

Terms of Reference (TOR) for engaging External Agency to undertake Baseline survey on Crop Residue Management in Kaithal and Kurukshetra districts, Haryana

About Us

S M Sehgal Foundation is a rural, grassroots implementing NGO that operates across 12 states of India, reaching over 4.2 million people and counting. The organization's mission is to achieve positive social, economic, and environmental change across rural India. It works to address critical issues concerning food security, water security, and good governance, with a focus on the empowerment of women and children. The foundation brings together a dedicated team of experts who create sustainable programs and work directly alongside rural communities to better manage their water resources, increase their agricultural productivity, strengthen and articulate their vision for village development, and transform the lives of youth and schoolchildren. S M Sehgal Foundation has five main program areas: Agricultural Development, Water Management, Local Participation and Sustainability, Transform Lives *one school at a time*, and Outreach for Development.

As part of its project on "Promoting sustainable agriculture with effective Crop Residue Management (CRM)", the foundation is seeking to hire an agency to conduct baseline survey for paddy crop residue management in select villages of Kaithal and Kurukshetra districts of Haryana.

Broad Tasks and Deliverables

1. Conduct baseline survey in the intervention villages of Kaithal and Kurukshetra, Haryana.
2. Attend brainstorming and review meetings to discuss methodology and sampling design with team members of SMSF (biweekly).
3. Create detailed baseline study report mapping key indicators to act as benchmark for future evaluation purpose.
4. Provide raw data and interview transcripts, along with audio-visual attachments and/or photographs as necessary.

Project Overview

In October and November every year, smoke engulfs India's Indo-Gangetic Plains (IGP) due to the burning of rice stubble by farmers, especially in the states of Haryana and Punjab. The IGP, also known as the "Food Bowl of India," spreads across the states of Haryana, Punjab, Uttar Pradesh, Bihar, and West Bengal. In this region, approximately 12 million hectares are accounted for rice-wheat crop rotation. The stubble is left behind after harvesting with Combine Harvesters, and farmers burn it in the field because manually removing it is not cost-effective. However, crop burning harms soil health, human health, and the environment. To address this issue, SMSF is implementing a project to provide

sustainable solutions for crop residue management, with a focus on improving soil health and crop productivity.

The primary objectives of the project are:

1. Promote adoption of good agricultural practices including sustainable management of crop residue with no burning.
2. Demonstrate technologies and better practices to improve crop productivity.
3. Build capacities of farmers and communities at large on alternatives to crop residue burning.

To ensure targeted interventions generate desired impact, the foundation is looking for a credible research agency to conduct a baseline survey and create a detailed baseline report that will establish reliable baseline data for the project. The baseline survey will establish benchmark values as per the objectives of the project in order to track changes happening in due course of project intervention. The baseline survey will include key stakeholders of the project, and the results of the baseline survey will establish the reference data of key indicators for the project.

Interested research agencies should submit their technical proposal outlining the methodology and the financial proposal at the earliest.

Objective of the Survey

To this end, SMSF seeks to engage an external agency to undertake a baseline survey of the project. The objective of conducting a baseline survey, is to gain an understanding of the current status, challenges, and opportunities related to crop residue management practices in the identified districts. Broadly, the survey aims to collect information on the quantity and extent of crop residue burning, as well as the availability and use of alternative crop residue management practices and crop diversification in the selected geography.

This survey is expected to provide information on following vital indicators:

- Community, social and demographic variables such as age distribution, gender characteristics, literacy levels, caste & religion, educational levels etc.
- Economic variables like income levels and sources, land holding pattern in the community, number of small and marginal farmers, current agricultural practices and cost-benefit analysis of lead crops.
- Status of women participation in agriculture and allied activities, as well as in non-agriculture activities
- Environment variables such as soil organic carbon status changes, spatial / imagery proof / showing the trend of CRB, shift in pre and post-monsoon CRM solutions adopted to address

CRB, Modelling changes in PM2.5 exposures, and trends of gas emission / residue burning over the past five years in the selected geography.

- Availability of farm machines such as Super Seeder, tractors owned or rented out; current rental models, types of tractors, and other machinery used in CRM.
- Government schemes/ services available and availed by the people in the project locations.
- Provide information and recommendations to minimize the crop residue burning practices.

Project Intervention Locations:

100 villages of Kaithal and Kurukshetra districts, Haryana.

Duration of the study:

Three-months from the date of signing the agreement.

Submission Criterion:

1. Proposal for the study – to include objectives, methodology, timeline, team credentials and budget.
2. Credentials of the organisation and projects handled.
3. The agency should have relevant thematic experience of working in the social sector (at least 5-6 years), specifically on Sustainable Agriculture Development and expertise in the application of digital tools. Experience of working with non-profit organisations and international donors is desirable.
4. The selection of research agency will be done considering the soundness of the technical proposal along with the feasibility of the financial proposal.
5. The costs allowable will be limited to reasonable, allocable, and necessary costs.
6. Interested agency should submit their technical and financial proposal by April 15, 2023 to niti.saxena@smsfoundation.org