



SHOUHARDO III - CARE Bangladesh

Harvesting the Outcomes of SHOUHARDO III's Local Service Provision Model of Micro Seed Dealers and Micro Seed Retailers (MSD/MSR)



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Acronyms

BADC	Bangladesh Agricultural Development Corporation
DAE	Department of Agricultural Extension
DHRC	Deep Haor and Remote Char
HH	Household
IGA	Income-Generating Activities
IPM	Integrated Pest Management
LSP	Local Service Providers
MSD	Micro-seed Dealer
MSR	Micro-seed Retailer
OH	Outcome Harvesting
PEP	Poor and extreme-poor
SAAO	Sub Assistant Agriculture Officer
SHOUHARDO	Strengthening Household Ability to Respond to Development Opportunities
S3X	SHOUHARDO III extension
VSLA	Village Savings and Loan Associations

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Introduction

Strengthening Household Ability to Respond to Development Opportunities (SHOUHARDO) III is a Resilience Food Security Activity (RFSA) funded by the United States Government through the United States Agency for International Development/Bureau of Humanitarian Assistance (USAID/BHA), with complementary funding from the Government of Bangladesh (GoB). SHOUHARDO III works at 947 villages in char and haor regions to improve the lives of 725,611 people from 170,298 households (HH). The program seeks to improve access to public and private services for the rural poor while building their resilience. The SHOUHARDO III program, originally from 2016 to 2020, was extended for two years with additional funding to capitalize on and improve the local resources and leadership in order to sustain the interventions that have been in place since 2016. This extension phase (hereinafter as S3X) focuses on two major principles: 1) testing, identifying, and promoting service provision models by the public, private, and community-based organizations and service providers; and 2) mobilizing communities to engage with these service providers to ensure sustained benefit (SHOUHARDO III, CARE Bangladesh, 2022 a). As a result, S3X emphasizes local service provision models to create a broader spectrum of service provision for poor and extreme-poor (PEP) households (HH) to enhance their livelihoods and improve their income. In most of the program areas, the Local Service Providers (LSPs) are at the core of this service provision model and are designed to be implemented in hard-to-reach locations where public and private services are scarce (SHOUHARDO III, CARE Bangladesh, 2022b). SHOUHARDO III selected, trained, and is engaging LSPs from various service provisioning sectors to improve their technical and relevant soft skills and linkage-building capabilities to sustain the program impacts and enable efficient service provisioning by harnessing the local resources.

One of the essential factors in enhancing agricultural productivity in any farming system is the use of high-quality seeds. “Quality seed, also termed as healthy seed, is defined as varietally pure seed with a high germination percentage, free from disease and disease organism, and with a proper moisture content and weight” (Singh and Jain, 2014). High-yield varieties that are suitable to the production area, and have pathogen-pest-lodging-shatter resistance, as well as other desired features, are essential for optimum crop productivity and yield (G Elias, 2018). The aim of food self-sufficiency and guaranteed food security, as stated in the National Agriculture Policy (NAP) (Ministry of Agriculture, Government of Bangladesh, 2018), can be attained through the effective distribution of inputs and support services. For example, greater agricultural output necessitates the timely delivery of high-quality seeds in sufficient quantities. Bangladesh Agricultural Development Corporation (BADC), NGOs, and the private sector participating in seed production, procurement, and distribution can provide 20% of the total national demand, whereas BADC's contribution is 13% (Bangladesh Agricultural Development Corporation, Ministry of Agriculture, 2014). Although the contribution to national demand rose from 5-6% (Mandal, 2006) since 2006, the percentage contribution is still insufficient to cater to the national good quality seed demand. SHOUHARDO III aims to ensure sustainable agriculture and access to quality agro-inputs for the PEP population in the deep haor and remote char (DHRC) areas. The program developed seed sellers as the LSPs (under on-farm result area) at the community level who can reach the most remote locations where public and private services are insufficient. According to Mondal (2010), there is a lack of quality seeds in Bangladesh which affects the quality crop production. Although NGOs and the private sector are trying to compensate for this scarcity, they lack the facility of standard seed preservation and processing techniques; BADC is the only entity with such facilities. SHOUHARDO III planned to intercept this through building linkage with local seed-related resources to contribute to its sustainability agenda for the farmers. The program engaged with private seed companies of Bangladesh, including Lalteer, Brac Seed, Metal Seed, Syngenta, and Ispahani, to strengthen the seed distribution mechanism for the PEP farmers in program areas.

As per the programmatic definition of SHOUHARDO III, there are two types of seed sellers - 1) Micro-seed Dealers (MSD) and 2) Micro-seed Retailers (MSR). The MSDs are wholesale seed sellers who have a business in several unions. They have a direct relationship with seed companies, and received training (from the private companies) on seed variety, transaction process, and other technical information. They sell seed in bulk quantities and provide farming advisories to the MSRs and farmers. The MSDs usually have a shop/outlet in the local market where they also sell other agricultural products, such as fertilizer, pesticides, equipment, and seed. (SHOUHARDOIII, CARE Bangladesh, 2020a).

The MSRs, on the other hand, are at the forefront of transacting with village-level farmers and exist at the end of the supply chain in the vegetable and field crop seed market. An MSR usually sells seeds in a maximum of two villages. They receive information about seed variety, seasons, and quality from the MSDs on a need-basis. The MSRs are based at the neighboring locations to the communities compared to the MSDs. The MSRs sell seed in the market openly and might not have a dedicated place or shop.

Table I: Characteristics and scope of work Micro Seed Dealers and Retailers

Criteria	Micro Seed Dealer	Micro Seed Retailer
Business territory	Numerous unions	Only cover 1 or 2 villages
Capacity building	The company provides training on its seed variety, transaction process, technical information	Dealer provides information about variety, seasons, quality
Sales volume	Wholesale	Retail
Channel location	Direct relations with seed companies	Maintain relations with dealers and provide direct services to the community
Embedded service for producers	Lower price; provide knowledge to the farmers about which seeds would be good for quality production; short duration variety; high yielding variety; production processes on particular seeds	Making seeds available at the doorstep as they sell seeds in the neighborhood
Price for producers	Urge for a lower price through negotiations	Price quoted in packets
Business station	Only fixed-place	Both fixed-place and roaming

Background

SHOUHARDO III aims to ensure sustainable agriculture and livelihood for its beneficiaries. Part of this entailed forming community groups consisting of both men and women farmers, as well as increasing their capability in terms of quality seeds, agricultural technology, input and output markets, and connections with public and private actors. In agricultural production and supply, high-quality seeds are essential (FAO, n.d.). High-quality or good seeds are FAO (2018) “genetically pure, characterized by a high germination percentage and appropriate moisture content; they are free from diseases and have a high content of pure seeds and no weed seeds” (FAO, 2018). In Bangladesh, the seed standard authority is the National Seed Board which publishes the seed standard for all the crops (Iqbal and Toufique, 2022). Iqbal and Toufique (2022) also mention that good quality seeds are those which are certified by the certification agencies; however, because of weak institutional strength in developing countries, the quality of the seeds often cannot be ensured. A high germination rate is often an essential indicator of good quality seed. FAO (2018) defines germination rate as “the percentage of the pure seed with the ability to germinate and that can develop into normal seedlings under appropriate conditions of optimum moisture, temperature, and light.” The germination rate can be calculated by dividing the number of seeds sprouted by the number of total seeds sprouted, then multiplied by 100 (Burke, 2019). SHOUHARDO III works in remote communities where the poor and extreme poor (PEP), particularly female farmers, lack expertise and access to high-

quality seeds. The program attempted to develop a comprehensive mechanism that will address challenges like remoteness, travel expense reduction, mobility issues of female farmers, the inadequate policy of local-level Department of Agricultural Extension (DAE) regarding staff movement and accountability, unavailability of seeds, and technical advice.

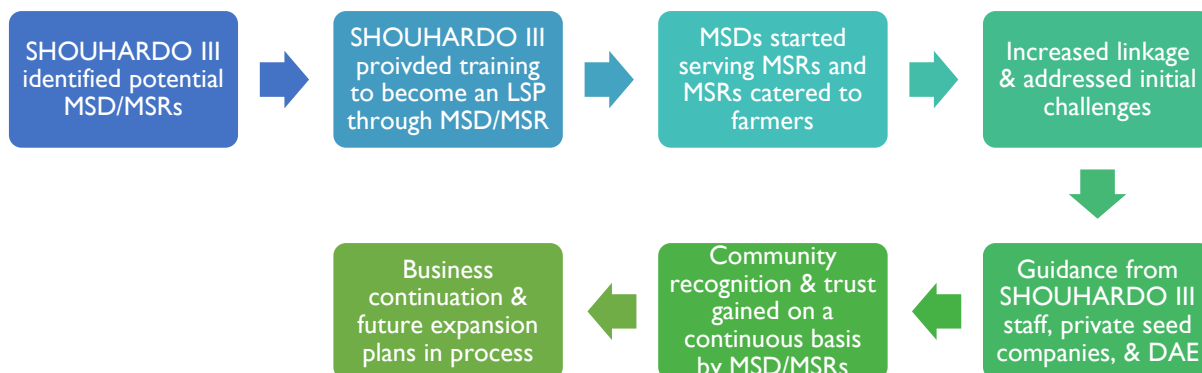


Figure 1: Flowchart of SHOUHARDO III's approach toward the MSD/MSR model

As a result, the program developed Micro-seed Dealers/ Micro-seed Retailers (MSDs/MSRs)¹ as the Local Service Providers (LSP) in 2019 to strengthen their effort in delivering agricultural inputs and enhance knowledge among farmers efficiently at the village level and in a sustainable manner. The program considered three aspects – affordability, accessibility, and availability while developing the MSD/MSRs to take the local leadership in agri-inputs and seed sales. Furthermore, the program engaged MSDs/ MSRs to strengthen the supply chain to provide quality seed to the last mile users, especially in remote communities. The program also coordinated with the private seed companies² so that MSDs could have seeds per their requirements. In general, MSRs are selling/supplying seeds within their village, and MSDs conduct business beyond their villages, including seed supplies to MSRs.

A total of 16 MSDs (all male) and 561 MSRs (Female: 84 and Male: 477) are currently working in the program areas¹

¹ MSDs/MSRs are considered as one single unit of LSP under on-farm result area. The MSRs sell their products to the small farmers, while the MSDs customers serve MSRs and small farmers.

² Lalteer, Brac Seed, Metal Seed, Syngenta, and Ispahani



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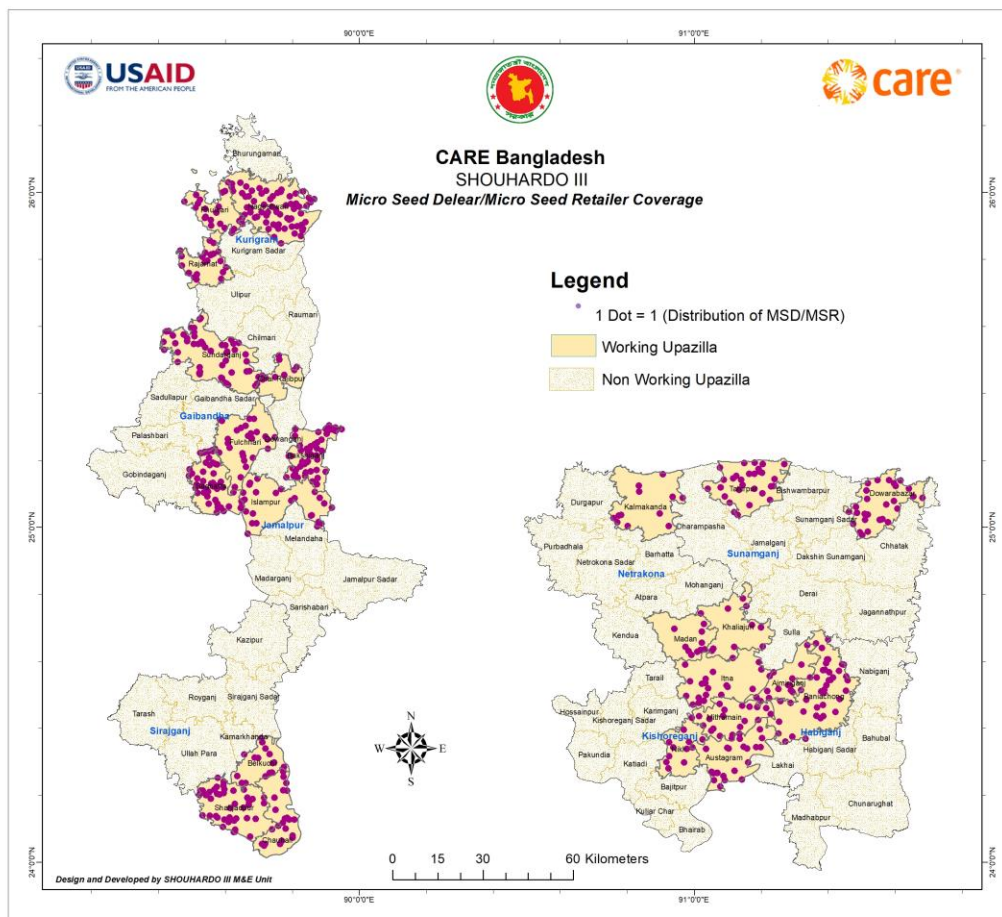


Figure 2: LSP coverage – MSD and MSR as of June 2022

Table 2: Number of MSDs and MSRs as of May 2022							
Area	MSD			MSR			Grand Total
	Female	Male	Total	Female	Male	Total	
Char	0	0	9	27	334	361	370
Gaibandha		0		4	113	117	117
Jamalpur		2	2	1	47	48	50
Kurigram		7	7	14	101	115	122
Sirajganj		0		8	73	81	81
Haor	0	0	7	57	143	200	207
Habiganj		1	1	21	27	48	49
Kishoreganj		0		5	64	69	69
Netrakona		4	4	2	26	28	32
Sunamganj		2	2	29	26	55	57
Grand Total	0	16	16	84	477	561	577

Synopsis of Pilot study on MSD/MSR model 2019:

SHOUHARDOIII, CARE Bangladesh (2020a), SHOUHARDOIII, CARE Bangladesh (2020b).

SHOUHARDO III conducted a pilot study in September-October 2019 to assess the MSD/MSR models so the program can strengthen its effort in delivering agricultural inputs and enhance knowledge among farmers efficiently and in a sustainable manner. The study involved interviews with 16 MSDs and 16 MSRs from five Upzilas.

The pilot study confirmed the field activation of the planned interventions from SHOUHARDO III's extension phase. The summary of the findings is as follows:

- The study confirmed that the MSDs are the seed wholesalers who were connected with the private seed companies before SHOUHARDO III considered harnessing their strength to build capacities, access, and improve the business of MSRs.
- Almost all MSDs were in the seed-selling business for a long time; the findings suggested that MSDs were more experienced than MSRs, as 13 (out of 16) MSDs had more than five years in selling agricultural inputs compared to six (out of 16) MSRs.
- To reach the last mile farmers, the MSRs (12 out of 16) were playing a vital role in terms of providing technical support to the farmers at different stages of cultivation compared to half of MSDs (9 out of 16).
- MSDs deal with big companies, MSRs, and some farmers (both wholesale and retail). MSRs deal with only farmers and retail.
- The source of information for MSRs is mostly MSDs and few companies. The MSDs have good connections with private companies and get information from them.
- Farmers preferred buying small packets of seeds from the retailers, especially vegetables. Large grower farmers usually bought bulk seeds of rice from the MSDs.
- The female customers, according to the respondents, mostly demanded seeds that were of local varieties, short-cycled, and rich in nutritious value; these were shared mainly by respondents that sold vegetable seeds. It appeared that women, in particular, had a high demand for vegetable seeds.
- Respondents shared that most farmers would buy rice, maize, mustard, and vegetable seeds.
- In terms of income, the study found that Haor, in general, had a higher income than Char-based MSD/MSRs. Tables 3 and 4 show the weekly income category of the 32 MSD/MSRs interviewed. The minimum income amount for MSDs was BDT 1,575 (USD 17.65), and the maximum amount was BDT 52,516.16 (USD 5,885) reported by the respondents of the pilot study. For the MSRs, the lowest income reported was BDT 1.07 (USD 0.012), and the highest was BDT 2,1006.57 (USD 235.4).

Table 3: The volume of weekly income (in BDT and USD) for MSD and MSR in the Char region					
Weekly sale		Number of MSRs	Weekly sale		Number of MSDs
In BDT	In USD		In BDT	In USD	
Below 5,061	0.012- 58.85	4	Below 25,305	Below- 294.25	5
5,061 - 10,122	58.86 - 117.70	2	25,306 - 50,611	294.26 - 588.5	1
10,123 - 15,183	117.71 - 176.55	1	50,612 - 75,916	588.51 - 882.75	1
15,184 - 20,244	176.56 - 235.4	1	75,852 - 101,222	882.76 - 1,177	1

Table 4: The volume of weekly income (in BDT and USD) for MSD and MSR in the Haor region					
Weekly sale		Number of MSRs	Weekly sale		Number of MSDs
In BDT	In USD		In BDT	In USD	
Below 5,061	0.012- 58.85	4	Below 50,611	Below 588.5	1
5,061 - 10,122	58.86 - 117.7	3	50,611 - 101,222	588.51 - 1,177	3
Above 10,122	Above 117.7	1	101,222 - 151,833	1,177.01-1,765.5	1
			151,833 - 202,444	1,765.51- 2,354	2
			Above 202,444	Above 2,354	1

- The study found that each MSD competed with, on average, four other dealers (1:4) in the same markets and villages compared to the MSRs. The MSRs were competing with, on average less than three other retailers (1:2.5) in the same market, possibly due to the extent and coverage of their trade.
- About 81% (26 out of 32) of the respondents mentioned quality seeds, 75% (24 out of 32) of the respondents referred to a fair price, and 66% (22 out of 32) of the respondents said that friendly behavior helped them stood out among other sellers in the market.
- MSD/MSRs shared that natural disasters (such as floods, monsoon rains), price fall, seed damage, fire, and theft were significant business risks for them.
- One of the critical challenges shared by the respondents of this pilot study was that on a few occasions, the MSRs were selling mixed seeds of freshly opened and already opened sacs which resulted in an overall poor germination rate. Once the seed sac is open, the seeds come in contact with air, become oxidated, and start to degrade. A few MSRs mixed these open sac seeds with freshly opened seeds to minimize the loss. Eventually, the farmers lost faith in MSRs and reached out to the MSDs for seed purchase. The program tried to mitigate this by counseling the MSRs and focusing on building and improving networks within the community through active and regular participation of the MSRs in various community meetings arranged by the program.

In short, the MSD/MSR model flourished in its first few months of operation with fewer challenges before the pandemic and lockdown began. The findings from the pilot study necessitated another probing after more than two years of the MSD/MSR model being present in the field. For adaptive decision-making and the interventions and sustainable impacts on the overall food security status of the PEP, this current study describes the factors that influenced the performances of the MSD/MSRs, the current field scenario, and the learnings captured.

Rationale and Objectives

SHOUHARDO III initiated the MSD/MSR model with other LSP models in 2019. The pandemic affected the implementation of several activities of the program; hence the intended execution or succession of the LSP models was unfulfilled compared with its target achievements. As of March 2022, Bangladesh has slowly started to return to pre-pandemic normal functionality; so did SHOUHARDO III. Re-ensuring the resources and support toward the MSD/MSRs, the program is trying to pick up the change factors that contributed to the high performances of several MSD/MSRs and replicate the interventions toward the positive impacts they had on the food and nutrition security status of the program participants. It is critical for the program at this stage in 2022 to gather and document a comprehensive knowledge of the MSD/MSRs regarding their outcomes and challenges to improve the quality of ongoing implementation and inform the design of future programs within the RFSA or broader network. In order to understand this, SHOUHARDO III carried out a qualitative study in January-February 2022. The study attempted to

explore and document the current situation of MSD/MSRs and illustrate the contributing factors (intended, unintended, positive, challenging) towards high and moderately performing MSD/MSRs. This study also informs sustainability approaches for adaptive management practices of the program through learning reflections.

The key objective of this study is to capture the high-performing and moderately-performing factors of the MSD/MSR model, drawing lessons from the outcome harvesting (OH) approach and reflecting on the sustainability strategies in the SHOUHARDO III areas.

Specific objectives:

1. To capture the change factors behind high-performing and moderately-performing MSD/MSRs and their performances in their working areas
2. Document the existing challenges/barriers of the MSD/MSR model and suggest measures to improve toward achieving high-performance
3. Reflect on the sustainability of MSD/MSRs beyond the program operation and timeframe

Methodology

Outcome Harvesting (OH) approach: The qualitative study followed the Outcome Harvesting (OH) methodology, which helps to identify, describe, and analyze the changes brought about through a change agent (INTRAC, 2017). Outcome Harvesting (hereinafter as OH) will be adopted as it is the most suitable for this study to capture changes that can be positive or negative and intended or unintended (Reliefweb, 2021). This study will also attempt to illustrate a comparison and contrast of the high-performing and moderately-performing LSPs to sieve out best practices.

Operationalization of the key terms:

- i. Outcome Harvesting (OH): Who (e.g., community, family, stakeholders, or similar services) supported the change agents (LSPs), and how did the changes (if at all) take place (e.g., supports, contribution, guidance)
- ii. High-performing: active MSDs/MSRs serving in the communities (at least one year) who made significant positive changes in terms of income and client-base (see Table 1)
- iii. Moderately-performing: active MSDs/MSRs serving in the communities (at least one year) who made moderate positive changes in terms of income and client-base (see Table 1)
- iv. High-performance factors of LSPs: based on the selected parameters like income, client-base, business expansion
- v. Sustainability factors of LSPs: considering their business and High-performance factors

The Outcome Harvesting approach will help focus on high-performing LSPs and trace back the success factors that have led to where they are now. It will also assist in identifying the components affecting the changes, such as community behavior, actions, activities, or practices. The approach will gather evidence of the outcomes by collecting primary data from the LSPs and communities and then trace changes to assess whether or how the program contributed to that change since pilot initiatives. The OH terms relevant to this study are explained in Table 5.

Table 5: Relevant terms for Outcome Harvesting (OH)

Change agent: CARE Bangladesh and implementing partner NGOs working in the Program areas influencing the outcome or changes
Social actor: MSD/MSRs (LSPs) and communities that changed due to interventions brought by the change agents
Harvest user: SHOUHARDO III management team as a harvest user needs OH findings to make necessary informed and adaptive program decisions
Harvester: SHOUHARDO III Program as the harvester leading the OH process, facilitating, and supporting participation within the process

This qualitative study followed the purposive sampling method to ensure the representation and inclusion of LSPs adhering to a list of predetermined criteria (see Table 2). Purposive sampling permits qualitative research designs to be more adaptable, allowing for the use of specific techniques as needed to achieve the study's objectives. The absence of the MSDs/MSRs in some villages might affect the village selection process. As a result, the study intends to follow purposive sampling to select eight program Upazilas (with 75% or above LSPs working in that area) to represent a sufficient number of required LSPs. For data collection, this study conducted Key informant interviews (KII) with stakeholders, In-Depth Interviews (IDI) with MSDs/MSRs, and Focus Group Discussions (FGD) with the service recipients (farmers) for the MSD/MSR model.

Location: The study purposively selected eight Upazilas with 75% or above LSPs. Considering the time constraint, limited skilled research workforce, and the looming threat of the additional rise of COVID-19 infection along with its preventive measures, the study incorporated multiple villages from one union since the program intends to avoid the duplication of LSPs in one village offering the same services (e.g., one *Sanchay Sathi* from each village).

Sampling: The study included the MSDs/MSRs, their service recipients, relevant stakeholders, and the program staff.

This study probed the MSDs/MSRs models based on the following criteria –

1. Their service area coverage
2. Their service duration

The availability of baseline findings is required to compare and contrast the changes with their ongoing performance and provide a comprehensive picture.

Table 6: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> Active in the community Provided service for at least one year Scaled up by SHOUHARDO III 	<ul style="list-style-type: none"> Dropped out Inactive Below one year of service provision

Table 7: Sample size summary

Category	Male	Female
MSD/MSR (IDI)	16	
Stakeholders (KII)	8	
Program staff (KII)	4	
Farmers & service recipients (FGD)	16	16
Total	44	16

Data collection: The study included a total of 60 respondents (Male: 44 and Female: 16). According to the study design, 16 IDIs were conducted with the MSDs/MSRs (eight with high-performing and eight with moderately-performing). Eight KIIs were conducted with the relevant stakeholders (e.g., extension workers, seed selling companies, microcredit suppliers), and four KIIs were conducted with the SHOUHARDO III program staff. In addition, four FGDs were conducted with 32 people (of which 50%

were male and 50% female). The data collection approach followed a hybrid approach of in-person and remote modalities.

Scope of the study: Although this study has one prime objective, this document includes only the OH of MSDs/MSRs piece of research. A practical comparison is possible within the same LSP model regarding high and moderately performing LSPs to present a critical analysis through outcome harvesting. The details are discussed below in Table 8.

Table 8: Parameters for identifying high and moderate-performing LSPs			
LSP type	Income	Client-base	All-inclusive
MSDs/ MSRs	High-performing: average monthly income BDT4,000 (USD 48) or above	High-performing: MSDs/MSRs serving a minimum of four or more villages	LSP income and client-base for the high and moderate-performing LSPs have been selected based on the baseline study findings and information from the M&E team (see Annex for the MSD and MSR baseline report from January 2020)
	Moderate-performing: average monthly income below BDT4,000-2,000 (USD 48-24)	Moderate-performing: MSDs/MSRs serving minimum 2-3 villages	

Findings

This section describes the background and scope of work of the MSD/MSRs, their client-base, income, service provision, successes and challenges, progress, and business expansion as LSPs. Although the study's initial approach was to follow the Outcome Harvesting (OH) tool to present the findings from the MSD/MSR model, however, while analyzing the findings, the key indicators (income and client-base) that define the outcomes for this study faced some challenges. The recurring pattern that emerged was that the MSDs and MSRs were grouped together for almost all terminologies, program design, database, and interventions. The pilot study in 2019 interviewed 32 MSD/MSRs. For the MSDs, the minimum income amount was BDT 1,575 (USD 17.65), and the maximum was BDT 52,5164.16 (USD 5,885) reported by the pilot study respondents. For the MSRs, the lowest income reported was BDT 1.07 (USD 0.012), and the highest was BDT 2,1006.57 (USD 235.4). So, the income for both MSDs and MSRs overlapped within a common range of BDT 1,575 (USD 17.65)- 21,006.57 (235.4). After the pilot study, and as of today, the program database had a gap regarding separate income information of MSDs and MSRs.

This significantly affected when determining the performance (high and moderate) of the MSDs and MSRs separately based on their range of income and client-base. While MSDs are big wholesalers of seeds with broader service coverage in terms of clients and geographical area, the MSRs are the retail seed sellers with a significantly lower number of products and service coverage, resulting in a lower income range than MSDs. Therefore, analyzing them jointly as MSD/MSRs immediately puts the MSDs in the high-performing category among all MSDs and MSRs. Hence it was difficult to adapt a comparative analysis of the performances of MSDs and MSRs separately. To mitigate this, the study looked into secondary indicators of outcomes to present an understanding of the MSDs and MSRs in the market working as SHOUHARDO III's LSPs. These include the linkage and networks established with the GoB, private companies and communities (farmers), their perceived social recognition, and testimonies from clients and relevant key stakeholders such as DAE officials and private seed companies.

In addition, the study also had some technical and methodological challenges. The OH method requires a list of pre-determined indicators from which intended and unintended outcomes can be measured. The tools of this study were designed following the 'Outcome-Based Learning Field Guide' by The World Bank (2014), which emphasized operationalizing the outcomes, their significance, contribution, support required, and sustainability plans. Since the definition and terminology of the MSD and MSR were grouped together, the data could not be disaggregated for the OH approach to pan out. Furthermore, the latest

data from the program's STREAM³ database is currently being updated (by the end of June 2022) and is unavailable for data triangulation of income and client-base- which are the two key indicators set for this study to harvest the outcomes. Hence the findings are written in a manner that closely represents the outcomes reported only by the respondents themselves using secondary indicators as mentioned above. Cross-checking (data triangulation) of the respondents' perceived data with the statistical data was unlikely as of May 2022. The data collection on multiple indicators of LSP by the program is ongoing.

A. Terminologies, background, and other general information of the MSD/MSR model

The MSDs, also known as *boro beej bebshay* in Bengali, are wholesalers who purchase products directly from the seed companies and sell at the district or Upazila (sub-district) level. The MSDs sometimes also sell directly to farmers as well in some cases with a broader area of coverage; for instance, farmers from different villages can reach out to MSDs for a smaller purchase. The MSR, also known as *khudro beej bikreta* in Bengali are the retailers who purchase their seeds from the MSDs and serve at the union or village level. The MSRs also offer agriculture-related advisories to their customers. A few high-performing (according to the inclusion criteria of this study) MSRs have expanded their business beyond their villages as a result of ease of migration in post-lock down, strong relationship with farmers and linkage with MSDs. They are now selling seeds to farmers coming from more than two but less than ten villages.

The **social actors** (MSD/MSR) of the study, especially the MSRs, are involved in small-scale seed selling and supply businesses to serve grassroots farmers in remote areas intensely. At the very beginning, the **harvester** (SHOUHARDO III) identified the need and supply of quality seeds for the farmers through community group discussions. Later on, the harvester picked up on the feedback of the group discussions and incorporated it into the LSP model for seed-selling, also known as MSD/MSR. Through these discussions, the capacity of seed supply was also discussed, hence the big wholesale seed sellers became the MSDs, and small retail seed sellers became the MSRs.

The MSDs typically work in a business territory including multiple unions, and the MSRs work within their villages. The program collaborated with private seed companies for enhancing farmers' knowledge of quality seeds. SHOUHARDO III program wanted to improve and increase agricultural production by creating linkage with the input and output market, private and financial sectors for sustainable agriculture. The program initially started with seven seed sellers at Belkuchi, Sirajganj. At present, 16 MSDs and 561 MSRs are working in the program areas.

A high-performing and GoB enlisted (by the Department of Agricultural Extension) MSR, Kamal Hossen (42) from Habiganj Upazila, shared, "Mainly we collect seeds from the dealers at Upazila level, and sometimes different companies give us some seed. We resell them to the local community, including SHOUHARDO III beneficiaries. Farmers from eight villages purchase seed from me with a price range between BDT 40-1,000 (USD 0.48-12)."

The MSDs sell mainly three products – 1) field crop seeds, 2) pesticides, and 3) fertilizers. The MSRs mostly sell vegetable and field crop seeds (such as pumpkin, sweet gourd, dampta, red amaranth, bottle gourd, ridge gourd, mustard, okra, bitter gourd), and they have introduced the culture of selling seeds in

³ STREAM stands for "System for Tracking Results and Evidence for Adaptive Management". It is SHOUHARDO III's internal database to use for systematic tracking of the program's results.

Abdul Momin, SAAO, DAE, Fulchari, Gaibandha shared, “Seed sellers sell their seeds in different ways – some own personal shops, some do as hawkers, and some have additional businesses (such as selling fertilizers, pesticides). Considering the seasonality, the sellers ensure the availability of relevant seeds.”

mini-packs at the community level. According to the FGD respondents, MSR/MSDs are the people who are involved with seed selling. Some sell fertilizers, pesticides, and other necessary products along with seeds. They strongly connect with Sub Assistant Agriculture Officer (SAAO) and private seed selling companies (such as Lalteer, Brac Seed, Metal Seed, Syngenta, and Ispahani). Some sell seeds through megaphone announcements; they disseminate updates on the availability of seeds and welcome all to buy as per their need. Based on suggestions from SAAO, the

MSDs collect seeds from seed producers/company representatives/shops then sell seeds to the MSRs and farmers. The MSRs further sell the seeds and provide seed-related advisories to the farmers. Both the MSDs and MSRs advise on the seed utilization process and harvest timing.

This study also reveals the disconnection of the initial terminology, and program approach of MSD/MSR with the current scenario. In a sample of 16 in-depth interviews (IDI) of this current study, there was a scarcity of MSD sample; only two could be found in the targetted study villages. This is mainly because only 2.8% of the total MSD/MSR group (16 out of 577) is the MSDs who were less in number from the beginning. As a result, 14 out of 16 IDI respondents are MSRs. Field observations, KII interaction and the findings of this study suggests that the objective with which the program defined the MSDs and MSRs in 2019, with extension and sustainability phase in mind, were on the right path until the LSP model was mobilized for realtime in the communities. After almost three years of operation, the MSRs are at the forefront of serving the last mile farmers with quality seeds, agricultural inputs and advisories, even providing them a pathway toward communicating with SAAOs and private seed companies. SHOUHARDO III (the **harvester**) harnessed the strength of MSDs (**social actor**) to put the MSRs (**social actor**) out in the available market for the farmers to easily reach, access and meet their seed-related needs for farming. This evolving nature of the social actors turned out to be an unintended positive outcome for the LSP model.

B. Factors influencing the functionality of MSD/MSR

The social actors'- MSDs and MSRs, journey as LSPs was built on several inherent and external factors that influenced the overall outcomes of this model. Both the external and inherent factors influenced the journey of the MSDs and MSRs throughout the past two and a half years since the program initiated the LSP model. Inherent factors, such as tenure of business, are mostly the qualities that the MSDs and MSRs had from before SHOUHARDO III included them in the LSP model mechanism. Contrarily, external factors, such as pricing, income from seeds and other sources, service provision and client-base, are those that affected the outcomes of the MSD/MSR model with the help of the program (harvester). In this study, some of the external factors were also built on the MSD/MSRs inherent qualities hence the finding related to influencing factors are embedded within each other and overlapping.

Tenure of business: The average years of work as a seed seller for 11 MSRs is 3.6 years; the remaining three had 10, 13 and 23 years of experience in seed selling. Although more than 10 years of experience does not usually mean a small trader of seeds, however, since they sold seeds seasonally (approximately four months each year) along with other farming related products, they were considered as MSRs. The two MSDs of this study had 12 and 15 years of seed selling experience in Haor and Char respectively. The years of experience more than three years means that some MSRs and both MSDs were engaged in seed selling before SHOUHARDO III stepped in with the LSP model. The program approached to harness the

strength of already existing MSDs/MSRs and utilize that to develop new seed sellers (LSP) in the program areas contributing toward the sustainability agenda. An MSR, Abu Bakkar (50) from Sunamganj stated, *“SHOUHARDO III staff motivated me to sell seed in the community as I can earn BDT 2,000-3,000 (USD 24-36) as an extra income during the lean season⁴. As a result, I started working as a small seller (MSR).”*

“I was have a grocery shop. Additionally every day, I spent some time in a seed selling shop and observed the buying and selling process. Later on, I discussed the trade with the seed sellers and other businessperson, and learned the process. Since there was no seed or pesticide shop in my locality, I decided to start selling seeds based on my first-hand learning.”- Shubash, MSR from Gaibandha

In the pilot study, it was found that almost all of the MSDs were active seed-sellers for a long time. The findings also suggested that MSDs were more experienced than MSRs as 13 (out of total 16 MSDs in pilot study (SHOUHARDOIII, CARE Bangladesh (2020a)) had more than five years in selling agricultural inputs compared to six (out of 16) MSRs. The MSDs were found to be active in seed-selling business in both the pilot study and current study.

Some MSDs/MSRs were also involved in seed selling businesses, such as through Community Agricultural Volunteer (CAV) staff of seed-selling companies, seed selling through grocery shop, and family seed-selling businesses, that paved their way of becoming an MSD/MSR even more. In some cases, their personal experience and interest encouraged them to become seed sellers in their areas. Nurnabi, an MSD from Kurigram shared, *“When I was engaged in farming by myself, I bought seeds from the market. It is not difficult to get good crops out of those seeds...but it was difficult for me to see that other farmers were getting good harvest while I failed. I was frustrated. I used to take advice from farmers who had a good harvest. That is how I became interested in seeds. Later on, I came to know that SHOUHARDO III is offering training on becoming a local seed seller. I contacted them and received the training.”*

Product pricing: The MSDs purchase seeds at a wholesale rate fixed by the private companies from the companies and wholesale market; the MSRs also utilize the fixed rate pricing while buying seeds from the MSDs. Although the seed sellers are not consulted when the private companies determine these prices and rates, the MSDs receive purchase/sales commissions from the private companies. The rate of commission varies depending on their negotiation skills. Later on, the MSRs make small and mini packets of seeds out of the large packets they buy from MSDs and sell them to farmers at varying prices through negotiation. The MSRs shared that they make small profits while trading with the PEP farmers. Kamal, an MSR from Habiganj, shared that he purchased a packet of seeds at BDT 45 (USD 0.54) from his nearby MSD at a discounted price, while the actual price is BDT 110 (USD 1.32). As a result, he can also offer a discount to farmers compared to the original packet price. This year (as of March 2022), Kamal sold each bag of rice seedlings at BDT 270 (USD 3.24) to farmers, while the original price was BDT 350 (USD 4.20).

Income from seed selling: There are two types of monthly income reported in this study by the respondents. The MSDs have a higher monthly income than MSRs since they deal with a larger client base. This study only included two MSDs whose income were BDT 12,000 and BDT 30,000 from Char and Haor respectively. The MSRs reported their income range starting from BDT 1,500 to BDT 5,750 per month. The MSRs in Char and Haor earned an average of BDT 5,071 and BDT 3,857 respectively every month. Table 9 shows district wise income reported by the respondent MSDs and MSRs in this study.

⁴ In agricultural regions of developing countries, the lean season is that risky timeframe between planting and harvesting when job opportunities are scarce and incomes reduce.

Table 9: Monthly Average Income of MSD/MSR from seed-selling as of March 2022

Area	MSD		MSR	
	In BDT	In USD	In BDT	In USD
Char	12000	140	5,071	59
Gaibandha			5,500	64
Jamalpur			5,000	58
Kurigam			3,000	35
Kurigram	12,000	140		
Sirajganj			5,750	67
Haor	30,000	349	3,857	45
Habiganj			5,000	58
Kishoreganj			4,000	47
Kishoregonj			7,500	87
Netrakona	30,000	349	1,500	17
Sunamgnaj			2,000	23
Overall average income⁵	21,000	244	4,464	52

The MSRs reported adopting several techniques to increase their income from seed selling. A high-performing MSR (linkage and networks established with the GoB, private companies and communities (farmers), their perceived social recognition, and testimonies from clients), Muqbul Islam from Kishoreganj used to sell fertilizer and pesticides. He received great responses from the community once he included seeds as a selling item. *“I conduct the germination process of my seeds after I purchase them from the seed companies. I have found a 90% of germination rate⁶ for my seeds. I also try to maintain a good relationship with my customers and sell quality seeds to them,”* stated Muqbul. The high-performing (linkage and networks established with the GoB, private companies and communities (farmers), their perceived social recognition, and testimonies from clients) MSDs and MSRs become faithful to their customers by building rapport with farmers, supplying quality seeds, conducting demonstration with high yield variety, and addressing any challenges faced by the farmers. They are also organizing get-togethers (*Haalkhata*⁷) with farmers and companies at the beginning of the Bengali new year in April.

Other income sources: Both the MSDs and MSRs are engaged in additional income-generating activities (IGA) besides seed selling. They are involved in farming, livestock and poultry rearing, and other businesses, such as selling fertilizer, insecticides, pesticides, diesel, rice, animal feed, grocery, equipment and hardware. The MSRs mostly have small items such as fertilizer and pesticides besides the seeds. Larger items are available at the MSDs' shops.

⁵ Average income= Total income/ Number of earners

⁶ The standard germination rate might vary for different types of crop and vegetable seeds, but usually is 90%.

⁷ Haalkhata is a festival celebrated by Bengali shopkeepers and traders on Pahela Baishakh (the first day of the Bengali Calendar) by opening a new ledger. Haalkhata is basically the ledger book. On the first day of every bengali new year (14th April) businesspeople open a new Haalkhata and invite their customers to have good luck in the new year.

Table 10: Monthly Average Income of MSD/MSR from other sources as of March 2022

Area	MSD		MSR	
	In BDT	In USD	In BDT	In USD
Char	4,000	47	11,714	136
Gaibandha			6,000	70
Jamalpur			15,500	180
Kurigam			16,000	186
Kurigam	4,000	47		
Sirajganj		0	11,500	134
Haor	20,000	233	10,357	120
Habiganj			19,000	221
Kishoreganj			10,000	116
Kishoregonj			4,500	52
Netrakona	20,000	233	7,000	81
Sunamgnaj			6,500	76
Grand Total	12,000	140	11,036	128

Drawing from the pilot study in 2019, the minimum weekly income of MSDs was BDT 1,575 (USD 17.65) and the maximum weekly amount was BDT 52,516.16 (USD 5,885). Similarly, for the MSRs, the lowest income reported was BDT 1.07 (USD 0.012) and the highest was BDT 2,100.57 (USD 235.4) every week. This income was an overall income for the MSDs and MSRs which also included the income from sources other than seed-selling. The current study found that MSRs' income from seed-related sales was lower than the income from other sources for both the MSDs and MSRs. This is possibly due to being seasonal seed-sellers and choosing to sell seeds in only one season of the year. On the other hand, the MSDs income from seed-selling was higher than other income sources as this was their main product throughout the year.

Service provision: The MSRs mentioned offering and selling the following items and services to the farmers:

- High-yield and quality seeds, agricultural inputs
- Advice and motivation on using advanced technology in the cultivation, such as, sac method, monitoring crop health with mobile apps
- Insecticides use and control
- Land preparation before planting seeds
- Seed plantation techniques
- Appropriate doses of fertilizer usage
- IPM technique⁸
- Support and improve linkage building between farmers and the SAAO

The MSDs are big sellers who provide the above-mentioned services to multiple MSRs and a few farmers. The main services provided by the MSDs show their strength and years of presence in the already existing market which they utilize to shape the MSR and their business proposition. This includes the quality input, agricultural advisories and other seed-related feedback to the MSRs who convey the information to the

⁸ IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties.

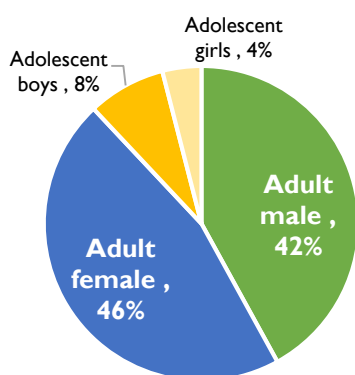
last mile farmers. If the seeds sold are found with a low germination⁹ rate, the seed sellers try to compensate the farmers' loss by giving them more seeds or selling seeds on credit facilities the next time. Among the most demanded products, the MSD/MSRs mentioned selling crop seedlings (rice - BR-29, BR-89, maize, chili, jute, mustard), vegetable seeds (beans, bitter gourd, cauliflower, red spinach, stem spinach, eggplant, squash), fertilizer, and pesticides.



The demand for seeds fluctuates by season. Seed demand is higher at the beginning of crop cultivation (depending on the variety), followed by heightened demand of fertilizers and pesticides. Farmers prefer products from several agriculture-related private companies as they supply better quality seeds. The MSDs are the ones dealing with the private seed companies and making quality seeds available for the MSRs to purchase and gather. Farmers from the study villages are mainly farming crops (rice, wheat, maize, jute, sugarcane) and vegetables (bean, tomato, gourd, pumpkin, red amaranth, jute spinach, okra). They purchase seeds based on seasonal needs from the MSRs. For example,

demand for rice seedlings is high between October to December every year. Affordable pricing, minimal to no travel expenses, good quality products, and additional guidance from the MSRs motivates the farmers to purchase seeds from them. Only three MSRs have started their service provision within the last three years; the rest of the MSRs have been present in the market for more than three years and up to 23 years. The two MSDs in this study are providing their services for the past 12 and 15 years from Char and Haor respectively.

Figure-3: Client coverage by age group in %



Client base (service recipients): All types of farmers purchase seeds from MSRs; a few farmers purchase from MSDs as they were closer in proximity and had a wider seed collection. This study found that the big producers or farmers usually buy seeds in bulk from the MSDs (particularly for rice), whereas the smaller or homestead producers or farmers buy seeds from the MSRs (mostly vegetable seeds). This chart in Figure 3 shows that the number of female farmers is the highest (46%) according to the claims of the respondents in this study. The MSRs prioritize female farmers and their needs when they visit; many of the female farmers started vegetable cultivation in their backyard as they can purchase seeds as per their needs

which are available close to their homes. Having women and girls at the core of its program design, SHOUHARDO III instructed the MSDs and MSRs to prioritize the needs of female farmers and ensure their access to quality seeds. The MSRs also utilize the community groups to reach female farmers.

Mamun, an MSR from Sirajganj, shared, *"I arranged courtyard sessions with farmers in the community with the help of SHOUHARDO colleagues. I made frequent visits to have one-to-one discussions, offered counseling through*

⁹ Germination is usually the growth of a plant contained within a seed; it results in the formation of the seedling. It is also the process of reactivation of metabolic machinery of the seed resulting in the emergence of radicle and plumule.

mobile Apps (such as, Fosholi, Krishoker Janala) from my mobile phone to ensure proper care of quality seeds, and provided sample packets among the female farmers.”

Story of Maksuda, a female farmer from Kishoreganj

Maksuda (40), a farmer from Kishoreganj, did not have any knowledge of vegetable seed planting methods before. However, she wanted to grow vegetables in her backyard. She made a plan and prepared the land to plant seeds. Later on, she randomly planted a handful of bean seeds into each of the holes she dug. The seedlings sprouted after a few days. But 15 to 20 seedlings grew in each hole. All of her hard work went in vain as all the seedlings died after a few days unfortunately. Unable to understand the problem, Maksuda brought the MSR home and explained the situation. The MSR taught her the correct method of planting seeds by making pens, and beds. Following which Maksuda got a good harvest.

From the pilot study, the respondents shared that the female farmers mostly purchased vegetable seeds that were of local varieties, short-cycled, and rich in nutritious value. It appeared that women, in particular, had a high demand for vegetable seeds. In this current study, it is also observed that the female farmers were engaging in homestead farming more and more as this became a source of food and income during the pandemic. The FGD respondents shared that female farmers are more comfortable to work with the female MSDs/MSRs. However, the male to female ratio of the MSDs and MSRs are significantly disproportionate. There are no female MSDs in the program areas. Only 84 (out of 561) MSRs are female accounting for around 14.9% and a female to male MSR ratio of 1:5.7

The MSDs sell their products to a maximum of 750 MSRs, 300 farmers and coordinate with 20-25 seed selling companies in a month. On average, the MSRs serve 100-150 farmers every month. The high-performing MSRs have client base of up to 600 to 1,000 customers, however, they were present in the market for a longer time than the program LSPs. The MSRs have increased their client base for the past two years with the continuous communication and field presence with the farmers. A high-performing MSR from Sirajganj, Halim Rana, increased his client base from 150 to around 1,000 farmers in the last four years through his hard work, networking, good communication skills with customers, and community visits. Similarly, another high-performing MSR, Kamal from Habiganj, attracted more customers in each passing year with his good behavior, business on credit, and good pricing policy. “I did not pressure farmers to repay the amount they got on credit. My policy is that once a farmer buys seed from my shop, he will purchase it again,” stated Kamal. He has been selling seeds seasonally (four months in a year) for the past 13 years. When the LSP models were introduced in the program areas, SHOUHARDO III’s help boosted both of these MSRs’ client-base even more as the linkage with MSDs and private-public entities were easier with the support of the program staff.

Kamal Hosen, an MSR from Habiganj

Kamal Hossen (42) from Ajmiriganj, Habiganj encountered a huge financial loss from his rice selling business in 2013 as his boat loaded with rice sank. After that incident, Kamal started looking for work and engaged himself in different types of IGA and businesses in an on-and-off basis. Following him becoming out-of-work, he started working as an MSR with the support and motivation of another local MSD, Mr. Anwar (not a respondent in this study). As MSR Kamal Hosen lacked experience, MSD Anwar provided him with a chart of fixed prices of seeds, where purchasing and selling prices are mentioned. “MSD Anwar helped me through linkage development with different seed companies and their representatives, and government agriculture department staff. Anwar gave me seeds worth BDT 5,00,000 (USD 6,000) to start my business on credit.” At present (March 2022), Kamal overcame the losses incurred back in 2013 and adjoining difficulties. He serves 2,000 customers each month and 60 customers on average every day. He started selling fertilizer, insecticide, diesel in his shop aside from seeds. “SHOUHARDO staff encouraged me to continue the seed selling business and supported me in linkage building and networking with the government and private companies. I have received respect and love from the community, and I will continue the seed selling business even after SHOUHARDO is no longer there. The program staff can help and promote me in the community by buying more seeds from me before the program ends. Government officials and private company representatives come to my shop whenever they visit the community.”

C. Support mechanism of MSD/MSR model

i. Support provided to the communities:

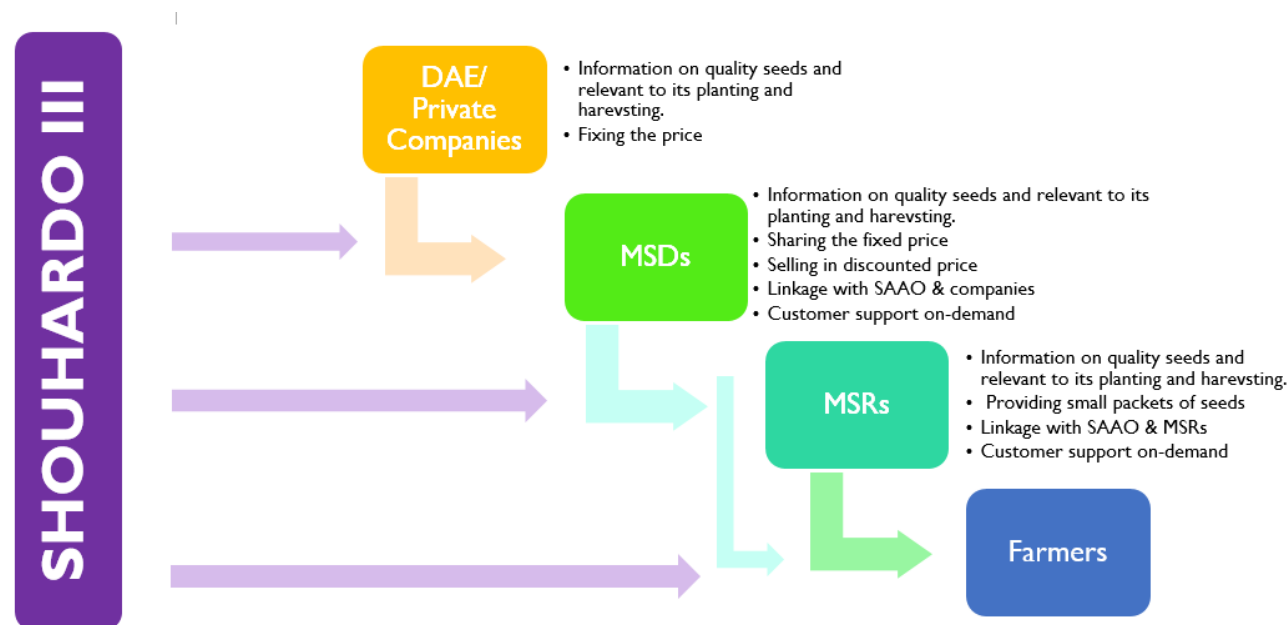


Figure 4: Intra-relational support mechanism of MSD/MSR model

Services provided by the MSD/MSRs-

- Quality seed supply
- Seed advisories (how to sow, harvest, weather related information)
- Linkage with SAAO
- Linkage with private seed companies
- Customer support on demand (through phone, in-person)

The MSDs to MSRs, and the MSRs to the farmers- supply and advise on planting quality seeds. They also guide the usage of modern agricultural techniques, pesticides, and fertilizers. An MSR, Ashaduzzaman, from the Gaibandha shared, “Previously, the communities followed traditional techniques to cultivate their crops. They learned these techniques either from their predecessor farmers or by practicing seeing other neighboring farmers. As a result, their harvest was often not up to their expectations in terms of either quality or quantity. After I

started the selling seeds, I attended various meetings, became familiar with villagers, especially female farmers. Now the farmers visit me and purchase good seeds from me. They also receive free advice from me.”

An officer from a renowned local private seed selling company said, “MSD/MSRs made it easier for the farmers to access quality seeds. Generally, hybrid seeds are expensive, and poor farmers cannot or do not want to buy them because they are comparatively costly. Sometimes even if the farmers can afford them, they are ignorant of the hybrid qualities and processing methods. The local seed sellers (mostly MSRs) are making a big change here through informing and educating the farmers. Now, many farmers are feeling confident and purchasing hybrid quality seeds more than before as yield is high.”

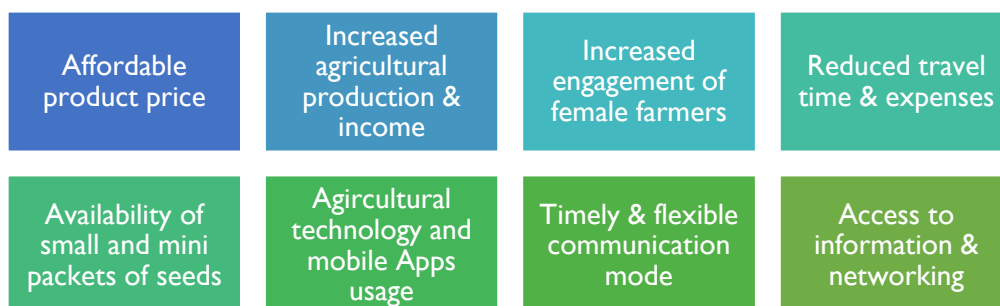


Figure 5: changes in community lives due to the quality service provisioning of MSDs and MSRs

The farmers in the FGDs shared that MSRs are providing similar support to the rural women farmers who can purchase seeds locally without traveling at all and thus saving travel time and expenses. The farmers also learned about advanced technology in agriculture, fertilizer and pesticide application, and insect control methods. The female farmers were encouraged to grow vegetables in their backyards by the MSRs as well. FGD respondents (mixed male & female) from Kurigram shared, “We have been proficient at using a variety of quality seeds, seed planting techniques, seedling making, application of organic and chemical fertilizers, and irrigation techniques as a result of counselling by the local seed sellers (MSRs).” In addition, the farmers have increased their income through the services offered by the MSD/MSR as their agricultural production increased, and cultivable land areas have increased (turning unused or uncultivable lands into fertile ones by the use of modern technology, equipment, and techniques, such as pest control, pheromone trap, bed making, seed planting, doses of pesticide and fertilizer). FGD farmers reported being benefitted constantly by the MSDs and MSRs, “Even in the absence of men, women have also been able to produce more crops by taking advice from the local seed sellers (MSD/MSR), including purchase of seeds and fertilizers. For example, previously, yield per 33 decimals of land was 800 KG to 1,000 KG. Now, we can yield 1,000 to 1,100 KG from 33 decimals land.”

The MSDs/MSRs expressed their satisfaction with the interpersonal relationship with their clients and in the community. An MSR, Mukbul, from Kishoreganj shared, “I am really happy about my customers. My customers are also happy with my work (selling seeds) as they can get quality service and seeds from me.” Similarly, the MSDs reported developing and maintaining communication with the private companies, Government office staff (SAAO), and local NGOs with the help of the program staff regarding seed selling business. They wish to continue the networking after the program phases out. An MSR from Netrokona, Soju Mia expressed, “If the program phases out, the DAE and private companies will still remain. I have good communications with them, have the contact number (mobile phone) of these respective officers, and I shall communicate with them when needed. I can maintain the communications and support systems after the SHOUHARDO III program ends. The private seed companies advise me on purchasing quality seeds at an affordable price from the village market. I was advised on the culture process (seed germination, bed preparation, pest control, diseases, etc.) from Government offices.”

The communities benefit from the MSD/MSRs’ services as they have adopted improved agricultural techniques. The supply of quality seeds has increased their scope of farming as farmers increased their agricultural lands by farming on abundant lands in their villages. Some farmers started taking out loans from the local Village Savings Loan Association (VSLA) groups and adopted modern farming technologies with the help of money. The MSD/MSRs have gained community trust by providing quality products at affordable prices. According to Md. Anowar Hussain, TO-ED, National Development Programme (NDP), one of the partner NGO staff implementing SHOUHARDO III in Sirajganj, the high-performing MSD/MSRs have almost around 90% of the communities’, and this is something the moderately-performing MSD/MSRs still need to improve.

ii. **Support from the program:** At the beginning of initiating the MSD/MSR LSP model, SHOUHARDO III provided the basic and general training to all of the selected MSD/MSRs. A part of the initial training included information on farming, seeds, weather information and other relevant agricultural advisories. Afterwards, the program staff continued to motivate MSDs and MSRs to become the local sources of quality seeds for the last mile farmers. They introduced them to the nearby Community Groups formed by the program and other relevant group meetings as seed sellers. They also offered suggestions and guidance on linkage development and networking with the government and private stakeholders.

“SHOUHARDO III staff introduced me to community groups and the SAAO. They also talked about my business in different meetings and sessions. As a result, my customers are increasing day by day. Now, I participate in Math Dibos (field day) with SAAO.”

- Ashaduzzaman, an MSR from Gaibandha

D. Challenges faced by the MSD/MSRs

Initial challenges: At the beginning of this LSP model, the MSD/MSRs faced difficulties with poor capital, fewer buyers, seed purchase and packaging, communicating with male farmers, absence of female customers, bad location of the shop, and non-cooperation of private companies. Ashaduzzaman, an MSR, from Gaibandha commented, “In the beginning, I didn’t have sufficient cash to buy seeds from the dealers (MSDs) to start my small-scale seed selling business. Besides, some farmers did not accept me easily as I was new. After being in the market for over two years, my family and community have positively taken my seed-selling business.” At the initial stage back in 2019, the MSD/MSRs received guidance from the program staff. “SHOUHARDO staff helped me by introducing me in different community group meetings. They also made sure that the female farmers know me and can reach me in need.”

The MSDs/MSRs learned to cope with the emerging challenges through on-the-job experiences. Through this study, they shared their experience of hardship, support mechanism, and learning from the earlier phases of LSP model initiation. An MSR, Rubel, from Habiganj expressed, “At the beginning (of seed selling), I had a poor sale. I started motivating farmers to buy seeds from good companies (such as like Lalteer, Ispahani,

Synzanta, Aftab). Sometimes I sell seeds on credit and lend farmers money to lease land for plantation. Now my sales have increased. I am very happy.” Another MSR Soju Mia from Netrokona, shared, “Initially, it was not so easy. Customers did not understand me and my products. They used to collect local seeds at low prices. Gradually I raised awareness on good quality seeds by continuing to be an on-demand support for them, price negotiation that helped the farmers, and motivated them to buy seeds from me. Following my continuous efforts, farmers started accepting me and buying the seeds I sold as they were convinced that I sold good quality seeds. My villagers and villagers from other Unions purchase products from my shop when I sit at the nearby local market.” Contrarily, his peer Mijanur Rahman, an MSD from Netrokona who has run this business for 15 years with a good reputation, stated, “Mostly I provide suggestions to those who seek my guidance, mainly the small farmers of my community and the retail sellers (MSRs). If I voluntarily offer farmers any advice, many thought I am doing it only to sell my products. That’s why I only consult farmers who ask for my suggestion!”

Current challenges: 10 (out of 14) MSRs face several challenges while selling seeds, such as inadequate germination¹⁰ and insufficient yields. They try to find better methods through discussions with the farmers and the seed selling companies. Shubhash, an MSR from Gaibandha shared, “Due to bad weather, sometimes some seeds do not germinate properly. When this happens, farmers who took the seeds on credit do not want to pay the rest of the payment. I try to connect them with the right information from the MSRs or SAAO and convince them to make full payment when they purchase more seeds the next time they come.”

“Sometimes the farmers face problems with germination and yields. When I or the farmers face these problems, I quickly communicate with the respective company’s representative and provide an alternative seed or inform another process to mitigate the farmers’ losses along with mine.”- MSR Mamun, Gaibandha

MSRs also struggle to decide and negotiate the seed price as customers (farmers) can easily purchase poor-quality seeds at a lower price from the local stores. This also involves the prices of mini packs that the MSRs can usually negotiate with the farmers. During the KIIs, the stakeholders also confirmed similar challenges. “Communities can easily purchase poor quality seeds (khola beej/ non-packaged) from the local markets at a cheaper rate. The local markets do not always sell hybrid quality seeds,” commented one private

company representative. The MSDs (to MSRs and sometimes farmers) and MSRs (to farmers) raised awareness on good quality seeds, their processing, more productive capacity and provided warranty to resolve these issues. Soju Mia (MSR) from Netrokona shared his experience on dealing with such a challenge, “I had to create awareness, motivate and convince farmers to purchase at a fair price that works for both of us. I sell seeds at prices set by the companies and customers’ abilities.” In addition, the MSRs face other challenges like due payment, the lack of storage, or a return policy for unsold seeds. Halim Rana, an MSR from Jamalpur was once blamed for trading poor quality seeds, “My business was going well. Someone complained to the Upazila Department of Agricultural Extension (DAE) office, claiming that I sell duplicate and expired seeds. After investigation from the DAE, they found that the claim was false, but I had to suffer temporary losses in business. But for that, now my connection with DAE has improved.”

In most cases, the MSD/MSRs reported the absence of female peers in their working areas. Kamal from Habiganj shared, “Being a male MSR, I think that female seed sellers have some limitations. Traveling after dark from the local market is risky for them...also communication at night or other times when the women are busy with household work night makes them unavailable to the farmers’ needs and queries.” Kamal also emphasized that MSRs sometimes need to stay out late to buy seeds from the big seed sellers (MSDs) which can also hamper women’s safety and security if they choose to become MSRs. He has not seen a female MSR in his working area. The same applied to other areas in this study. While scoping for purposive sample before

¹⁰ The germination process is a scientific technique that follows several steps. The steps in seed germination require a balanced amount of water, oxygen, temperature, light or darkness, and scarification. The process can be hampered by the externalities or by the ignorance of farmers, hence sometimes seeds with a high germination rate might not germinate.

the data collection, the program database did not have any female MSD/MSRs in the selected eight villages for this study.

The **change agents** (CARE Bangladesh and partner NGOs) of the program portrayed the journey of the MSDs/MSRs from a comprehensive viewpoint. Two recurring themes sprouted from their interviews are the challenges related to the remoteness of their working areas, and MSDs and MSRs becoming a great source of agricultural inputs for the communities in the absence of private and public service providers made the MSDs/MSRs. Bishnupodo Roy, the Market Development Officer (MDO), Air Malik Seed Company, commented on evaluating the service quality, product pricing, and availability of the MSD/MSRs, *“Their services are quite good. But considering the remoteness, their services are not easily available in the community. For example, when MSRs need to visit a village/go to the market every week, s/he can do that twice or once a month. Although the seeds they sold were affordable for the communities, sometimes the MSD/MSRs do not purchase hybrid seeds that much due to the poor demand from the community (as the poor farmers cannot afford them). In addition, travel expenses increase their product and service costs. Many MSRs have to travel quite a long route (cross two/three rivers even) to purchase seeds from the MSDs (vice versa MSDs from the companies). For example, when a packet of vegetable seeds costs BDT 20 (USD 0.24), an MSR might sell them at BDT 35 (USD 0.42), including his traveling expenses. This increases the market price automatically and creates a gap with the poor farmers as they might think the price is unfairly pushed on them.”*

Another challenge mentioned by the program technical lead was that the poor farmers were incapable of utilizing even the mini packs of seeds which results in wastage. The demand for seeds is hence fluctuates depending on the needs of the farmers. Dr. Hedyatul Islam, Team Lead, on-farm result area, SHOUHARDO III shared, *“Previously the companies used to sell seed packets of one to half kg, later they introduced at 100/200-gram packets. For small farmers, even these 100/200-gram packets are waste as well. They need 5/10 pieces of seeds to plant in their yard or ‘mada’¹¹ Neither ours nor the market-generated demand work here...it was the farmers and their demands.”*

Predicted future challenges: Nine (out of 14) MSRs and both the MSDs expressed that they will not face any major or new challenges once SHOUHARDO III program is no longer there to support them. This is mainly due to the years of experience (four or more years) that the MSRs and MSDs had before been affiliated with SHOUHARDO III. Their market presence precedes the program’s involvement. However, they expressed that the continuous field support, advice, and networking opportunities by SHOUHARDO III in the future will not be available which might create a hiccup in the business in the first few months following program's phase out. An MSR, Panna from Kishoreganj stated, *“If there is no SHOUHARDO III, we’ll go through a shock first! Now that I have been in contact with government officials, if those officials leave, it will take me a while to get in touch with someone new. Even after that, I will try to overcome it with the knowledge and skills I gained from the SHOUHARDO II program.”* Additionally, the respondents also anticipated a reduction in customers, group-based selling, and possible future unrest in the market (such as, price negotiation, infringement of good seeds, supply of poor-quality seeds) in the absence of the program.

“Even if all the MSDs and MSRs might say that that they don’t need our (program’s) help or can continue their business without SHOUHARDO’s support or in absence, I fear that a few of them might drop out soon. There is a high possibility that they might be inactive in the program’s absence. We support them through ensuring participation in the linkage meetings, reaching the private companies and government offices. There is one female MSR in my area who might become inactive soon. But we are motivating her now to continue the seed selling. This will be absent in the near future when program support is absent.”
 - A SHOUHARDO III staff from Sirajganj

¹¹ In every homestead of the Bangladeshi village, there are raised mounds also known as mada in the open corners of the homes. The mounds used to prepare annually collecting dry clods from the clayey loam from crop fields.

E. Performance analysis of MSD/MSRs

The performance analysis in this study was initially based on the range of income and the size of client-base of the MSD/MSRs. Criteria for high-performing and moderately-performing MSD/MSRs were set at the beginning before the sample selection of the study. However, since the joint term MSD/MSR did not provide a comprehensive understanding of the MSDs and MSRs indicative outcomes separately, the study undertook the critical appraisal of secondary outcome indicators; in this case- the linkage, networks, social recognition, and testimonies from service recipients and providers.

The relationship between the MSD/MSRs and the communities plays a key role in the sustainability of this LSP model. The social acceptance and popularity of the MSD/MSRs mostly depends on their on-demand customer service through courteous and helpful behavior. The softer skills paired up with providing good quality seeds are key turning points of business for the MSD/MSRs. Particularly the MSRs are more engaged with the farmers as they also offer agriculture-related advisories. The interlinking relationship of MSRs with MSDs also helped in strengthening and expanding MSRs' businesses beyond their villages. The MSDs help the MSRs with the technical information they receive from the seed companies, in turn also helping the farmer indirectly through the MSRs. As part of introducing the LSPs to the program communities, SHOUHARDO III regularly took the MSD/MSRs to attend the meetings of community groups, VSLA, and other relevant courtyard sessions and meetings. The continuous communication and field presence with the farmers gave the MSD/MSRs an opportunity to promote their businesses to the end-users (farmers). Subhash, an MSR from Gaibandha shared, *"Now the community knows me as a small businessman selling seeds. My recognition in the community has increased as the farmers call me whenever they need my assistance."* The program helped make the MSRs 'the point of contact' for seed-related inquiries by the farmers. A similar mechanism applies for the MSDs, who are 'the point of contact' for MSRs for seed or agriculture-related inquiries. Eventually the strong connection of MSRs and MSDs resulted in some of the MSRs achieving a higher performance compared to their previous years. Such an example is Kamal, an MSR from Habiganj, as he managed that he regularly gets seeds at a discounted price through negotiation and good functional relationship with his MSD nearby. Subsequently, he can sell seeds at a lower price than the market to the farmers. The farmers are also content to purchase good quality seeds at a low price which makes them keep coming back to Kamal to buy more seeds. The connection and linkage with the MSD have established Kamal as a high-performing MSR with an improved recurrent client base and increased income.

Through constant connectedness and support, the program managed to improve the farmers' trust and increased familiarity with the MSRs, and in a few cases with the MSDs. This also applied to the trustworthiness of the private seed companies and local agriculture-related GoB officials. SHOUHARDO III sometimes introduced and in other cases re-emphasized the connection with GoB and Private sectors regarding seed selling and agriculture-related advisories. The DAE also acknowledged the contribution of the MSDs and MSRs in remote communities. Atikul Islam, SAAO of DAE- Mithamoin, Kishoreganj shared, *"DAE is responsible for providing agricultural services to the community. DAE still provides such services to the community, but it is challenging to cover the whole area with a limited workforce. So, the seed sellers trained by SHOUHARDO (MSD/MSR) are counted as extended hands for delivering agriculture service."*

The web of interconnectedness is one of the positive intended outcomes of the program (harvester). SHOUHARDO III is heavily focused on improving the networks and linkage of the MSD/MSRs with the farmers, GoB and private stakeholders. The findings of this study revealed that the process is ongoing and approaching a sustainable impact in the program areas.

F. Sustainability plan

The MSD/MSRs wish to increase their income and take this service provision/business forward when SHOUHARDO III is not there. They are planning to continue the relationships and network they have developed with SAO and private companies with the help of program staff. All of them are confident to continue visiting the SHOUHARDO III community groups¹², increase product varieties, and generate employment opportunities to expand their business in the future.

The communities suggested (through FGDs) that the MSD/MSRs could continue their business if they maintain their product quality (such as, not selling expired goods), interpersonal relationships with the farmers, GoB, NGOs and private seed companies, and keep improving their capacities in terms of agricultural inputs regardless of program's presence. The stakeholders from the DAE and seed selling companies expressed their eagerness to extend support to the MSD/MSRs in the upcoming days. They will assist the MSD/MSRs in offering technical knowledge and advisories, including in different workshops and field demonstration days. Soju Mia, an MSR from Netrokona expressed, *"If the program phases out, DAE and private companies will remain, I have good relations with them, have the contact numbers (mobile phone) of the respective officers, and I will communicate with them while needed. I can maintain the communications and support systems after the SHOUHARDO III program ends. The private seed companies advised me on purchasing quality seeds at an affordable price from the village market. I was also advised on the culture process (seed germination, bed preparation, pest control measures) by Government offices. If I can continue communicating with them, I think I will receive the help that I need."*

"I think the local seed provider (MSD/MSR) will be able to conduct their business in the absence of SHOUHARDO. They have developed that capacity after years of working closely with the program staff. Also, we (Air Malik Seed company) are planning to conduct informative training programs with the seed sellers (MSD/MSR) in the future."

- Bishnupodo Roy, MDO, Air Malik Seed company, Kurigram

Discussion

SHOUHARDO III initiated the MSD/MSR LSP model with the hopes to meet the needs of the last mile farmers in terms of quality seed supply leading to good harvest. The model was initiated in 2019 which gradually started to pick up in the beginning of 2020 until the pandemic started from March 2020. The pandemic, lockdowns and movement restrictions affected a lot of SHOUHARDO III's planned interventions and activities toward the sustainability agenda in its 6th and 7th year of implementation. Life slowly started getting back to normal from March 2022. One of the in-house monitoring systems called the Recurrent Monitoring System (RMS) conducted in March 2022 revealed that out of the 425 surveyed households, only seven (1.6%) reported that their lives were still affected by the pandemic in terms of income, job opportunities, coping options, livelihood, and wellbeing status. This means that the program participants are slowly going back to the pre-pandemic era and engaged in the IGAs that were available and most suitable for them. Although farmers did not take a break during the pandemic, there was a scarcity of workforce during the harvest season during the lockdowns in Bangladesh in the past two years (2020-2021). In 2022, so far, no such challenges regarding shortage of available agricultural products, inputs and workforce have been observed.

¹² The Community Groups formed by SHOUHARDO III will dissolve with the end of the program. However, the MSD/MSRs perceive that some community groups will continue their meetings regardless of program presence. They also think that the VSLA groups will continue which they wish to utilize for group seed selling.

The study had a few methodological challenges to begin with. The key challenge was the approach to follow the outcome harvesting (OH) method based on two principal indicators – 1) income and 2) client-base. The study had limited data on these two indicators, mainly from a pilot study conducted in 2019 (SHOUHARDO III, CARE Bangladesh (2020a)) and the findings of this study; hence further data triangulation met with difficulties. Although the pilot study (described in the background section) offers an overview of weekly income of MSD/MSRs (altogether, not separate), however, the latest data on income is only available in the findings of this study. This had its own demerits as only the perceived and estimated income and client-base is available from the respondents' interviews. The analysis of this study could not follow an ideal approach toward OH method and hence the analysis was presented as closely to OH method as possible using secondary indicators depicting the significance and contribution of the outcomes through the current scenario of the MSD/MSRs, their support mechanism, linkage, networks, challenges toward becoming a successful LSP model and sustainability plans.

While analyzing the interviews, discussions, field observations and through continuous learning discussions with program technical teams, this study found a contradictory understanding of the MSD and MSR terminologies. The initial terminology and definition of MSD/MSR gradually changed towards the current approach. Initially in 2019, the MSDs were defined as the big seed sellers with big shops who were already in business for a long time, had well-established connection with the private seed companies, and provided services to MSRs and a few farmers from several neighboring unions. The MSRs are the small seed sellers who purchased seeds from the MSDs, sold small number of seeds and provided agricultural advisories to the poor farmers in their villages (sometimes adjacent villages but not to the geographic-level coverage of MSDs). Although the initial objective set in 2019 for this terminology was on the right track, after three years of field presence, it all came down to the MSRs who are at the forefront of dealing with the last mile farmers. The MSDs also sold seeds and provided advisories to farmers in their nearby villages, however, less in number. Currently, there are 16 MSDs (all male) and 561 MSRs (Female: 85 and Male: 536) working in the program areas. The program had the same interventions planned for both the MSDs and the MSRs. At the initial stage, they received local service provision and seed-related technical training from SHOUHARDO III. During the last two years, the program supported them with improving or building linkage with the local GoB officials, and private seed companies. The program also introduced the MSRs in the meeting organized by different groups formed by the program, such as community groups and community-based savings groups known as Village Saving and Loan Association (VSLA). The 'MSD/MSR' terminology and interventions need to break down in separate categories for a more focused customized interventions by the program as the scope of work for MSDs and MSRs are different. At this stage, the MSRs are serving the farmers better and more actively, hence there is an opportunity to elevate their presence and performance in the remaining months of the program for a sustainable impact. As MSDs are established seed sellers in the community regardless of SHOUHARDO III's presence, their strength (linkage, technical knowledge, price fixing, communication) should be harnessed to train the MSRs to become successful local seed sellers.

This study also revealed another technical adversity. Although the linkage with the MSDs, GoB Agriculture Officials, Farmers, Good Quality seeds, technical advisories and fair pricing impacted the performance of the MSD/MSR, the performance-based classification (based on income and client-base) faced challenges with the field-level experience-based information. In this study, the operational definition of high-performance was having an average monthly income of BDT4,000 (USD 48) or above, and having a client-base in four or more villages. Here is the twist- since there was no differentiation made for MSDs and

MSRs separately by SHOUHARDO III at the initiation of the model, the income and client-base information from the program database is always jointly presented, not separately for MSDs and MSRs. Hence when the study delved deeper into exploring the different types of income and client-base for MSDs and MSRs separately, it faced challenges to present a focused analysis as all the information available outside this study was jointly for MSD/MSRs. As a result, the comparison between high-performance and moderate-performance of MSDs and MSRs separately was difficult to portray. This is because MSDs, the big seed sellers, usually have more years of successful experience, more income because they have a wider client-base due to trading in more than one village, and they have an established point-of-contact (their shops) where they sell seeds in wholesale along with other agriculture related products (pesticides, fertilizers, farming equipment). Whereas MSRs are small seed sellers who buy seeds from the MSDs, usually have less years of experience, less income and less client coverage than MSDs since they only sell seeds in their villages or at best in two villages. The income and client-base has different variables for the MSDs and MSRs, hence it is not ideal or practical to compare the income and client-base of MSDs and denote them as high-performers whereas denoting MSRs as moderate-performers because they have less achievements in number than MSDs.

An exception was found with one of the MSRs in this study, Tazul from Kishoreganj, who has around 23 years of seed-selling experience but he serves around 155 farmers in a month. He shared that seed-selling is a seasonal business for him that he does four months every year. On the other hand, Kamal is an MSR from Habiganj who shared that he has 13 years of seed-selling experience and serves around 2,000 farmers each month. When probed even further, he shared that he remembers the number of times he sold seeds- which can mean that he might have sold seeds multiple times to one farmer. This creates confusion between the numbers of clients served, and the number of times service provided by the MSRs. Both of the MSDs in this study shared that they also serve farmers on a regular monthly basis apart from selling to MSRs and buying wholesale seeds from private companies. According to the findings of this study, the average income of MSRs from seed selling is less than the income from other sources. Usually, they sell other products besides the seeds such as fertilizer, pesticides, farming equipment, and diesel. These are the factors that influenced the count and perception (respondents') of income and client-base for the MSDs and MSRs through this study. The absence of a baseline and up-to-date database rendered the performance-based comparison unfeasible. There are opportunities to improve the database and future follow-up interventions catering to the needs of the program, MSDs, MSRs, seed companies and farmers. The program is conducting a Routine Monitoring Tracking System (RMTS) for the LSPs to enrich the databases with income, client-base and service coverage during April to June 2022. Updated list will be available in July 2022.

This study revealed an interesting finding on the client-base of the MSDs and MSRs. The highest percentile of clients belongs to the female farmers. This is a positive outcome of the relentless efforts of the program (harvester) and its field staff (change agent). On the other hand, according to the program database, only 14.9% out of 561 MSRs are female which is significantly low. To cater to the needs of the growing female farmer base, there is an opportunity to focus on developing more female MSRs.

According to the pilot study (SHOUHARDOIII, CARE Bangladesh (2020a)), farmers' trustworthiness toward MSRs wavered in some villages as the farmers would rather trust the MSDs more because of the quality of seeds, prices and other inputs. The farmers initially lost faith in the some MSRs because the MSRs sometimes mixed fresh seeds with seeds from already opened sacs to mobilize sales which resulted in overall poor quality of seeds. Many farmers bought these mixed seeds and later saw the germination

rate was not up to the mark. Therefore, they went to the nearby MSDs as they were certain to receive good quality seeds. The FGD findings revealed that MSRs were determining the price of the seeds by themselves which also drove the farmers towards the MSDs as they looked for a fair price. Through this study, the respondents shared that the key point of purchase of good quality seeds for them are the MSRs. The shift in the trustworthiness of the MSRs by the farmers is proof that SHOUHARDO III's intended intervention worked toward the expected outcome. The program's constant support through building linkage, maintain communication with companies, improving inter-personal relationship among the MSDs and MSRs, motivating the MSRs to provide unadulterated seeds and maintaining communication with the farmers through several program platforms worked well toward the business agenda of the MSDs and MSRs, agricultural input agenda of the farmers, and sustainability agenda of the program.

The intended outcome of the MSD/MSR model is to have strong linkage, communication and inter-personal relationships among the MSDs, MSRs, local GoB offices, private companies and farmers, especially female farmers. Field observation and the findings of this study revealed that all of the MSDs and MSRs agreed that their communication and linkage with the GoB offices, private companies, and farmers have increased due to SHOUHARDO III's continuous support. However, they also mentioned that there lies a risk of the GoB official (SAAO) being transferred from their villages which will make them lose the connection when the program phases out in the future. Dr Hedyatul Islam, the on-farm technical lead from CARE Bangladesh shared, *"Agricultural Extension Workers (AEO) from DAE usually work in coordination with the program's MSD/MSRs to reach the poor farmers in remote areas. This has been creating a win-win situation for the farmers, extension workers, and seed selling companies as previously there was a scarcity of not only good quality seeds but also seed sellers. The MSD/MSR model is filling the gaps in the workforce. The program also taught the MSD/MSRs to use available hotlines (weather, agriculture), and mobile applications (Livestock diary, Fosholi) to support the farmers."* For future planning, the respondents in this study revealed that there is a need to improve their technical knowledge hence training will be useful.

Conclusion

Food security and optimum nutrition are elemental toward achieving the SDGs for Bangladesh. According to collaborative research (Osmani et. al., 2016) conducted by the GoB and the USAID, undernutrition costs Bangladesh over \$1 billion in lost productivity and considerably more in health expenditures each year. The USAID has been actively partnering with the GoB on various development initiatives to improve food security, economic growth, and nutrition by utilizing the power of technology and innovation to boost agricultural production, and address hunger toward ending poverty in Bangladesh (USAID, n.d.). Being one of the flagship programs of the USAID and GoB, SHOUHARDO III incorporates almost all SDGs toward achieving a food and nutrition secure population in the remote northern regions of Bangladesh.

There's a Bengali proverb - *"Bhalo bije bhalo foshol"* (good seed makes a good crop), meaning favorable raw materials will produce favorable end results or harvests. Good quality seeds are regarded as the most important input for increasing agricultural productivity which contribute toward achieving comparatively better food self-sufficiency. The quality of the seed primarily determines the effectiveness of other inputs such as fertilizer and irrigation. However, the utilization of good quality seed is still very low (Ministry of Agriculture, Government of Bangladesh, n.d.). Previously farmers from the remote char and haor areas could not get quality seeds due to availability, affordability, and transportation challenges. They used to plant the seeds they could avail within the during planting season. Many female farmers used to recreate



seeds from the crops, which tend to lose their quality. Now they can access quality seeds at affordable prices within the right seasons with the help of MSDs and MSRs. Farmers can purchase seeds independently and, in a group, which is helpful for the poor farmers.

SHOUHARDO III developed the MSD/MSR as a sustainable seed provisioning model to serve poor farmers. This LSP model is designed and developed to reach the remotest communities to meet their agricultural input requirements in the possible absence or a lack of public and private service providers. This study revealed that the MSDs and MSRs have been acting as an extension of the private seed sellers in many areas along with being the only seed sellers in some deeply remote areas of Haor and Char. Following the OH method, the change agents (CARE Bangladesh and PNGOs) actively engaged the social actors (MSDs, MSRs and community farmers) to build and improve the interconnected linkage with the private and public entities through the harvester (SHOUAHRDO III). The learning from this study will be utilized by the harvest users (program management team) to further strengthen the program design through collaborating, learning and adaptive (CLA) decision-making in the remaining months of the program. The target is to transform the model into sustainable ones, so that the functional web of inter-linkage and communication remains in the program areas for a long time.

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Annexes

Annex I: Study Outline on Harvesting the outcomes of two local service provisioning models (Sanchay Sathi and MSDs/MSRs) in SHOUHARDO III program areas.

Background

Strengthening Household Ability to Respond to Development Opportunities (SHOUHARDO) III is a Resilience Food Security Activity (RFSA) funded by the United States Government through the United States Agency for International Development/Bureau of Humanitarian Assistance (USAID/BHA), with complementary funding from the Government of Bangladesh (GoB). SHOUHARDO III is working at 947 villages of char and haor regions to improve the lives of 725,611 people from 170,298 households (HH). The program seeks to improve access to public and private services for the rural poor while building their resilience capacities. The SHOUHARDO III extension (S3X) phase focuses on two major principles: 1) testing, identifying, and promoting service provision models by the public, private, and community-based organizations and service providers; and 2) mobilizing communities to engage with these service providers to ensure sustained benefit¹³. As a result, S3X emphasizes service delivery models to create a broader spectrum of service provision for poor and extreme-poor (PEP) households (HH) to enhance their livelihood and improve their income.

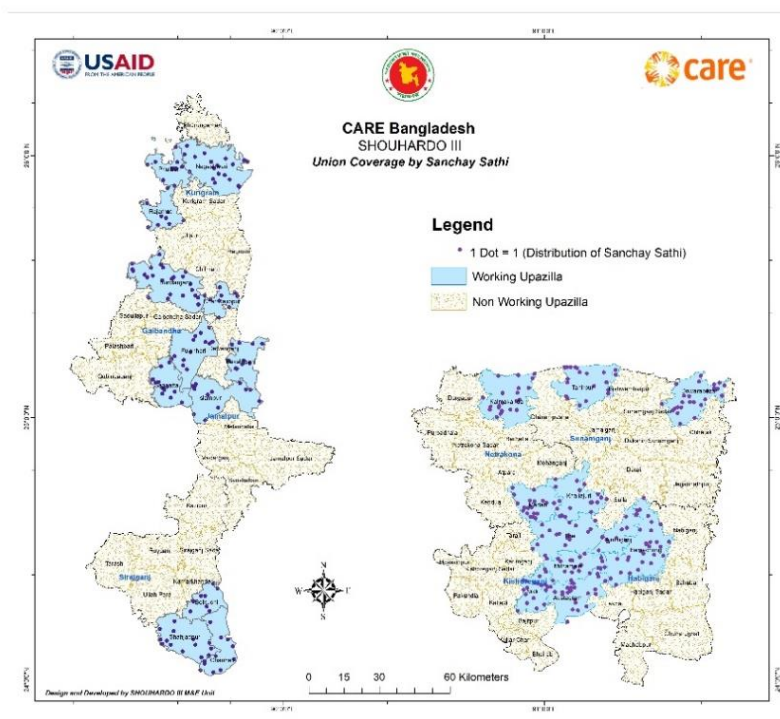


Figure I: LSP coverage – Sanchay Sathi

¹³ Source: A brief synopsis of Local Service Providers (LSP), SHOUHARDO III, CARE Bangladesh.

Local service providers (LSP) are at the core of this service provision model in most program areas and are designed to be implemented in hard-to-reach locations where public and private services are scarce¹⁴. Through skill development and linkage-building capabilities, the program selected, trained, and prepared LSPs from various service provisioning sectors to sustain the Program impacts and enable efficient service provisioning through them. It is critical for the program at this stage (with eight months remaining until phase-out) to gather and document a comprehensive knowledge of the LSPs regarding their positive and challenging outcomes to inform future designs of programs within the RFSA network; this document discusses a qualitative approach to capture this.

Considering the constraints on time, workforce and movement plans resulting from emerging threats of COVID-19, this study selected two models to explore through qualitative probing (from the total of nine types of LSPs –See Annex 1): (i) the Village Savings and Loan Associations (VSLA) by the *Sanchay Sathi*¹⁶ (SS) and (ii)

Table 1: LSP status			
Type of LSP	Char	Haor	Total
<i>Sanchay Sathi</i> /Village Agent (VA)	153	227	380
Micro Seed Dealer (MSD) and Micro Seed Retailer (MSR)	398	218	616 ¹⁵

Micro-seed Dealers (MSD)/ Micro-seed Retailers (MSR)¹⁷. These two models were selected based on –

3. Their service area coverage
4. Their service duration
5. The availability of baseline findings is required to compare and contrast the changes with their ongoing performance and provide a comprehensive picture.

Sanchay Sathi (SS):

After successfully executing the piloting initiative with 15 *Sanchay Sathis*, the program scaled-up the model in almost¹⁷ 100% of the program areas (see figure 1). The *Sanchay Sathi* was one of the initial local service provisioning models that navigated to ensure the financial inclusion of PEPs. Currently, 380 *Sanchay Sathis* (all female) are working in the Program areas (see Table 1). *Sanchay Sathis* receive their service fees at the end of the savings cycles once the VSLA completes the share-out process, rather than monthly basis.

Micro-seed Dealers (MSD)/ Micro-seed Retailers (MSR):

The program developed MSDs/MSRs¹⁸ to strengthen its effort in delivering agro-inputs and enhance knowledge among farmers efficiently at the village level and in a sustainable manner. Furthermore, the program engaged MSDs/ MSRs to strengthen the supply chain to provide quality seed to the last mile users, especially in remote communities. The program also coordinated with the private seed companies so that MSDs/MSRs could have seed as per their requirements. In general, MSRs are selling/supplying seed within their village, and MSDs conduct business beyond their villages, including seed supplies to MSRs. The program found both interventions effective in ensuring better access to such services for poor people. A total of 616 MSDs/MSRs (Female: 84 and Male: 532) are currently working in almost¹⁹ 100% of the program areas (see figure 2).

¹⁴ Source: Final Report on the P-CSBA Pilot Assessment.

¹⁵ Among the 616 MSDs and MSRs, 84 of them are female.

¹⁶ English meaning of *Sanchay Sathi* is Savings Companion also known as Village Agent. This study is using *Sanchay Sathi* for non-farm LSP.

¹⁷ With a minor exception of a few villages

¹⁸ MSDs/MSRs are considered as one single unit of LSP under on-farm result area. The MSRs sell their products to the small farmers, while the MSDs customers can comprise small farmers to seed retailers.

¹⁹ With a minor exception of a few villages



USAID
FROM THE AMERICAN PEOPLE

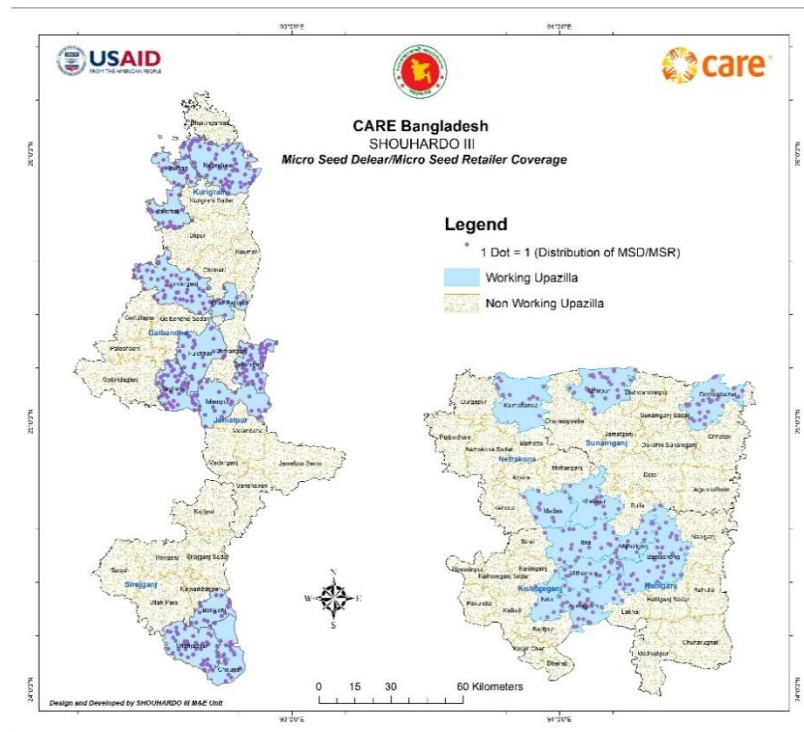


Figure 2: LSP coverage – MSD and MSR

Rationale of the study:

In the remaining months of SHOUHARDO III, this study will contribute to adaptive management decisions for the program and will inform the moderately-performing LSPs to improve their business, and service provision in the future, even after the program phases out. For instance, the study will compare two selected LSPs from the same service provisioning discipline and document the achievements of the high-performing LSPs and the opportunities to improve for the moderately-performing LSPs. At the end, a list of suggestive measures will be highlighted for the moderately-performing LSPs with an opportunity to upgrade to the high-performing ones.

Operationalization of the key terms:

- vi. *Outcome Harvesting (OH): Who (e.g., community, family, stakeholders, or similar services) supported the change agents (LSPs), and how did the changes (if at all) take place (e.g., supports, contribution, guidance)*
- vii. *High-performing: active Sanchay Sathis and MSDs/MSRs serving at the communities (at least one year) who made significant positive changes in terms of income and client-base (see Table 2)*
- viii. *Moderately-performing: active Sanchay Sathis and MSDs/MSRs serving at the communities (at least one year) who made moderate positive changes in terms of income and client-base (see Table 2)*
- ix. *High-performance factors of LSPs: based on the selected parameters like income, client-base, business expansion*
- x. *Sustainability factors of LSPs: considering their business and High-performance factors*

Scope of the study:

Although there is one prime objective of this study, this document is a consolidation of two pieces of research. Firstly, the OH of Sanchay Sathi, and secondly, the OH of MSDs/MSRs. The consolidation includes similar but two strategies for sampling, data collection, and field plan. The data collected

through this study will generate two separate reports as well. A comparison between Sanchay Sathi and MSDs/MSRs is not practical as each LSP model represents a different thematic discipline and mode of service provision. Their income and client-base are also different; hence the same parameters cannot be defined for inter-model comparison. An effective comparison is possible within the same LSP model regarding high and moderately performing LSPs to present a critical analysis through outcome harvesting. The details are discussed below in Table 2.

Table 2: Parameters for identifying high and moderate-performing LSPs			
LSP type	Income	Client-base	All-inclusive
Sanchay Sathi ²⁰	High-performing: BDT 50 (USD 0.60) and above per session	High-performing: formed and supporting six and above VSLAs	LSP income and client-base for the high and moderate-performing LSPs have been selected based on the baseline study findings and information from the M&E team (see Annex for the MSD and MSR baseline report from January 2020 and Sanchay Sathi assessment report from April 2020).
	Moderate-performing: BDT 49-20 (USD 0.59-.0.24) per session	Moderate-performing: formed and supporting 4-5 VSLAs	
MSDs/MSRs	High-performing: average monthly income BDT4,000 (USD 48) or above	High-performing: MSDs/MSRs serving minimum four or more villages	
	Moderate-performing: average monthly income below BDT4,000-2,000 (USD 48-24)	Moderate-performing: MSDs/MSRs serving minimum 2-3 villages	

Objectives

Key objective: The study aims to capture the high-performing and moderately-performing factors of the selected LSP models, drawing lessons from the outcome harvesting approach and reflecting on the sustainability strategies in the SHOUHARDO III areas.

Specific objectives:

4. Capture the change factors behind high-performing and moderately-performing LSPs and their performances in their working areas
5. Document the existing challenges/barriers of the scaled-up LSP models and suggest measures to improve with reference to the high-performing ones
6. Reflect on the sustainability of LSP beyond the Program operation and timeframe

Methodology

Outcome Harvesting (OH) approach:

The qualitative study will follow the Outcome Harvesting (OH) methodology, which helps to identify, describe, and analyze the changes brought about through a change agent²¹. Outcome Harvesting (hereinafter as OH) will be adopted as it is the most suitable for this study to capture changes that can be positive or negative, and intended or unintended²². This study will also attempt to illustrate a

²⁰ For Sanchay Sathi selection, the study will prioritize the client-base as prime parameter followed by their income. Their service fees are determined by the VSLA meetings/sessions they attend and they receive service fees equivalent to the share values (the number of shares can vary) per meeting. At the end of the savings cycle, they receive their entire service fees (based on the number of meetings attended) when the VSLA completes their share-out process.

²¹ Available at: <https://www.intrac.org/wpcms/wp-content/uploads/2017/01/Outcome-harvesting.pdf>, last seen: January 6, 2022.

²² Available at: <https://reliefweb.int/report/world/outcome-harvesting-best-practices-learning-reflection>, last seen: January 10, 2022

comparison and contrast of the high-performing and moderately-performing LSPs to sieve out best practices.

The Outcome Harvesting approach will help focus on high-performing LSPs and trace back the success factors that have led to where they are now. It will also assist in identifying the components affecting the changes, such as community behavior, actions, activities, or practices. The approach will gather evidence of the outcomes by collecting primary data from the LSPs and communities and then trace changes to assess whether or how the program contributed to that change since pilot initiatives. The OH terms relevant to this study are explained in Table 3.

Table 3: Relevant terms for Outcome Harvesting (OH)	
Change agent:	CARE Bangladesh and implementing partner NGOs working in the Program areas influencing the outcome or changes
Social actor:	LSPs and communities that changed due to interventions brought by the change agents
Harvest user:	The Program management team as a harvest user needs OH findings to make necessary informed and adaptive program decisions
Harvester:	SHOUHARDO III Program as the harvester leading the OH process, facilitating, and supporting participation within the process

This qualitative study will follow the purposive sampling method to ensure the representation and inclusion of LSPs adhering to a list of predetermined criteria (see Table 4). Purposive sampling permits qualitative research designs to be more adaptable, allowing for the use of specific techniques as needed to achieve the objectives of the study. The absence of the MSDs/MSRs, and *Sanchay Sathis* in some villages might affect the village selection process. As a result, the study intends to follow purposive sampling to select eight program Upazilas (with 75% or above LSPs working in that area) to represent a sufficient number of required LSPs. For data collection, this study will conduct Key informant interviews (KII) with stakeholders, In-Depth Interviews (IDI) with MSDs/MSRs, Focus Group Discussions (FGD) with the service recipients (farmers) for the MSD/MSR model. Another set of IDI will be conducted with *Sanchay Sathis* and FGDs with the VSLA members for *Sanchay Sathi* LSP model.

Location: The study will purposively select eight Upazilas with 75% or above LSPs (the study might select the same union for both the models since the *Sanchay Sathis* have almost 100% of Upazila coverage). Considering the time-constraint, limited skilled research workforce, and looming threat of additional COVID-19 along with its preventive measures, the study plans to incorporate multiple villages from one union since the program intends to avoid the duplication of LSPs in one village offering the same services (e.g., one *Sanchay Sathi* from each village).

Sampling: The study will include the LSPs (*Sanchay Sathis* and MSDs/MSRs), their service recipients, and relevant stakeholders.

Table 4: Inclusion and exclusion criteria		
LSP Model	Inclusion criteria	Exclusion criteria
1) MSDs/MSRs	<ul style="list-style-type: none"> Active in the community Provided service for at least one year Scaled up by the SHOUHARDO III 	<ul style="list-style-type: none"> Dropped out Inactive Below one year of service provision
2) <i>Sanchay Sathi</i>	<ul style="list-style-type: none"> Active in the community Provided service for at least one year 	<ul style="list-style-type: none"> Dropped out Inactive Below one year of service provision

Ethical considerations: The study will ensure ethical measures and a do-no-harm approach at every step by ensuring the followings items -

- Individual consent of the participant
- Voluntary participation of the involved population
- Confidentiality of participants' information
- Harm related to perpetration or disclosure for participation (e.g., family consent or commentary from the neighborhood)
- Physical safety of participants/program staff

Data collection plan:

LSP model	IDIs:	KIIs:	FGDs:	Case stories:
Sanchay Sathi	<ul style="list-style-type: none"> • 16 (8 with high-performing and 8 with moderately-performing) IDIs with LSPs 	<ul style="list-style-type: none"> • 2 KIIs with SHOUHARDO Program staff 	<ul style="list-style-type: none"> • 4 FGDs with the VSLA group members (VSLAs formed and facilitated by the Sanchay Sathis) 	<ul style="list-style-type: none"> • One case story from the Sanchay Sathi model
MSDs/ MSRs	<ul style="list-style-type: none"> • 16 (8 with high-performing and 8 with moderately-performing) IDIs with LSPs 	<ul style="list-style-type: none"> • 3 KIIs with government stakeholders (e.g., extension workers) • 3 KIIs with private company stakeholders (e.g., seed selling companies, microcredit suppliers) • 2 KIIs with SHOUHARDO Program staff 	<ul style="list-style-type: none"> • 4 FGDs with the farmers (who took services from MSD/MSR) 	<ul style="list-style-type: none"> • One case story from the MSDs/MSRs model

Field plan

(a) Data collection plan for Sanchay Sathi (SS) model

District & Upazila	Union (TBD)	## of IDIs with Sanchay Sathis	## of KIIs with stakeholders	## of FGDs with VSLA members
Gaibandha, Fulchari		2	1	
Kurigram, Char Rajibpur		2		
Jamalpur, Bakshiganj		2		1
Sirajganj, Belkuchi		2		1
Kishoreganj, Mithamain		2	1	
Netrokona, Madan		2		
Habiganj, Ajmiriganj		2		1
Sunamganj, Dowarabazar		2		1
Total		16 IDIs	2 IDIs	4 FGDs

(b) Data collection plan for MSDs and MSRs

District & Upazila	Union (TBD)	## of IDIs with MSDs/ MSRs	## of KIIs with stakeholders	## of FGDs with farmers
Gaibandha, Fulchari		2	1	1

Kurigram, Char Rajibpur		2	1	1
Jamalpur, Bakshiganj		2	1	
Sirajganj, Belkuchi		2	1	
Kishoreganj, Mithamain		2	1	1
Netrokona, Madan		2	1	1
Habiganj, Ajmiriganj		2	1	
Sunamganj, Dowarabazar		2	1	
Total		16 IDIs	8 KIs	4 FGDs

Data collection teams (TBC)

Char		Haor	
Gaibandha, Fulchari	Zohurul Islam 1 M&E colleague 2 PNGO colleagues	Kishoreganj, Mithamain	2 M&E colleague 2 PNGO colleagues
Kurigram, Char Rajibpur	2 M&E colleague 2 PNGO colleagues	Netrokona, Madan	2 M&E colleague 2 PNGO colleagues
Jamalpur, Bakshiganj	2 M&E colleague 2 PNGO colleagues	Habiganj, Ajmiriganj	2 M&E colleague 2 PNGO colleagues
Sirajganj, Belkuchi	2 M&E colleague 2 PNGO colleagues	Sunamganj, Dowarabazar	2 M&E colleague 2 PNGO colleagues

Tentative Timeline

Activity	Jan 9-20	Jan 23-27	Jan 30-Feb 3 ²³	Feb 6-7	Feb 8-28
Concept note & Tool finalization					
Orientation with data collection teams & field preparation					
Fieldwork					
Interview reports submission and check					
Analysis and Research Report submission					

Data collection contingency plan:

The COVID-19 situation in Bangladesh has deteriorated since the beginning of January 2022, with daily infection rates increasing to 24% (8,407 confirmed infections on the day) on January 18, 2022; which was 2% at the beginning of this month²⁴. With emerging and increasing infections of the Omicron variant, CARE Bangladesh instructed its employees to take the necessary safeguards and work from home until January 27th. The management will take further decisions based on the severity of the infection from then on. For further unprecedented events like this, the study will adhere to one of the following plans.

²³ Depending on COVID-19 advisories

²⁴ Source: <http://dashboard.dghs.gov.bd/webportal/pages/covid19.php>

1. In case of emerging moderate threats of COVID-19 infections, the study will opt for a hybrid data collection modality engaging village-based program staff for in-person data collection in areas with less COVID-19 rates and with a minimum duration of travel. In other areas with high infection rates, the study will conduct remote data collection.
2. Following strict measures for severe COVID-19 surges during the time planned for data collection, the program will carry out a full remote data collection through phone calls.
3. In any of the above cases, the KIIs and IDIs can be conducted remotely and FGDs can be conducted in-person if situation allows for it.

Data analysis and management:

- i. **Data entry templates:** For the FGDs, IDIs, and KIIs, the study will develop customized data entry templates and disseminate them to the data collection team for transcription.
- ii. **Field notes sharing:** After analyzing the field notes, each data collection team will transcribe them (from handwritten notes or audio recordings) and share them within the provided timetable after careful review.
- iii. **Field notes collection:** Field notes for two LSP models will be maintained separately (files will be labeled in chronological order based on the data collection type and location).
- iv. **Data cleaning and analysis:** After the data cleaning process, the study will review the texts for missing data before analyzing them using Atlas.ti 8 software.
- v. **Writing the reports:** The final presentation of the research will usually be in the form of a report. The findings of this qualitative study will be arranged into themes and provided in the report as a section title.

Study Outline developed by: Anika Bushra; Reviewed by: Sairana Ahsan (updated on 19 January, 2022)