the following framework, structured as a results chain of inputs, outputs, initial outcomes, intermediate outcomes, final outcome, and impact:

1. The programme activities can be divided into five types of interventions, which are the inputs in the results chain.

- a. Institutional interventions includes the collectivisation of producers into producer groups and producer organisations, which provide the base for the delivery of other interventions.
 - b. Input interventions such as making higher quality seeds or hatchlings available.
 - c. Market interventions such as supporting farmers to move up the value chain and undertake additional activity before they sell their produce.
 - d. Credit or finance interventions that improve the availability of finance to producers by providing access to credit from community institutions as well as financial institutions.
 - e. Skills and knowledge interventions such as training, capacity building, and the provision of climate information.
2. These inputs are expected to lead to four related outputs:
 - a. Increased and improved availability of inputs, as well as lower cost of inputs.
 - b. Improved market access.
 - c. Improved access and increased availability of finance.
 - d. Improved knowledge and increase in skills.
 3. It is then expected that these outputs will enable producers to change their production decisions (initial outcome) e.g.: through diversification or increased use of inputs; and this will in turn lead to increased production and / or productivity (intermediate outcome) and increased sales revenue (final outcome).
 4. This, in turn, is expected to lead to an impact in terms of meeting programme targets of increased household income of producer households, who are the target beneficiaries of the JOHAR Project.

Illustrated below is an overall theory of change for the JOHAR project, showing the impact pathways.

Figure 1 JOHAR theory of change



1.5.1 Diversified and resilient production and value addition

This component promotes sustainable production through productivity enhancement, diversification, building resilience into production systems including crop, efficient horticulture, small livestock (including fisheries), and non-timber forest produce and creating improved skills and capacities across each of these sub-sectors. It will finance farm and non-farm sector inputs and innovative technologies, training on package of practices, pilots and demonstrations for farmers, while supplementary financing will be leveraged through alternative channels such as convergence with government programs, SHG / VO micro-financing and from formal financial institutions.

A brief description of the sub-components follows;

1. Rural producer collectives

The objective of this sub-component is to promote collectives of small producers with significant participation of women producers from SHGs. The strategy that will be adopted is to build on the existing NRLM base where the mobilized households have developed a first-level of assets or resources and are significant economic actors in specific sub-sectors or commodities. Close alignment with the institutional structure of SHGs, whose membership base is women from poor households, will ensure that these producer collectives are socially inclusive. For the project, this component will institute producer groups at the village level, rural business hubs and livestock service centres at the cluster or block level, producer organizations at the district level and a farmer producer organization incubation and support cell (FISC) at the state level. Activities that will be carried out at the various levels are listed below;

- a. Producer groups at the village level: aggregation, procurement, primary level sorting and grading, collective demand for inputs, and access to technology and finance.
- b. Rural business hubs at the cluster or block level: aggregation, sorting, grading, processing, and management of custom hiring centres.
- c. Livestock service centres at the cluster or block level: vaccination, deworming, castration, and selling feed to the producer groups as per demand generated.
- d. Producer organizations at the district level: Backward and forward linkages and business management as well as expansion.
- e. FISC: Create linkages with large and institutional buyers and foster partnerships, as well as develop marketing strategies for brands that will be promoted by the producer organisations.

2. High value agriculture development

This sub-component will create opportunities for farmers to produce high-value agricultural commodities that will lead to rise in their income levels by increasing cropping intensity, the scale of operations and participating in diverse markets. Crops are selected based on agro-climatic zone, topography and season, as well as market potential. Producer groups that will collectively produce a HVA crop will be instituted in clusters or patches that are viable for high value agricultural commodity cultivation, with these groups comprising of beneficiary households that have a minimum of 0.3 acres of land suitable for cultivation of high value agricultural commodities and are SHG member households.

3. Irrigation system development

This supports and is implemented along with the HVA sub-component, with the objective of providing irrigation for the cultivation of high value agricultural commodities, since the lack of irrigation is a key determinant of cropping intensity and land use in Jharkhand. Under this intervention component, a suitable irrigation scheme will be set-up and utilized by a producer group. The project targets the following schemes, (i) gravity flow scheme, (ii) solar lift, (iii) electric pump, (iv) lift irrigation, and (v) drip irrigation.

4. Livestock development

The livestock development component is implemented as a primary as well as secondary activity, with pig and goat rearing being the primary activities and poultry broilers or layers and backyard poultry being the secondary activities. Producer groups instituted will include breeder or mother unit groups and dependent beneficiary groups

5. Fisheries development

This component will strengthen or build sustainable fishery groups to promote enhanced fish production by introducing improved fish culture techniques and access to credit, as well as organization and coordination with markets.

6. Non-timber forest produce development

In the JOHAR project, the NTFP sub-component is implemented along with one of the other activities as a secondary or tertiary source of income for the beneficiary household. A key challenge in this sector is the inefficient value addition of non-timber forest produce, and further the value chain for NTFP suffers from lack of timely availability of inputs, low capacity in production processes, no processing centres in rural areas, and no collectivization or market linkages. The sub-component focusses on clusters which have potential and access to established local markets.

1.5.2 Promoting market access, skill development and pro-poor finance

The objective of this component is developing and strengthening forward linkages to markets for rural producers in farm and non-farm sectors (namely agriculture, horticulture, fisheries, small livestock and NTFP). The component will primarily provide: financing for capacity building of the producer organizations in business planning; initial capital investment and working capital financing to producer organizations; small-scale infrastructure for value addition; delivery of market information/intelligence; and provision of skills and jobs through training and capacity building.

A brief description of the sub-components follows;

1. Market access and private sector partnerships

This sub-component seeks to improve market access for rural producers by providing market information and intelligence, forward market linkages, and a farmer producer organisation incubation and support cell.

2. Skill development in focus value chains

The objective of this sub-component is to upgrade skills of entrepreneurs and service providers in the agriculture and allied sectors to build their capacity for entrepreneurship and for training as well as technical service delivery to producers.

3. Financial services for agriculture and allied sectors

The objective of this sub-component is to support producer collectives and their enterprises in accessing financial services, especially credit and insurance, to support production and resilience. The project shall follow three major pathways for channelizing credit: (i) credit from village organisations or financial institutions to SHGs, and/or, from financial institutions to joint liability groups (JLGs) (ii) partnerships with financial institutions for credit targeted at individual producers, and (iii) credit from financial institutions for producer organisations by leveraging their equity capital base.

1.5.3 Project and knowledge management

This is the management and coordination component of the project, which will establish management structures and promote strong management of knowledge and information for effective functioning. In addition to establishing management structures at different levels with the appropriate resources, project coordination, implementation, financial management, environmental and social safeguards management, human resource development, and monitoring at all levels will be supported. A project monitoring, learning, and evaluation system will be established and integrated as well.

1.6 THE ROLE OF THE IMPACT EVALUATION

The impact evaluation is part of a broader overall monitoring, learning and evaluation system, whose objective will be to reinforce a result based management culture and provide the basis for evidence based decision making processes at all levels from the community institutions level to the state level for strategic decisions as well as operational decisions and processes.

The monitoring, learning and evaluation system is described in the separate “M&E Framework” which provides a structure for all M&E activities to be undertaken for JOHAR. It has been developed based on two primary factors: an assessment of the needs of various stakeholders – what information is required for whom, for what purpose, and when; and the emergent Theory of Change for the programme as a whole.

The primary stakeholders and their needs have been identified as:

- Rural Development Department, Government of Jharkhand – estimates of impact and cost-effectiveness of the programme to inform decisions to scale-up across the State; programmatic lessons that can be applied to JSLPS
- JSLPS management – programmatic lessons that can be applied to JSLPS
- JOHAR management – actionable management information throughout the life of the programme that can lead to course corrections as required
- Intervention teams in JOHAR – intervention specific information on the fidelity of implementation, the functionality of the interventions, and the downstream effects on targeted households
- World Bank – monitoring of results framework for accountability purposes; lessons that can be applied to other programmes in India and elsewhere
- NRLM and Ministry of Rural Development, Government of India – programmatic lessons that can be applied to other States
- Broader academic, research and professional community – programmatic lessons and evidence on impact that can be applied to other contexts

Based on this, four primary M&E questions that track the theory of change and answer the information needs of the key stakeholders have been identified. These questions are:

- Have the programmatic interventions (inputs) been delivered with fidelity?
- Have the programmatic interventions been sufficient to achieve the expected outputs (change in farmers' knowledge, availability of inputs, and market access)?
- Have the programmatic interventions made sufficient difference to targeted households such that they change their production decisions (intermediate outcome)?
- Have changes in production decisions translated into increased production and/or productivity, increased sales revenue, and increased household income in line with programme targets?

To answer these four questions, a Results Based Monitoring Framework (RBMF) has been developed. This is a set of indicators that relate to every stage of the aggregate project theory of change and the

individual theories of change for the main project components, as well as the assumptions that underpin the cause-effect relationships between inputs, outputs, outcomes and impact.

Data sources – primarily the impact evaluation and the project Management Information System (MIS) have been identified to generate the information required for each indicator within the RBMF.

Additional M&E activities answer a set of secondary questions outlined in the M&E framework. These activities include process monitoring, community based monitoring, periodic tracking surveys, thematic evaluations and on-demand studies and analysis.

Therefore, the impact evaluation is both a theory based evaluation against the JOHAR theory of change, as well as one mechanism for generating data to answer a more comprehensive set of questions identified in the M&E Framework.

1.7 PROCESS FOR DEVELOPING THE IMPACT EVALUATION

Based on the M&E framework developed in consultation with stakeholders and identification of the primary questions to be answered, an impact evaluation for the JOHAR project has been developed. Impact evaluations determine whether a project has had the defined desired impact on target beneficiaries of the programme, and to assess whether those effects are attributable to the programme interventions.

The key steps in the development of an impact evaluation are understanding programme interventions, their roll out mechanisms and timelines, targeting and beneficiary selection, and coverage, this is followed by discussions and consultations with stakeholders on prospective approaches to conduct an impact evaluation and their implications. After decisions and agreements between stakeholders have been arrived at, the technical team designing the impact evaluation defines the counterfactual that will be used and calculates the sample size required to get statistically significant results to detect the desired effect. The crucial aspect of developing an impact evaluation is in constructing the counterfactual, which would provide a comparison for the rigorous analysis of impact. A comparison group constitutes a group that hasn't participated in the programme or received the programme interventions, but resembles the programme's intended beneficiaries as closely as possible, and thereby describes the condition of the programme's beneficiaries in the absence of the programme. A well-constructed comparison group, also known as the control group, provides a good measure of the counterfactual, which allows for the impact measured by the evaluation to be attributed to the programme. With the method to construct a control group and sample size estimates ready, usually another round of discussions between stakeholders of the evaluation, including project managers and the technical impact evaluation team is held to understand the feasibility of the control groups, the study design, its implications on project management and roll out of interventions, as well as agreeing on a timeline for impact evaluation activities and allocation of resources.

Each of these steps have been followed in the development of this impact evaluation, and presenting the technical design. This document follows with the technical aspects of the evaluation, describing the approach, methods used, and sampling.

2 IMPACT EVALUATION DESIGN

2.1 SCOPE OF THE IMPACT EVALUATION

As outlined in the introduction chapter, the impact evaluation is one part of a broader M&E framework.

It primarily aims to generate evidence on the effect of JOHAR on target households ("outcomes" and "impact" in the theory of change). In particular, it covers the headline impact indicators:

- The increase in average annual real household income of targeted households
- The proportion of real income that comes from select livelihood sources prioritised by Johar

The impact evaluation will also generate information (particularly at midline) on implementation (“inputs”, “processes” and “outputs” in the theory of change) where indicators have been identified in the RBMF that are amenable to measurement through household surveys. This includes, for example, a focus on the effective coverage of interventions, and the effects of project trainings on farmer knowledge.

In particular, the impact evaluation will generate information for key indicators in the RBMF that relate to disaggregated effects (e.g. proportion of project beneficiaries that are female, and or belong to SC/ST categories). This will complement data collected from other sources, such as the MIS.

The impact evaluation will involve three survey rounds; a baseline in 2018, a midline at the end of project year three in 2020 and an endline in 2023.

During the inception phase, it has been decided with key stakeholders that the impact evaluation will focus on the Johar project blocks where interventions will start in year one and year two. This is so that the midline can generate meaningful results to feed back into implementation for the remaining duration of the project.

It has also been decided to only focus on the project blocks where the High Value Agriculture (HVA) intervention is being delivered. This is because these blocks cover 75% of the project beneficiaries and over 80% of the project budget. It was agreed that it would be an inefficient use of evaluation resources to cover other blocks where a very small proportion of households would receive project interventions. The other interventions (i.e. fisheries, livestock and NTFP) are still delivered in different combinations in the HVA intervention blocks. Therefore, they will not be excluded from the impact evaluation. However, the exclusion of blocks without HVA will remain an evaluation limitation and means that the evaluation measures the effectiveness of a subset of Johar implementation (in those areas where it is delivered with highest effective coverage) and is not therefore fully representative of the intervention as a whole. Additional thematic studies of the non-HVA interventions will be undertaken to learn about their functioning when they are implemented independently of HVA.

Based on this, fourteen blocks have been chosen to act as evaluation blocks. These are all the blocks that will receive the HVA interventions in year one and year two, excluding blocks which have implementation partnerships with external organisations such as PRADAN and the Tata Trusts. These partnership blocks have been excluded since these programs have been implementing livelihoods activities for several years now and it would be administratively difficult to have randomly assigned control in such blocks. The table below lists the fourteen evaluation blocks with the sub-components that will be implemented in each block, and their phasing.

Table 1 Evaluation blocks

JOHAR Impact Evaluation Blocks					
Block	District	HVA	Livestock	Fishery	NTFP
Chandankiyari	Bokaro	Y2	Y3	Y2	-
Purbi Tundi	Dhanbad	Y2	-	Y2	-
Ghatsila	East Singhbhum	Y1	-	Y2	Y3
Potka	East Singhbhum	Y2	Y2	Y2	Y2
Patamda	East Singhbhum	Y1	Y3	Y1	-
Sisai	Gumla	Y2	-	Y2	-
Khunti	Khunti	Y1	-	Y1	-
Bhandra	Lohardaga	Y1	-	Y2	-
Mandu	Ramgarh	Y2	Y2	Y2	-
Patratu	Ramgarh	Y2	-	Y2	-
Chanho	Ranchi	Y2	Y3	Y1	-
Angara	Ranchi	Y2	Y4	Y1	Y1
Bero	Ranchi	Y2	Y3	Y1	Y1
Kanke	Ranchi	Y2	-	Y2	-
Source: Government of Jharkhand's Project Implementation Plan for JOHAR Project					

2.2 IMPACT EVALUATION ACTIVITIES AND TIMELINE

The impact evaluation has a preparatory and design phase, a final report and dissemination phase with the survey(s) phase between these two. As stated above, the evaluation will include three rounds of survey, a baseline, a midline, and an endline, each of which will collect quantitative data from the panel of sampled households.

The preparatory and design phase involves the steps described above in the process for developing the impact evaluation section. Each of the survey rounds will involve planning for resources allocation, development of survey tools, hiring of an agency for data collection, preparation and training for data collection, the data collection itself, and lastly analysis of survey data and writing a survey report.

In addition to these activities, annual reviews will be conducted as well to understand implementation progress in the treatment group areas and to ascertain the retention of control status in the control group areas, by interviewing JSLPS stakeholders at the block, district, and state levels. These structured annual reviews, will enable stakeholders including JSLPS senior management to take informed decisions on the planning required for subsequent phases of the impact evaluation.

A timeline for the impact evaluation activities is shown in the table below.

Table 2 Timeline for impact evaluation activities

Impact evaluation activities							
Activity	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Stakeholder discussions on JOHAR, IE design options, and IE design summary	Q3&4						
IE technical design	Q4						
Planning for baseline survey	Q4						
Hiring data collection agency	Q4						
Survey tools development	Q4						
Preparation and training for data collection	Q4	Q1					
Data collection		Q1					
Data analysis		Q2					
Baseline report		Q2					
Annual review		Q4	Q4	Q4	Q4	Q4	
Planning for midline survey			Q4				
Hiring data collection agency			Q4				
Survey tools development			Q4				
Preparation and training for data collection				Q1			
Data collection				Q1			
Data analysis				Q2			
Midline report				Q2			
Planning for endline survey						Q4	
Hiring data collection agency						Q4	
Survey tools development						Q4	
Preparation and training for data collection							Q1
Data collection							Q1
Data analysis							Q2
Endline report							Q2
Final impact evaluation report							Q2
Dissemination of results							Q3

2.3 IMPACT EVALUATION APPROACHES

2.3.1 Internal and external controls

The impact evaluation design includes two separate approaches using two different control groups to act as counterfactuals:

- An “internal” control group whereby some parts of the project blocks are randomly assigned to act as control groups and will not receive the project activities (and hence act as a counterfactual to the areas that do)
- An “external” control group whereby project blocks are matched with control blocks outside the project blocks and these act as a counterfactual using a quasi-experimental identification strategy

The internal control approach is a more robust evaluation strategy because the randomisation of treatment ensures that (if done properly), there are no systematic differences between treatment and control groups and the control groups are therefore a good counterfactual for what would have happened to the treatment groups without the intervention. However, it requires compliance in implementation and is vulnerable to contamination and spillovers (e.g. where farmers in control areas are able to buy improved inputs from PGs in nearby treatment areas). The external control approach is less robust as matching is not a perfect substitute for random assignment; there will always be differences between treatment and control groups that undermine the validity of the counterfactual. However, it is less vulnerable to spillovers and has no implications for implementation.

The logic for using two separate evaluation approaches is that each one may not be sustained throughout the project duration. There is a chance that the project is scaled across other blocks in Jharkhand, rendering the external control contaminated. There is also a chance that the internal control cannot be maintained for practical or political purposes, or through spill-over effects, rendering the internal control contaminated. Using two approaches mitigates these risks. The midline and endline surveys will measure contamination/spillovers to assess the continued validity of the evaluation design.

It is possible that the internal control is only maintained until the midline and then implementation in the control areas within the project blocks goes ahead in the second half of the project. This would mean that this approach is dropped from the evaluation at the endline. This can be assessed at the time of the midline.

2.3.2 ITT vs ATT

The evaluation will use a panel of households that are revisited at baseline, midline and endline.

Both evaluation models will use a difference-in-differences estimator applied to a panel of households selected at the baseline; whereby changes in average levels of indicators over time (between baseline and midline/endline) in “treatment” households (where the project is operating) is compared with changes in “control” households (in the internal and external control areas). The difference-in-differences estimator removes the biasing effect of any time invariant unobservables that differ systematically between treatment and control areas and affect outcomes.

The evaluation will use both the Intention To Treat (ITT) and Average Treatment Effect on the Treated (ATT) specifications in the analysis.

ITT calculates changes in average outcomes for all those who were sampled (and expected to be eligible for the intervention), irrespective of whether or not they actually receive the intervention. The analysis is undertaken to understand the average effect amongst the target population to see whether the intervention is sufficient to make a difference at the population level.

ATT calculates changes in average outcomes only for those who actually receive the intervention, which is a subset of the sample if not all sampled households receive the intervention. The analysis is undertaken to understand what difference the intervention makes to the individuals that receive it.

The ATT estimates is the primary evaluation specification as the intervention is targeted at specific households and the main evaluation question of interest is the effect the intervention has on those households.

The use of the differences-in-differences estimator, and ITT and ATT specifications, are common to both evaluation models (using the internal and external controls).

For the ITT estimates, the estimate of programme impact is achieved using the following Difference-in-Differences specification:

$$Y_{hvt} = \alpha + \beta_1 Treat_v + \beta_2 Post_t + \beta_3 Treat_v * Post_t + \delta X'_{hvt} + e_{hvt} \quad (1)$$

Y_{hvt} is the outcome of interest for household h in cluster v at time t

$Treat_v$ is a dummy variable taking value 1 if the cluster was assigned JOHAR and if not, 0

$Post_t$ is a time dummy taking value 1 at endline (post-JOHAR period) and 0 at baseline (pre-JOHAR period)

X'_{hvt} refer to cluster and household-level controls

e_{ijt} is the error term

For the ATT estimates, we need to drop from the sample the households in treated villages who decided not to take up any of the JOHAR programmes, and run the following regression.

$$Y_{hvt} = \alpha + \beta_1 Beneficiary_h + \beta_2 Post_t + \beta_3 Beneficiary_h * Post_t + \delta X'_{hvt} + e_{hvt} \quad (2)$$

where, $Beneficiary_h$ is a dummy variable taking value 1 if the household is a JOHAR beneficiary and 0 for control households

As ATT uses a subset of the sample in the treatment areas (i.e. only those who actually receive project interventions), this sample is no longer representative of the whole sample and is therefore no longer well matched to the internal and external control areas. This is because of the self-selection bias that occurs from households who will actually receive the intervention likely differing systematically from households who do not receive the intervention (e.g. due to higher levels of motivation).

We need to limit the control households to households that are comparable with JOHAR beneficiaries in the treatment group, i.e. households which have an equal probability of participating in JOHAR had they been offered the programme.

As it is not known which households in the control areas would have received the intervention, this is done through Propensity Score Matching (PSM). Here, in the treatment areas, the observable characteristics of households are used in a regression to form a predictor equation of which households receive treatment or not, which generates a propensity score. This predictor equation is also applied to the control areas to estimate the probability of households in the control areas receiving the intervention, if they were in the treatment areas, and households are matched between treatment and control areas based on how close their propensity score is. Households in the control areas that are not matched to households that actually receive the intervention are dropped from the sample, as are households who receive the intervention that cannot find a match in the control areas. Therefore, only households in this area of “common support” are retained.

The limitation of the PSM approach is that it relies on the “conditional independence assumption” that there are no unobserved covariates that affect the probability of receiving treatment in the treatment areas and also affect outcomes that are not included in the PSM regression. This is mitigated through use of panel data which enables fixed effects models to remove the bias induced by any unobserved covariates (e.g. motivation) that do not vary over time. The impact of time variant unobserved covariates remains a limitation.

2.4 SAMPLING

2.4.1 Sampling strategy

As not all sampled households in the treatment areas will actually receive the intervention in practice, the effective sample for the ATT estimates will be smaller than the effective sample for the ITT estimates (which will use the full sample).

As the primary evaluation specification is the ATT estimate, the starting point is calculating the required sample for this, and then working backwards to calculate the full sample that will deliver the required effective sample for the ATT estimate.

The target for the ATT estimate agreed with stakeholders during the inception phase is a Minimum Detectable Effect (MDE, the smallest observed effect that can be said with adequate statistical confidence to be significant from zero) of a 15 percentage points increase in the primary impact indicator, total annual income. The overall project target is for a 50 percentage points change.

This would require a sample of 420 households per evaluation arm if divided across 28 clusters per arm; 15 per arm¹¹.

A cluster for this purpose is defined as a Gram Panchayat (GP), the lowest level of elected government in India that covers 5-6 revenue villages on average.

For practical reasons, the allocation of treatment and control areas within the fourteen intervention blocks selected for the evaluation would need to occur at the GP level, not the village level. This is because the interventions are delivered to a group of contiguous villages roughly analogous to a GP, and it is not practically feasible to withhold treatment to individual villages within a GP (and the spillover effects would be very high if attempted) but it is feasible to withhold treatment to entire GPs. Therefore, the evaluation needs to identify treatment and control GPs, rather than treatment and control villages. The GP therefore becomes the cluster in the sampling calculations.

This random assignment at the cluster level rather than the village level impacts on the required sample to achieve a given MDE due to increasing the effect of intra-cluster correlation which reduces the statistical efficiency of a sample and its power. There are also trade-offs between having a higher number of control clusters (and reducing the impact of intra-cluster correlation) and a better evaluation power with the practical problems this will cause the implementing teams through having more areas that they cannot implement in. 28 clusters and 15 observations per cluster was believed to be a good balance between these two competing objectives.

Within clusters, only those households who are eligible to receive the intervention will be sampled as that is the target population for the programme. They will be randomly sampled from a list of eligible households using a simple random sampling technique. Eligibility requires owning at least 0.3 acres of land and being a member of a Self Help Group. Using baseline data collected for the evaluation of the National Rural Livelihoods Mission and internal data on SHG membership by JSLPS, it is estimated that 45% of households in the intervention blocks

¹¹ This is based on the following assumptions: a baseline starting value of Rs 59,491; and an intracluster correlation of 0.06. Sampling parameters have been taken from secondary datasets (e.g. the NRLM baseline).

selected for the evaluation are eligible to receive the intervention. If the programme coverage targets are achieved, 63% of these households will receive the intervention¹².

To end up with fifteen households per cluster who receive the intervention, such that the ATT estimate is adequately powered, there needs to be oversampling to account for households who do not receive the intervention (37% using the calculations above) and attrition in the panel as households move away, drop out of the programme or do not want to be resurveyed (assumed to be 10%). In addition, there may be households who are not able to be matched with households in control areas using the PSM technique (if they are outside of the area of “common support”); an allowance of a further 10% of households is made. Therefore, just over half of the sample will not be available for the ATT estimates.

This would mean that a sample of at least 1,008 households per evaluation arm (36 per cluster) will need to be drawn, of which 90% would be available for the ITT estimates using the full sample after attrition (907) and 43% would be available for the ATT estimates (420).

There are risks that these assumptions are conservative (attrition to a six year panel may be higher than 10%, programme coverage may be less than expected, the matching may be less successful than planned) so the sample has been inflated by a further one third to mitigate the risk of the evaluation being underpowered to 1,344 per arm (48 per cluster). In addition, the number of clusters sampled in the treatment arm has been oversampled by a third (to 41 clusters and a sample of 1,968) which will give the ability to drop entire clusters if there is no implementation that occurs.

This will give a final sample of 4,656 of which 1,968 are in the 41 treatment clusters; 1,344 in 28 internal control clusters and 1,344 in 28 external control clusters.

Using expected coverage figures, this will give an effective sample of 1,209 per arm for the ITT estimates and 578 per arm for the ATT estimates, which will give an MDE of 12.0 percentage points for the ITT estimate and 13.7 percentage points for the ATT estimate.

Pessimistic assumptions would give an effective sample of 420 for the ATT estimate and an MDE of 15 percentage points, the minimum acceptable to stakeholders.

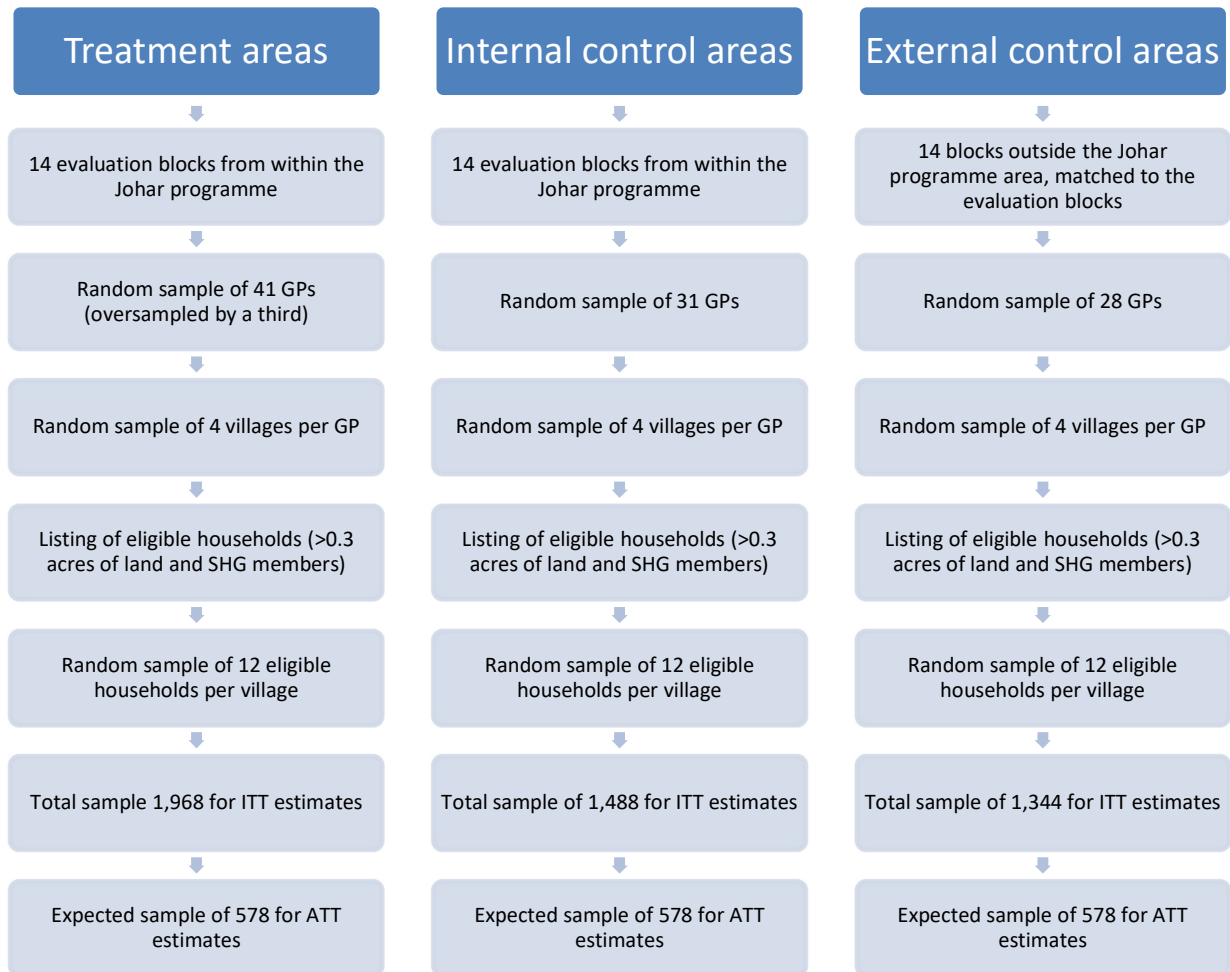
The sample of 42 per cluster will be operationalised through 12 observations in each of four villages per cluster.

During the stratified random sampling of clusters at the block level (to ensure broad representation of the fourteen evaluation treatment blocks), rounding meant that 31 GPs were selected as internal controls, adding 144 observations and bringing the total sample size to 4,800.

This is summarised on the following diagram:

Figure 2 Summary of the evaluation design

¹² This has been calculated by comparing implementation targets in the evaluation blocks with estimates of the number of households who meet the eligibility criteria in the same blocks



2.4.2 Selection of internal control areas

The random assignment of GPs to treatment and control areas within the 14 evaluation blocks generated the following assignment:

Table 3 List of assigned treatment and control clusters

District	Block
BOKARO	CHANDANKIYARI
DHANBAD	PURBI TUNDI
EAST SINGHBUM	GHATSHILA
EAST SINGHBUM	PATAMDA
EAST SINGHBUM	POTKA
GUMLA	SISAI
KHUNTI	KHUNTI
LOHARDAGA	BHANDRA
RAMGARH	MANDU
RAMGARH	PATRATU
RANCHI	ANGARA
RANCHI	BERO
RANCHI	CHANHO
RANCHI	KANKE

2.4.3 Selection of external control areas

We propose to use matching methods to sample control blocks that closely match treatment blocks. Essentially, matching limits the sampling frame of blocks to statistically identical treatment and control blocks. This is done by matching and comparing outcomes for units in the treatment group with control units that are as similar as possible to each other according to a set of relevant observable characteristics, i.e. comparing like with like only. In this study we propose to use Propensity Score Matching (PSM) which is one among the many established matching methods.

PSM is a two-stage analytical approach that employs a propensity score as a 'comparator metric' that summarises the information of the set of relevant characteristics, i.e. the ones that drive selection bias. This propensity score can also be interpreted as an estimation of the hypothetical probability of any individual being in the treatment group, given its characteristics. The first stage of any PSM analysis is to compute a valid propensity score for each unit of observation. The second stage is to then compare outcome indicators of interest across units (i.e. blocks in this case) with similar propensity scores.

PSM first stage model selection

The starting point for the PSM analysis was to select variables that were likely to be relevant and valid to be used for this analysis from a theoretical perspective. 'Relevant' implies that variables selected were theoretically expected to be correlated with treatment status and treatment effects, thereby introducing selection bias in a simple comparison of treatment outcomes between control and treatment groups.

To be 'valid', variables had to be unaffected by the programme. This is not an issue in this case, as matching is being implemented at baseline.

Second stage algorithm selection

There are a variety of algorithms available to implement the second stage of PSM, i.e. to match control and treatment units to each other based on the propensity score estimated in the first stage. For all approaches, the goal is to find appropriate (i.e. sufficiently similar) control group

members for treatment group members. We follow Caliendo and Kopeinig (2008) in determining the appropriate algorithm for this study¹³.

Selecting the appropriate matching algorithm for a PSM exercise is not straightforward and requires careful analysis of how well-balanced samples are after employing algorithms with certain sub-specifications. In general, however, the selection of models is based on a bias/variance trade-off in the estimated treatment effect. To find the optimal estimation model, we propose to use kernel matching algorithms with different bandwidths and trimming levels. These different results will be compared with respect to the best balancing properties, with the best performing approach being selected as the optimal one.

The precise set of indicators for matching blocks is still being finalised but the two main indicators will be SHG coverage and maturity of the community institutions base (from NRLM MIS data) and the proportion of land under irrigation and vegetable cultivation (from GIS data). Blocks where other interventions are being delivered (e.g. where PRADAN is operating) will not be considered, along with blocks in agro-climatic zones (e.g. Ganga basin) where JOHAR is not operating.

2.5 SURVEY INSTRUMENTS

The impact evaluation will administer different quantitative survey instruments to sampled households in the assigned GPs using Computer Assisted Personal Interviewing (CAPI) to capture data during the survey rounds.

The range of survey instruments that will be used are as follows (at every survey round unless stated otherwise):

1. Household questionnaire administered to male and female respondents of sampled households
2. Village questionnaire administered to key informant(s) in every sampled village
3. VO questionnaire administered to VO members in every sampled village
4. SHG questionnaire administered to SHG members of sampled SHGs
5. PG questionnaire administered to PG members of sampled PGs at midline and endline

The household questionnaire is the main survey instrument, which will capture data required for the analysis and will include the following schedules;

1. Survey details
2. Household roster
3. Household details
4. Income
5. Consumption expenditure
6. Diet
7. Coping strategies and access to finance
8. Knowledge and skills
9. Assets
10. Agriculture
11. Livestock
12. Fishery
13. NTFP

The village, VO, SHG, and PG questionnaires will capture data to control for village, VO, and SHG characteristics respectively.

For the development of these quantitative survey instruments, the impact evaluation team will compile and review relevant existing survey instruments available in the public domain and adapt them for the JOHAR impact evaluation. The process to finalise them will involve receiving

¹³Caliendo, Marco, and Sabine Kopeinig. "Some practical guidance for the implementation of propensity score matching." *Journal of economic surveys* 22.1 (2008): 31-72.

feedback from experts and stakeholders as well as at least 3 rounds of field testing and refinement.

BLOCK LIST FOR QUASI-EXPERIMENTAL DESIGN CONTROL GROUP

#	DISTRICT	BLOCK
1	BOKARO	GUMIA
2	BOKARO	NAWADIH
3	DEOGHAR	PALJORI
4	GIRIDIH	DUMRI
5	GUMLA	BHARNO
6	GUMLA	DUMRI
7	HAZARIBAGH	DADI
8	RAMGARH	CHITARPUR
9	RANCHI	ITKI
10	RANCHI	NAMKUM
12	SIMDEGA	PAKAR TANR
13	SIMDEGA	THETHAITANGAR
14	WEST SINGHBHUM	NOAMUNDI

BLOCK LIST FOR LIVESTOCK COMPONENT OF ANALYTICAL STUDY

#	District	Block
1	DUMKA	Masalia
2	LATEHAR	Barwadih
3	LATEHAR	Manika
4	PAKUR	Pakaur
5	PAKUR	Pakuria
6	PALAMU	Chainpur
7	PALAMU	Chhatarpur
8	PALAMU	Patan
9	SIMDEGA	Kurdeg
10	WEST SINGHBHUM	Jhinkpani