



RESEARCH PROGRAM ON
**Climate Change,
Agriculture and
Food Security**



Organizational Midline Study **Vaishali, Bihar State, India**

Authors:

Pratyaya Jagannath

Raj

Mansi Nagpal

Arun Khatri-Chhetri

Organizational Midline Study: Vaishali, Bihar State, India

CGIAR Research Program on Climate Change,
Agriculture and Food Security (CCAFS)

Pratyaya Jagannath, Raj, Mansi Nagpal and Arun Khatri-
Chhetri

Interviews and original report by: Kanchan Kargwal,
Namrata Sharma, and Sanjay Prasad

Correct citation:

Jagannath P, Raj, Nagpal M, Khatri-Chhetri A. 2020. Organizational Midline Study: Vaishali, Bihar State, India. CCAFS Report. Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Available online at: www.ccafs.cgiar.org

Published by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT). The Program is carried out with funding by CGIAR Fund Donors, Australia (ACIAR), Ireland (Irish Aid), Netherlands (Ministry of Foreign Affairs), New Zealand Ministry of Foreign Affairs & Trade; Switzerland (SDC); Thailand; The UK Government (UK Aid); USA (USAID); The European Union (EU); and with technical support from The International Fund for Agricultural Development (IFAD).

Contact:

CCAFS Program Management Unit, Wageningen University & Research, Lumen building, Droevendaalsesteeg 3a, 6708 PB Wageningen, The Netherlands. Email: ccaafs@cgiar.org

Creative Commons License

This Report is licensed under a Creative Commons Attribution – NonCommercial 4.0 International License.

Articles appearing in this publication may be freely quoted and reproduced provided the source is acknowledged. No use of this publication may be made for resale or other commercial purposes.

© 2020 CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

DISCLAIMER:

This Report has been prepared as an output for the CCAFS Priorities and Policies for CSA Flagship under the CCAFS program and has not been peer reviewed. Any opinions stated herein are those of the author(s) and do not necessarily reflect the policies or opinions of CCAFS, donor agencies, or partners. All images remain the sole property of their source and may not be used for any purpose without written permission of the source.

About the authors

Pratyaya Jagannath is the Managing Director at Kabil Professional Services.

Raj is a consultant at Kabil Professional Services.

Mansi Nagpal is a Consultant (Project Scientist) at CCAFS South Asia.

Arun Khatri-Chhetri is former Science Officer at CCAFS South Asia.

Contents

Introduction.....	5
Organizations interviewed	6
Inconsistencies and challenges	8
Summary of activities	9
Natural resource management.....	9
Preparation to withstand extreme events	10
Reduction of risk due to climate variability	10
Activities' relationship to climate change	10

Introduction

The Consultative Group on International Agricultural Research (CGIAR) Research Program on Climate Change, Agriculture and Food Security (CCAFS) is a major research partnership that works in five regions, namely South Asia, South-East Asia, East Africa, West Africa, and Latin America. When CCAFS began in 2011, baseline surveys were carried out in 21 research sites across 17 countries within these five regions. The surveys were conducted using standardized baseline tools in each site, which included a quantitative household survey, a qualitative village study and an organizational survey.

Seven years after the baselines were conducted in South Asia, CCAFS conducted the midline study. The midline study compared findings with information collected at the time of the baseline to track the performance of the Climate-Smart Villages (CSV) sites and measure the impact on beneficiaries. With a few improvements, the same standardized tools were used again to carry out the midline surveys to ensure comparability with the data collected previously.

In 2011, CCAFS conducted a baseline study in India which included a household survey, a qualitative village study and an organizational survey at two CCAFS sites, namely in Karnal district in Haryana and Vaishali district in Bihar. To measure the impact of the program, the BISA-CIMMYT conducted a midline study containing the same three different components, i.e., Household Midline Surveys (HMS), Village Midline Surveys (VMS), and Organizational midline surveys (OMS). This report summarizes the findings from the Organisational Midline Survey (OMS) carried out in June 2019. CCAFS' organizational-level midline studies supplement the quantitative household midline surveys and the qualitative village midline studies conducted at the same locations.

For this study conducted in Karnal district, ten organizations were consulted on their farming activities, the impact of climate change and/or state of natural resources. A total of nine different organizations working or collaborating with farmers in Vaishali were then interviewed.

The Household Midline Survey and Village Study established crop production as the main occupation in the area, specifically in integrated livestock and agricultural systems.

The objectives of the organizational midline study are to:

- Provide indicators to allow us to monitor changes in behaviors and practices of locally relevant organizations over time
- Understand the provision of information/services at the local level which guides farmers' decision making, including their livelihood strategies in response to climate change's impacts

Organizations interviewed

As a part of the study, CCAFS conducted participatory village mapping exercises in Mukundpur village. During these exercises, mappings were done with village respondents to define the institutional landscape. These exercises were done with men and women respondents separately.

Further, participants were asked to prioritize by listing only the most important institutions impacting people's lives. Proximity to the village was also considered with participants placing the institutions in three different circles representing ease of access. The participants also indicated the degree of involvement and activeness of the organization as well as provided details on the services offered.

A total of six organizations were among those listed due to their participation in food security and Natural Resource Management (NRM) related issues.

Following this participatory exercise to identify the relevant organizations in the area under study, interviews were conducted with nine different organizations active in the Vaishali site. A guided questionnaire developed by BISA-CIMMYT was used to collect information. The organizations which were not involved in food security or NRM related issues were not considered for an interview.

The village survey generated a list of nine organizations active in the Vaishali site.

The table below details the different activities undertaken by each of the nine organizations selected for interview:

Organisation	Main areas of activity
Anganwadi	<p>The Anganwadi is a village/ hamlet level organization of the Department of Welfare and Health which runs under the Integrated Child Development Services program (ICDS). The Anganwadi focuses on the nutritional and health needs of children (under the age of 6 years) as well as on pre and post-natal care for women. It provides food, preschool education, primary health care, immunization, health check-up, and referral services.</p> <p>The Anganwadi worker of Munkundpur was interviewed.</p>
PI (Gram Panchayat)	<p>Last-mile system of local self-governance in the Indian democracy. The elected members, namely the ward members and the Sarpanch, facilitate the governance and implementation as well as monitoring of all government-related projects and schemes.</p>
Sarsai Dudh Upadhak Sahayog Samiti - ASMA DAIRY (Dairy Cooperative Society)	<p>The society is a cooperative society organization of milk producers operating at the local level which collects milk from dairy farmers to be sold via the District Milk Union (Sudha Dairy Cooperative). The society also supplies quality feed, fodder seeds, veterinary services and training on livestock management, animal health and animal hygiene.</p>
Panch Murti Farmers' Producers' Company	<p>The company promotes vermicomposting, mushroom cultivation, quail farming, and Zero Budget organic farming to farmers. It also encourages low-cost farming activities which support intensified production while ensuring a sustainable use of land.</p>
Public Distribution System (PDS)	<p>A government licensed shop, it ensures the distribution of food grains and other essential commodities to households benefiting from the food security social welfare scheme.</p>
Jeevika (Bihar Rural Livelihood Promotion Society), Rajapakar Block	<p>The Jeevika organizes women into savings and credits Self Help Groups. It also supports access to credits through the banks. The Jeevika also promotes farm and off-farm livelihoods for women.</p>
Added organizations	<p>Activities and/or why they are included</p>
Biodiversity	<p>The organization was included because it is engaged in the transfer of farm technology to farmers and is thus relevant to agriculture and food security. The organization researches new rice and wheat varieties for testing and promoting as well as organizing training for farmers' groups</p>
Eliminated organizations	<p>Why they were not included</p>
School	<p>The school is not directly related to food security, agricultural development, and/or weather or climate change.</p>
MFI	<p>The MFI is mostly involved in lending for credits and has no direct involvement in NRM or food security related issues.</p>
Bank	<p>No direct involvement in NRM, food security or climate change related issues</p>
Electricity Department	<p>No direct involvement in NRM, food security or climate change related issues</p>

Inconsistencies and challenges

During the interviews with the organizations' representatives, the respondents mentioned several activities being implemented in the field. These activities were also commented on by the villagers during the focus group discussions (FGDs) and households' surveys as well as during informal interactions. Some inconsistencies were found and are discussed below.

The Jeevika is a pioneer in the promotion of sustainable rural farming livelihoods through its efforts to promote of agroecological techniques such as the selection and treatment of quality seeds, improvements of soil nutrients, better water management, and the promotion of integrated and non-chemical pest management solutions. The Jeevika thus plays an important part in improving the overall agricultural productivity. During the household surveys and the FGDs, respondents reported that Jeevikais active in all villages. However, its agroecological and NRM work was not pointed out.

While all installed pumps for groundwater extraction are powered by electricity, no link was made with the related depletion in the groundwater table.

There has been an increase in livelihood diversification since the baseline study was conducted. This can be explained by the erratic and low rainfall over the past few years which pushed villagers to search for alternative livelihoods and sources of income. Regarding livestock related livelihoods, the respondents identified the dairy cooperative to be a more important actor than the Department of Animal Husbandry.

Respondents identified the following as being their main challenges in delivering services and providing information to farmers:

- Inadequate allocation of funds, time and human resources
- Many of the organizations have stopped working in the area (IFFCO, CIMMYT among others)
- The overall area remains resource-poor even if it situated close to the rivers Ganges and Gandak. The irrigation facility is still under development.
- The rainfall in the last few years has been below average which led to many rice and wheat plots failing.
- Farmers are still apprehensive of organic farming due to the fear that this would reduce the plots' productivity.
- There have been important procedural delays in the identification of target groups for benefits

Summary of activities

Based on the information obtained from the organizational surveys, the most important objectives pursued by the various organizations are:

1. Provision of modern agricultural technologies through extension and demonstration
2. Ensuring nutritional health and food security through the Anganwadi
3. Supporting access to credits for farmers through various institutions
4. Ensuring collection of milk with a better price for farmers
5. Promoting fodder production
6. Facilitating the marketization of produces (inputs and outputs)

Natural resource management

Natural resource management refers to the management of natural resources such as land, water, soil, plants, and animals, with a particular focus on how this management affects the quality of life for both present and future generations. As per the organizational survey, three of the organizations mentions natural resources management as part of their current objectives or activities:

Biodiversity International mentions the promotion of agroforestry with mango plantation. Biodiversity International also promotes composting among farmers.

The Panch Murti Farmer's Producer's Company is supporting soil enrichment by promoting vermicompost. It also promotes organic farming practices among farmers.

Finally, the Gram Panchayat (PI) has been disseminating information through a door-to-door campaign on the consequences of depleting the groundwater table and the importance of water management. The Gram Panchayat is also instrumental in supporting the installation of drinking water infrastructures across the Panchayat. The Panchayat has also been using the Mahatma Gandhi National Employment Guarantee Scheme (MGNREGS) to support the rehabilitation of water bodies.

Preparation to withstand extreme events

In extreme weather conditions, the Gram Panchayat assists farmers through the provision of financial help and also facilitates access to technologies and information. This is generally channelized through the Block Office. During floods and droughts, the Gram Panchayat also arranges grants from the government and provides diesel subsidies. According to the FGDs participants, the IFFCO Foundation was previously offering weather-based insurance to farmers but this has stopped as the foundation is no longer working in the village.

Reduction of risk due to climate variability

The Panch Murti Farmer's Producer's Company is involved in Zero Budget Natural Farming activities and is accompanying farmers to better plan for their crops as per their land quality and size to make the optimal use of the soil and water available. The company has also helped farmers diversifying their livelihoods portfolio by rearing quail and engaging in mushroom farming. As the plot productivity has gone down due to erratic rainfalls, the diversified livelihoods option has helped built farmers' resilience.

Moreover, Biodiversity International, through its provision of mango saplings to farmers, helped create mango plantations on the farmers' fields which can provide alternative sources of income. The organization also organized trainings at the village level to inform farmers on the suitable conditions for the growing of mangoes. This included on farm trainings and field visits to successful farms.

Finally, the Gram Panchayat has been involved in village-level planning for the creation of community infrastructure which take into account climate variability and extreme events and is instrumental in seeking budgetary provisions through the MGNREGS.

Activities' relationship to climate change

Although the events mentioned in the above sections might be indirectly related to climate change mitigation, their main objectives are not directly linked to tackling climate change-related issues. The following section details on the organizations who directly associate their work to efforts to mitigate

and adapt to climate change-related negative impacts. For instance, this include the activities related to water conservation and water management as they attempt address the issues of the overexploitation of groundwater and subsequent depleting groundwater table partially due to increasing rainfall variability and instances of drought

Moreover, Biodiversity International has been testing new drought resistant crop varieties among farmers. Drought resistant Varieties are provided to the farmers free of cost for rice (Suganda 5 and PNR 381), and wheat (HD2967). New agricultural practices were also demonstrated on farm by senior scientists with additional information and tips provided. Village level trainings were provided by demonstrating the suitability of farms to particular crops. Exposure visits were also arranged by a lecturer of the Central Agricultural Unviersity, Pusa for the farmers to gain a better understanding of crop suitability in the face of climate change.

Eventually, public awareness of climate change issues is restricted to erratic rainfall. As observed during the village study, the surface water table is still not highly depleted. However, the issue remains regarding the exploitation of shell aquifers through boreholes. Currently, all these pumps and boreholes are adjacent to the households. Unlike Haryana, the pump sets are still not installed on the agricultural fields. Water harvesting through various methods is essential and needs to be more widespread.