

REPORT

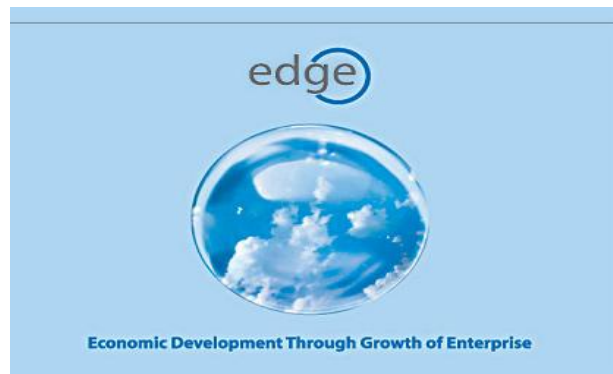
Facilitation area feasibility study for Milk Value Chain project in North and Northern West of Bangladesh



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FOREWARD

It's been a great pleasure to facilitate of area feasibility study for milk value chain project in North and Northern West of Bangladesh and submits the report for Economic Development Unit (EDU) of CARE Bangladesh. The report has taken into consideration the profile of the target beneficiary in selected districts in addition to dairy value chain inclusive milk production and potential. The report is prepared based on primarily and secondary information and interviews with various associated market actors, allied government officials and personnel.

I believe that this would help understand the status of the Thanas to assess of the situation in two-targeted region of Bangladesh. Any queries, suggestions, and comments regarding the report would be highly appreciated. Please feel free to contact me.

Meanwhile, I would like to thankfully acknowledge the contribution of Economic Empowerment Coordinator, Project Coordinator, Assistant project coordinator and other project staffs of Economic Development Unit who helped me in various ways to do the research and accomplish the assignment within the time period.

Thank you.

Best regards

Mahmud Hossain and Rasel Mahamud

Acronyms

BBS	Bangladesh Bureau of Statistic
BDS	Business Development Services
CBN	Cost-of-Basic-Needs
DCI	Direct Calorie Intake
DFID	Department for International Development
DLES	Department of Livestock and Extension
DLS	Department of Livestock Services
EDU	Economic Development unit
ELL	Method of Calculating Poverty
FAO	Food and Agricultural Organization
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GoB	Government of Bangladesh
HH	House hold
KAI	Key Actor Interview
KII	Key Informant Interview
MFI	Micro Finance Institute
MSE	Micro and Small Enterprise
MSME	Micro Small and Medium Enterprise
NGO	Non-Government Organization
RKUB	Rajshahi Kisi Unnayan Bank
SM	Secondary Materials
SME	Small and Medium Enterprise
SS-MA	Subsector Market Assessment
TLO	Thana Livestock Office
WFP	World Food Programme
YD	Youth Development

Table of Contents

1	Background.....	5
2	Introduction.....	6
2.1	Objective	6
2.2	Specific Objective	6
2.3	Methodology.....	7
	Narrowing down scope and Secondary materials review:	7
	Field Survey:	9
	Data analysis and reporting:	9
2.4	Challenges and Limitation	13
3	Result and Discussion.....	13
3.1	Target Beneficiary in Selected Districts	16
3.2	Milk Production and Dairy Value Chain in Selected Districts	16
3.3	Area Remoteness and Shocks in Selected Districts	17
3.4	Constraints in milk value chain in selected districts	18
4	Conclusion.....	19
5	Annexure	19
5.1	Prioritized areas for target beneficiary	19
5.2	Data Sheet for target beneficiary	20
5.3	Thana level lower poverty incidence	21
5.4	Flood affected districts.....	22
5.5	Area prioritization for milk production and value chain.....	23
5.6	Milk Production and Value Chain Data Sheet.....	23
5.7	Areas identified as Remote, feasible to milk transportation and vulnerable to shocks.....	25
5.8	Scoping Meeting participant list.....	25
5.9	Field Survey Respondent list.....	26
5.10	Field Survey Questionnaire.....	28
5.11	Bibliography.....	30

1 Background

The north and northwest region of Bangladesh is characterized by its remoteness from the political and economic centers due to poor infrastructural facilities and weak industrial development. The region has a high population density, and low per capita GDP when compared to the other parts of the country.

	National	Rajshahi Division	Difference
Per capita GDP at current market price (BBS 2001-2002)	20,754.00	15,174.00	-27%

1-1: Source: Statistical Year Book 2004

Significant effort made by different agencies contributed greatly for poverty reduction in this region. It has gained almost the same change of poverty reduction in 5 years from 2000 to 2005 compared with the nation gain. Significant disparity of poverty in urban and rural areas are found in this region i.e., in rural areas 35.6% and in urban areas 28.4% [BBS 2005]. The landless and small marginalized farmers are characterized as extreme poor in this region. The average income per household per month for them in this region is much lower than that of national average.

Livestock rearing is found an integral part in the mixed farming system of Bangladesh which is further intensified in this region. According to the Department of Livestock Services (DLS 2002) in 2001-02 there were about 23.72 million milking cows, which accounted for about 45% of the total cattle population. Compared to other parts of the country North Bengal is considered as the most potential area for cattle as well as dairy sub sector.

	National	Rajshahi Division	Difference
Percentage of cattle holding HH (BBS 1996)	45.83%	48%	5%
Average cattle per cattle holding (BBS 1996)	2.64	2.75	4%

1-2 Source: Estimated from Year book of Agricultural Statistics of Bangladesh 2004

Care Bangladesh seeing the potential of dairy and its role in overall poverty alleviation in this region, initiated 'Strengthening Dairy Value Chain' project in nine north and northwest districts. The basic profile of the target beneficiaries of these nine districts are as follows:

District	Number of Holdings	Farm Holding (% of all holding)	Small Farm Holding (% of all holding)	Cattle Holding (% of all holding)
Bogra	541,687	63%	52%	48%
Dinajpur	456,216	60%	41%	57%
Gaibandha	410,280	63%	53%	46%
Joypurhat	161,654	67%	53%	57%
Kurigram	318,270	64%	51%	43%

Naogaon	440,978	67%	49%	52%
Nilphamary	199,724	58%	38%	64%
Rangpur	440,234	62%	50%	47%
Sirajgonj	400,036	57%	46%	39%

1-3 Source: Estimated from Yearbook of Agricultural Statistics of Bangladesh 2004 (BBS)

2 Introduction

Areas when selected for development projects, it is particularly necessary to focus on certain targets so that the desired output of the project can be achieved effectively and efficiently. Similar to other different projects 'Strengthening Dairy Value Chain' is limited to certain desired output to be obtained through some stipulated resource allocated. More specifically, this project intends to improve the livelihoods of 35,000 rural small-holding and landless households (average of five persons per household, therefore 175,000 beneficiaries) currently earning \$20-30 per month in nine districts of north and northwest Bangladesh by enhancing their participation and profit from the milk value chain.

In order to direct the project to generate maximum outputs, the project should be implemented in locations where maximization of output is possible. This is why, identification of appropriate project locations is considered as a strategic part of the project implementation "Strengthening Dairy Value Chain", which is to be facilitated by Care. This study, in particular, intends to identify suitable project locations in terms of Thana and plays an important role along the junior administration level of the government, directive units of development projects and commercial hub of certain geographic boundary for private sector businesses. It is evident that administrative supports and important (as perceived by the government) services of the government be extended to the thana level, in other words, activities of ministries and ministry departments in the root level is directed via the thana headquarters.

Objective

Identification and prioritization of appropriate working area for the project implementation of 'Strengthening Dairy Value Chain'

2.1 Specific Objective

The followings are the specific objectives of the study that is to be reported on a field study basis.

- Identify and prioritize 36-40 working Thanas under 9 District considering:
 - Synopsis of data on number and distribution of milk producer HH in these Thanas of 9 districts with special reference to small holding and landless milk producer HH whose monthly income is below the poverty line per month/HH.
 - The number of women headed HH and role and activity of women in general in the dairy value chain in these areas
 - Milk production and potential for livestock rearing

- Information on the constraints/limitation to market access (based on backward and forward market linkage and support services)
- To find out remote chars form these respective districts those have potential as project working areas considering communication, HH cluster, required time to reach, mood of transportation, seasonality and migration)
- Observations in these working areas during the field study mentioning opportunities and challenges (especially shocks such as natural disasters, Monga and others) where the project can intervene in the project specific Region, District & Thana.

2.2 Methodology

The detailed methodology of the study is presented below here into a diagram:

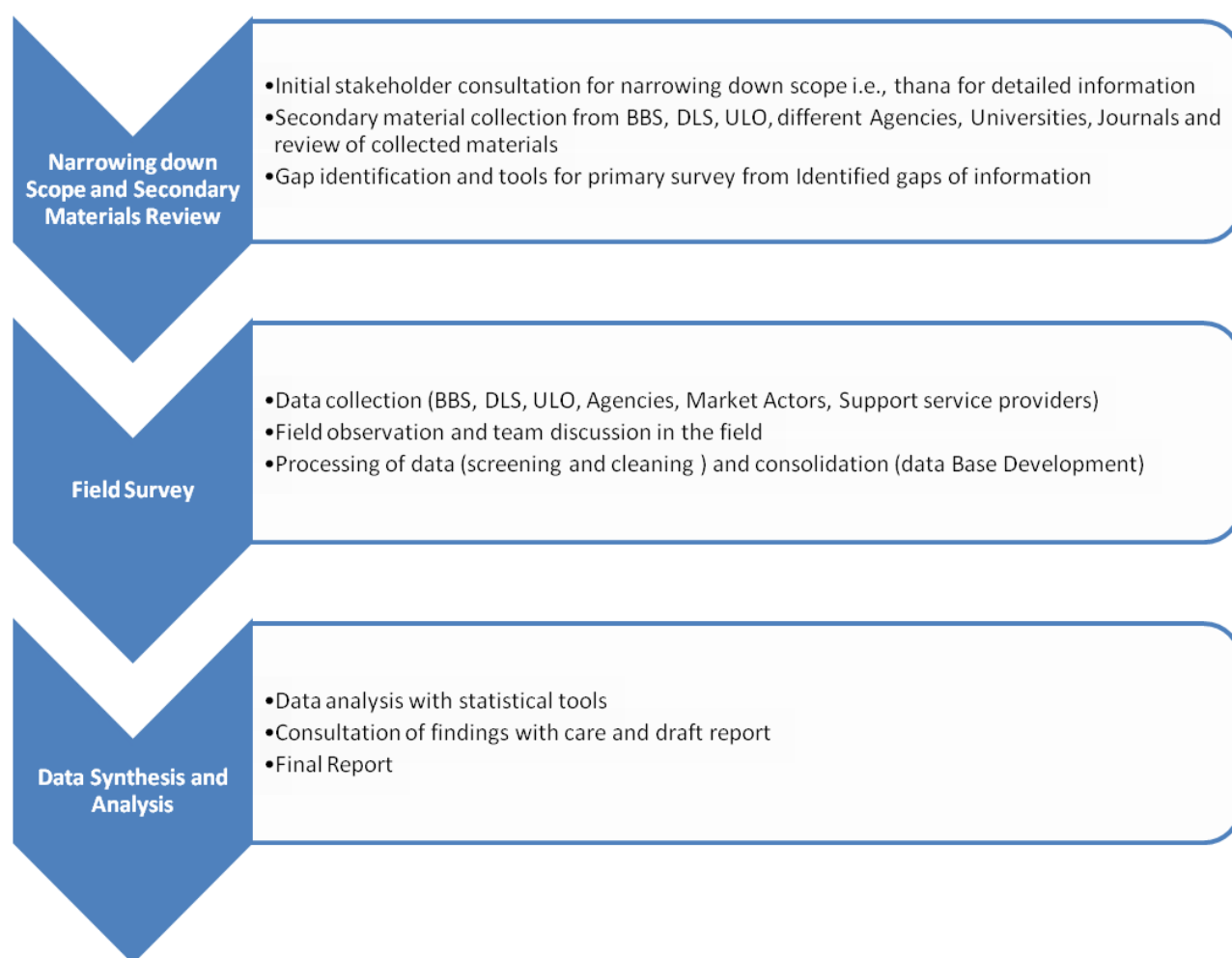


Figure 2-1: Methodology of the study

Narrowing down scope and Secondary materials review: A meeting with some potential key actors of dairy market (can be defined as potential stakeholder of the project) was conducted at the beginning of the study. This discussion particularly

Strengthening the Dairy Value Chain in Bangladesh

derived 45 most potential thanas from nine (9) north and northwest districts (Sirajgonj, Bogra, Naogaon, Joypurhat, Gaibandha, Rangpur, Dinajpur, Kurigram and Nilphamari) for further study to prioritize most potential thanas. In this discussion a general picture of all the thanas of nine (9) districts was developed first and then based on milk production potential, transportation facilities, infrastructure and private sector interest 45 potential thanas were identified. The participant list of the meeting is annexed with this report. Later on six (6) more thanas were added during the field visit having potential for the project. Altogether, 51 thanas in these nine districts of north and northwest districts were taken into consideration for identifying and prioritizing 36-40 working thanas for the project. Below here is the list of these thanas under consideration for the study:

District	Thana	District	Thana
Bogra	Adamdighi	Dinajpur	Birgonj
	Dhunat		Birumpur
	Dubchanchia		Bochagonj
	Gabtali		Chirirbandar
	Sariakandi		Fulbari
	Sonatala		Khanshama
Joypurhat	Akkelpur	Gaibandha	Parbotipur
	Joypurhat		Gaibandha
	Kalai		Gobindagonj
	Khetlal		Polashbari
	Panchbibi		Sadullapur
Naogaon	Badalgachi	Kurigram	Saghatta
	Manda		Sundargonj
	Mohadebpur		Char Rajibpur
	Naogaon		Nageswari
	Potnitala		Phulbari
Sirajgonj	Sapahar	Rangpur	Rajarhat
	Belkuchi		Rowmari
	Kazipur		Ulipur
	Raigonj		Badargonj
	Sirajgong		GangaChara
Nilphamari	Ullapara		Kawnia
	Domar		Mithapukur
	Jaldhaka		Pirgacha
	Kishorgonj		Taragonj
	Saidpur		

2-1: Identified thana for study

Relevant secondary materials related to dairy subsector of north and northwest districts were reviewed for acquiring relevant information on the specified objectives. The different materials consulted for this purpose are studies conducted by different

agencies, academics, journals and statistics published by relevant organizations. The list of documents reviewed for this purpose is annexed with this document.

Field Survey: Field survey comprises of key informant and interview of key actors. The relevant officials from government (Thana livestock officer, veterinary officer, statistic officer, etc) and NGOs of the area were treated as KI. Key market players involved with dairy value chain such as milk collector, milk seller, sweetmeat sellers, farmers, and milk processors are treated as key actors. All the informants were interviewed with structured questionnaire. In addition, while conducting field survey important information were documented. Cross checking and validating of data was done at the field, along with KI and KA reporting.

During the field survey the study team conducted series of meetings in order to consolidate their observations and views. The output of the discussion was considered as the reporting phase of the study.

Data analysis and reporting: Based on data from the secondary materials, field surveys, working areas, according to thanas, were identified and prioritized. A pre-selected information system was first identified to observe how information from different sources matched the objectives through a comprehensive set of indicators. These indicators were selected based on availability of information. The detail is provided below:

Objective	Indicator	Source of information
Synopsis of data on number and distribution of milk producer HH in these Thanas of 9 districts with special reference to small holding and landless milk producer HH whose monthly income is below the poverty line per month/HH.	Farm Household	Field survey DLS/BBS Materials at thana level
	Number of HHs involve in milk Production	Field survey BBS Materials at thana level
	Distribution of cattle farm HHs according to size of farms	BBS
	Percentage of people living below the poverty line	KII
The number of women headed HH and role and activity of women in general in the dairy value chain in these areas	Number of women headed HHs	BBS/CARE
	Women roles in general in dairy value chain	Study Reports
	Percentage of women in the DVC	DLS Materials and KII
Milk production and potential for livestock rearing	Cattle size or the number of cattle	Field Survey Data from DLS/KAI/KII and Scoping Report
	Existing Production	Field Survey Data from DLS/KAI/KII and Scoping Report
Information on the constraints/limitation to market access (based on backward and forward market linkage and support services)	Availability and access to inputs and markets	Field Survey Data from KAI/KII
	Access to support service	Field Survey Data from KAI/KII
To find out remote chars form these respective districts those have potential as project working areas considering communication, HH	Ratio of rural and urban population	BBS
	Thanas having Chars or remoteness	SM: Different Reports and field survey data from KII

Objective	Indicator	Source of information
cluster, required time to reach, mood of transportation, seasonality and migration)	Communication opportunity	Field Survey Data from KAI/KII
	Seasonality and migration	Field Survey Data from KAI/KII
Observations in these working areas during the field study mentioning opportunities and challenges (especially shocks such as natural disasters, Monga and others) where the project can intervene in the project specific Region, District & Thanas.	Major shocks of the area	SM: Different Reports and field survey data from KII
	Areas affected by shocks such as natural disaster flood, Monga or others	SM such flood data from disaster ministry departments, study reports and field survey data from KII

2-2: Information system of the study

The detailed procedures followed to identified thana is described below. The assessment followed four (4) steps:

Step1: Thana prioritization for target beneficiary

In order to meet the objective of the project the study tried to identify areas with extreme poverty. The survey identified poverty stricken communities and farmers who were involved with the already existing dairy chain, so the project "Strengthening the dairy value chain" substantially contribute towards alleviation of poverty. For this purpose, areas with high concentration of poor farmers, small farm household, cattle households and farmers with limited (below average, for this study 2 cattle is considered) number of cattle size were considered as the target beneficiary of the project. In addition to this, women head HHs were given priority. The details of the indicators used are provided below:

Percentage of people living below lower poverty incidence¹.	Poverty is defined through the direct calorie intake (DCI) method which is based on per capita calorific intake: the members of a household are considered poor if their average calorie intake falls below a certain level which refers to an average below 1805 kcal per capita per day and is defined as lower poverty line.
Number of farm household²	The number of farm household indicates the number of people engaged in agriculture who are potential beneficiary of the project.
Small farm household³	Small farms are defined as households with less than 2.49 acres of land holding. In this study, landless and marginal (less 0.5 acre land holding) are included.
Cattle farm household³	The cattle farm households are farms with cattle.
Small cattle farm	Among the cattle farm HHs the small cattle farms are the farms

¹ Thana wise lower poverty incidence map developed by BBS in 2004 in collaboration with WFP

² BBS 1996 Census of Agriculture Zila Series

³ BBS Census of Agriculture Zila Series 1996

household³	having less than 2 cattle.
Women headed household⁴	It means households headed by women, in other words, women are decision maker of the household.
Women headed farm household⁴	Women headed farm HH indicates agriculture households headed by women.
Women engagement in dairy	Women headed farm HH indicates agriculture households headed by women.

2-3: Description of indicators used for selecting areas with high concentration of target beneficiary

The actual data in each indicator was transformed into a comparable unit less data point through percent rank⁵ method. Thereafter, the generated data was run through weighed average calculation. The average found in this process was ranked (descending order) for prioritizing thanas for high concentration addressing maximum number of targeted beneficiary of the project. The formula used is as follows:

$$\text{Poverty incidence} * 25\% + 10\% * \text{Number of farm HH} + 15\% * \text{Small farm HH} + 10\% * \text{Cattle farm HH} + 15\% * \text{Small Cattle farm HH} + 10\% * \text{Women headed HH} + 10\% * \text{Women headed farm HH} + 5\% * \text{Women engagement in DVC}$$

The prioritized thanas and detailed data sheet is annexed with the report.

Step 2: Thana prioritization for milk production and value chain

The milk production of the area and potential for milk production are very important criteria for selecting certain area. Those areas with surplus milk production or potential for increasing milk production are given more priority for area selection. This issue is closely related with technical feasibility of the project. On the other hand, as the project focus is to strengthen the value chain of the area, the working scope of the project depends largely on the weakness of the value chain. This is why areas with weaker value chain were searched on priority. More specifically, it can be said that as areas with already developed value chain has limited scope for the project to add value rather areas where the value chain is relatively weaker.

Cattle size⁶	Cattle size means the population of cattle in an area.
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⁴ BBS Population census of BBS in 2001

⁵ Percent rank provides the rank of a value in a data set as a percentage of the data set. This function can be used to evaluate the relative standing of a value within a data set.

⁶ Thana Livestock Office

Number of milking cow⁵	Cattle have different uses such as milking, farm power, cow fattening. So, the number of milking cow actually describes pattern for which cattle is actually used.
Production of milk⁵	Milk production varies in different varieties of cows having different yield of milk. The study gets an estimation of existing milk production from KII.
Weakness of value chain	The weakness of value chain is measured in terms of availability, accessibility and affordability of inputs, market and required business service and price of milk. A judgmental value as comparable unit less data point is given here based on this information.

2-4 Description of indicators used for selecting areas with milk production potential and weaker value chain

The actual data in each indicator used for this purpose is transformed into a comparable unit less data point through rank percent method. The generated data is then gone through weighed average calculation. The average found in this process is ranked for prioritizing thanas for potential for milk production and weakness of value chain. The formula used here is as follows:

$$\text{Cattle Size} * 20\% + \text{Size of milking cows} * 20\% + \text{Production of milk} * 20\% + \text{Weakness of value chain} * 40\%$$

The prioritized thanas and detail data sheet is annexed with the report.

Step 3: Thana identification for remoteness and shocks

Area remoteness: This was regarded as a cross cutting issue. In general, it is found that there is a close relation between area remoteness with economic constraints. Poverty is intense in remote areas such as chars. In fact people of the area live in a disadvantaged situation from where economic opportunities can hardly be tapped. On the other hand, considerations of economy of scale, milk transport time etc some areas are not absolutely feasible for networking or market linkages. So, the study tries to have a close look on the issues relating to area remoteness and balancing both side prioritized areas with potential.

Shocks: Natural disasters (flood, drought, cold shock, etc) and economic shocks (Monga) had tremendous impact on the economy along these areas. People effected by these shocks are poorer and more vulnerable than others. Since it was our focus to target the vulnerable and extremely poor people, the study tries to prioritize areas consisting of people affected by such shocks and may be helped via the interventions of this project.

Observation in the field survey and team discussion regarding this matter helps identifying thanas with remote places (such as chars) and vulnerable to shock. Here observation on feasible transportation time of milk, seasonality and migration (in some places during the time of shock people migrate) are also utilized to consider and develop a feasible list of

thanas for project implementation. A list of remote, possible to reach and vulnerable to shocks is annexed with this report.

Step 4: Thana prioritization as working area of the project

Three lists of prioritized thanas are developed from the lists developed from the prioritization exercise followed in earlier steps.

First Priority List	Thanas common in step 1, step 2 and step 3
Second Priority List	Thanas common in step 1 and step 2
Third Priority List	Thanas in either step 1 or step 2 and priority got in field discussion and observation.

Table 2-5: Description of priority lists

2.3 Challenges and Limitation

The study within the time period and resource allocation has to use more secondary data (in most of the cases the statistics published by BBS) which in some cases are not very recent. As the study is a comparative assessment of different thanas, the old data can usefully be utilized for the purpose of comparison. In addition, significant or break through changes which can intensely change the context is not observed in this region after the data is published. Thus, the limitation of using old data is considered in other way that it will not significantly limit the findings and result of the study.

3 Result and Discussion

The study result is obviously a prioritization of the working areas which here has been derived in terms of thana. As described in the earlier sections the three priority lists have been developed through a comprehensive exercise followed in the study. The three priority

Strengthening the Dairy Value Chain in Bangladesh

lists of thanas have been identified onto a map of north and northwest part of Bangladesh for ease of use.

District	Thana	District	Thana
Bogra	Dhunat	Dinajpur	Bochagonj
Bogra	Sariakandi	Gaibandha	Saghatta
Naogaon	Badalgachi	Gaibandha	Sundargonj
Naogaon	Manda	Kurigram	Phulbari
Naogaon	Mohadebpur	Kurigram	Rajarhat
Rangpur	GangaChara	Kurigram	Ulipur
Rangpur	Pirgacha	Nilphamari	Domar
		Nilphamari	Jaldhaka

3-1 First priority list of areas

District	Thana	District	Thana
Bogra	Gabtali	Dinajpur	Birgonj
Bogra	Sonatala	Dinajpur	Chirirbandar
Joypurhat	Joypurhat	Dinajpur	Khanshama
Joypurhat	Kalai	Gaibandha	Gobindagonj
Joypurhat	panchbibi	Gaibandha	Polashbari
Naogaon	Potnitala	Kurigram	Nageswari
Naogaon	Sapahar	Kurigram	Rowmari
Sirajgonj	Ullapara	Nilphamari	Kishorgonj
		Nilphamari	Saidpur

3-2 Second priority list of areas

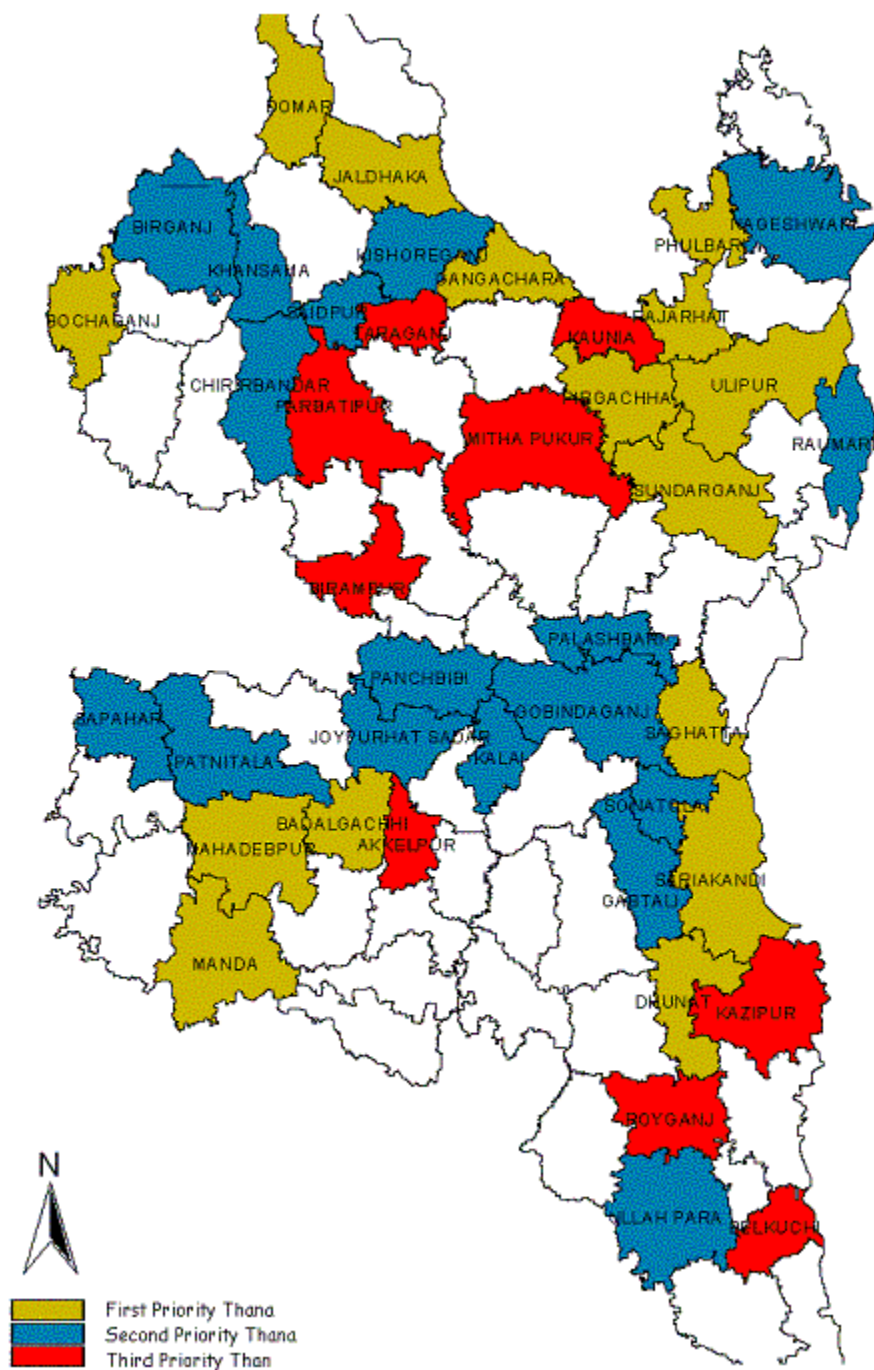
In the first and second priority lists 32 thanas were prioritized as working areas for the project. A third priority list has been developed considering reflections accumulated from field observation and survey conducted thru team discussion.

District	Thana	District	Thana
Joypurhat	Akkelpur	Dinajpur	Birampur
Sirajgonj	Belkuchi	Dinajpur	Parbotipur
Sirajgonj	Kazipur	Rangpur	Kawnia
Sirajgonj	Raigonj	Rangpur	Mithapukur
		Rangpur	Taraganj

Table 3-3 Third priority or considered list of areas

The prioritized working areas in is presented here in a map:

**Area feasibility study for Milk Value Chain project
Identification and Prioritization of Thanas**



3.1 Target Beneficiary in Selected Districts

The study while identifying poverty level according to Thana in the nine subject districts, found adjacent thanas to river Jamuna have very high concentration of people below poverty line [Poverty Map by BBS 2004]. The most number of Thanas are found in Kurigram district others in Gaibandha, Bogra and Sirajgonj. Analyzing the map, BBS publication on census of agriculture and field data a datasheet for target beneficiary of the project is prepared and annexed with this report. This datasheet shows data on Total Farm HH, Small Farm HH, Cattle HH, HH Less 2 Cattle, Female Headed HH, and Female Headed HH in agriculture, and Percentage of women in the DVC according to Thana. Based on the data, the thanas are ranked, indicating high concentration of project potential regarding target beneficiary. This list is also annexed with this report.

3.2 Milk Production and Dairy Value Chain in Selected Districts

Bangladesh has a deficit of 9.42 million tons of milk a year while producing about 15% of the total requirement [Ahmed 2000]. But the demand for milk is much lower than the estimated amount (11.04 millions tons) as the majority of people do not have adequate buying ability. According to FAO review in 2002 Bangladesh has to import 250,000 tons equivalent milk annually to satisfy its national demand. Around 90% of the total milk comes from cows and the remaining 10% from buffalo and goats [Saadullah 2002].

In north and northwest Bangladesh almost 50% households rear cattle, with an average of 2.75 cattle per household [BBS 1996]. The field survey identified that, small dairy rearing group households use their milk primarily to meet their own consumption needs. A part of their surplus milk goes directly to other neighborhoods. There are also local milk processors who actually are the sweetmeat producers, who collect milk door-to-door from the farmers' houses and also from the local markets. They prepare sweetmeats, ghee and milk products and sell those products in the local market. Sometimes the small-scale producers bring their milk to the market place on a regular basis if they can not make any regular arrangements to sell it from their own house. Small dairy households producing more than their household needs (1 liter/day or more as per need of the household) sell part of their milk in the local market. The phenomenon of producing 1 liter/day or little above is very common as most of the household usually have one local variety of milking cow.

There is a group of people called Paikars who do regular business (buying and selling of milk) in larger quantity. They usually have regular contact with all the commercial dairy farms producing larger quantities of milk for market sale and also with the market intermediaries (sweetmeat producers and chilling centers), who buy milk in larger quantity on a regular basis. The paikers sometimes collect milk from the local market if their daily supply exceeds their total demand. The paikers also supply their collected milk to different social gatherings e.g. parties, which later are used for preparation of some dessert items. The chilling centers of Milkvita, Brac, Rangpur Dairy, Pran have also established their own network by organizing cooperative dairy farms or groups to collect their required volume. Different studies shows that in the country there are already 9 milk processing manufacturers/plants involved in collecting, processing and marketing of fresh milk from dairy farms to the urban markets. It should be remembered that facilities for sale to chilling

centers are limited to only select areas – the areas of concentrated milk production and good transport facilities.

Price for fresh milk in rural and peri-urban markets is usually stable across the seasons. But in the recent years high increase of price is observed. Higher market price fluctuations are generally observed during periods associated with social occasions such as social ceremonies, and religious festivals, when there is an increase in demand over supply. It is also important to note that in Hindu majority community areas with a different calendar of marriage, religious and social occasions, and the price fluctuation is greater. Prices of milk supplied to different chilling centers are determined/fixed by fat content, i.e., higher the fat the higher the price. Since all the milk processors have some kind of verbal (and sometimes written) agreements with their milk producing groups/co-operatives to serve their demand and fix a limit for each and every group/co-operative society, a little fluctuation in market price does not usually affect their rate. If the market price increases significantly then the manufacturers are bound to increase their price rate to receive adequate quantities.

This is an overall sketch of milk production and dairy value chain of the northern districts subject to this study. Differences are found according to Thana based on area geography, infrastructure and socio economic settings. Sometimes adjacent Thanas shows very close phenomenon of milk production and value chain. The details can be found in a datasheet annexed with this report.

3.3 Area Remoteness and Shocks in Selected Districts

During the field visit in selected thanas of the nine districts information is gathered on percentage of people affected by different shocks with specific reference to dairy people effected. The duration of the shocks are also captured.

It is found that physical risk from natural disaster is generally lower in the northwest than elsewhere in Bangladesh, although the chances of flooding near the major rivers are very high. The selected districts of north and northwest region of Bangladesh are characterized as remote with high proportion of rural versus urban population. The estimation of data from population census 2001 of BBS shows an average of 15 which implies rural people are 15 times greater than that of urban population. The ratios are higher in some districts such as Kurigram, Sirajgonj and Gaibandha as significant population of these areas reside in Char lands.

The Chars are particularly remote as decentralized from the main land. Areas with chars can be designated at the most remote places. People living in Chars are most vulnerable to natural disaster as flood damage crops almost every year in these areas. Famine locally named as Monga is another great disaster in these areas. Monga has relation with the seasonal flood. In every year for four months intermittent from July-August and October-November flood and Monga adversely affect these areas.

Although the project 'Strengthening Dairy value Chain' aims to implement in remote decentralized places and Shocks areas, observation on feasible transportation time of milk, seasonality and migration (in some places during the time of shock people migrate) some

thanas are not feasible for project implementation. Examples of such areas are Rawmari and Char Rajibpur of Kurigram.

3.4 Constraints in milk value chain in selected districts

During this area identification and prioritization study the team identifies few constraints those hindering the growth of the dairy sub sector. Interventions addressing the constraints can usefully contribute to the growth and development of the sub sector in this region and substantially help the poor small farmers to come out from poverty. An overview of few burning problems in the market have been discussed which should be further revisited for detailed dynamics while taking intervention on these issues.

Cattle Feed: Dairy farms face acute problems with the availability of feeds and fodder; there are problems with both quality and quantity and a lack of economical technology for optimum utilization of local feed resources. The price of feed is also very high. The field survey reveals that 1 Kg of bran cost 25 Tk with a 12 Tk increase of price over the last year. So, alternative feeding option should be developed for cattles. On the other hand, fodder which can be an option, the cultivation is limited from medium to large scale dairy farmers due to lack of cultivable lands available to the small dairy farmers. The other reason is lack of awareness among them. (Akbar et al. 2000) reported that it has been established that fodder legumes can be integrated into rice production without having a negative impact on the yield of rice.

Breeds of Cattle: Cattle breeds available are mostly indigenous and only 2.8% of cattle are crossbred. The average level of milk production of the indigenous cows is about 221 litres/lactation (Miyan 1996). However, crossbred cows in some milk pocket areas produce 600–800 litres/lactation. The local cattle are nondescript and are crossbred with Sahiwal, Sindhi or Haryana. The major disadvantages of the local cattle are (i) low productivity, (ii) failure to let milk down without presence of the calf, and (iii) late maturation. However, these cattle are well adapted to the local feed resources, local housing facilities and scavenging systems. They have low nutritional requirements, heat tolerance, larger rumen volumes and possibly a more efficient digestion of low quality feed (Mould et al. 1982). Most importantly, their performance is also good in terms of feed efficiency (kg feed required/kg of product). Efforts are being made to improve milk production through crossbreeding with exotic breeds.

Disease: Diseases present a major constraint to cattle production in Bangladesh; the extent of losses due to disease is very high. The country's climate, along with the poor nutritional status of cattle, contributes to a high incidence of cattle diseases, especially in the calves. The vaccination is entirely governed by DLS and treatment facility through DLS and private paravats in the locality. The farmers have lack of confidence on getting proper treatment from available services. Scopes are there to strengthen the provision to health service for the farmers out of reach from government health service.

Credit or access to finance: The field survey reveals that very limited availability of finance for dairy farm. Only RKUB has limited opportunity for financing dairy bank. The MFIs does not have any financial product suited for dairy farm. YD has scope for financing dairy farm which is also considered as not suited for the business. In order to improve the dairy sector access to finance is very much important. Initiatives are required to develop dairy specific financial product and its promotion for the growth of the sub sector.

4 Conclusion

The identification and prioritization of working areas for project implementation would assist Care to focus their project activities in some of the very important thanas of nine North and Northwest districts. The rationale approach of this prioritization hopes to gain maximum outcomes and very efficient project implementation. It is very important to note that the project implementation or activities of the project should not be same all over the identified areas i.e., 'one size fit all' shouldn't be followed. The constraints and context of the market varies over the areas. So, a detailed value chain study is highly recommended to explore market system and constraints inhibiting value chain growth.

5 Annexure

5.1 Prioritized areas for target beneficiary

<i>Bogra Region</i>				<i>Rangpur Region</i>		
District	Thana	Rank		District	Thana	Rank
Bogra	Adamdighi	49		Dinajpur	Birgonj	22
	Dhunat	11			Birumpur	43
	Dubchanchia	42			Bochagonj	36
	Gabtali	16			Chirirbandar	24

	Sariakandi	20			Fulbari	46
	Sonatala	14			Khanshama	37
Joypurhat	Akkelpur	41			Parbotipur	28
	Joypurhat	26		Gaibandha	Gaibandha	8
	Kalai	35			Gobindagonj	7
	Khetlal	44			Polashbari	13
	Panchbibi	29			Sadullapur	10
					Saghatta	15
Naogaon	Badalgachi	23			Sundargonj	3
	Manda	6		Kurigram	Char Rajibpur	48
	Mohadebpur	9			Nageswari	12
	Naogaon	17			Phulbari	39
	Potnitala	27			Rajarhat	30
	Sapahar	34			Rowmari	32
Sirajgonj	Belkuchi	51			Ulipur	5
	Kazipur	40		Nilphamari	Domar	33
	Raigonj	45			Jaldhaka	19
	Sirajgong	38			Kishorgonj	18
	Ullapara	1			Saidpur	50
				Rangpur	Badargonj	25
					GangaChara	21
					Kawnia	31
					Mithapukur	2
					Pirgacha	4
					Taragonj	47

5.2 Data Sheet for target beneficiary

District	Thana	Total Farm HH	Small Farm HH	Cattle HH	HH Less 2 Cattle	Female Headed HH	Female Headed HH in agriculture	Percentage of women in the DVC
Bogra	Adamdighi	19267	15668	6652	4421	5,005	360	3%
Bogra	Dhunat	34952	30128	15738	10847	7,033	2,354	5%
Bogra	Dubchanchia	21516	17997	8807	6160	4,139	1,869	2%
Bogra	Gabatali	38942	33923	18487	13106	7,252	2,515	13%
Bogra	Sariakandi	27252	21921	12285	8679	6,965	2,217	8%
Bogra	Sonatala	44907	37447	23011	16132	5,096	1,493	12%
Dinajpur	Birgonj	30065	19413	11172	6895	6,214	1,978	13%
Dinajpur	Birumpur	17604	12832	7722	5163	2,703	1,120	15%
Dinajpur	Bochagonj	15768	9206	10893	3338	5,653	739	10%
Dinajpur	Chirirbandar	28769	20436	14145	8394	4,635	1,460	14%
Dinajpur	Fulbari	13943	8844	5253	3332	2,876	983	5%

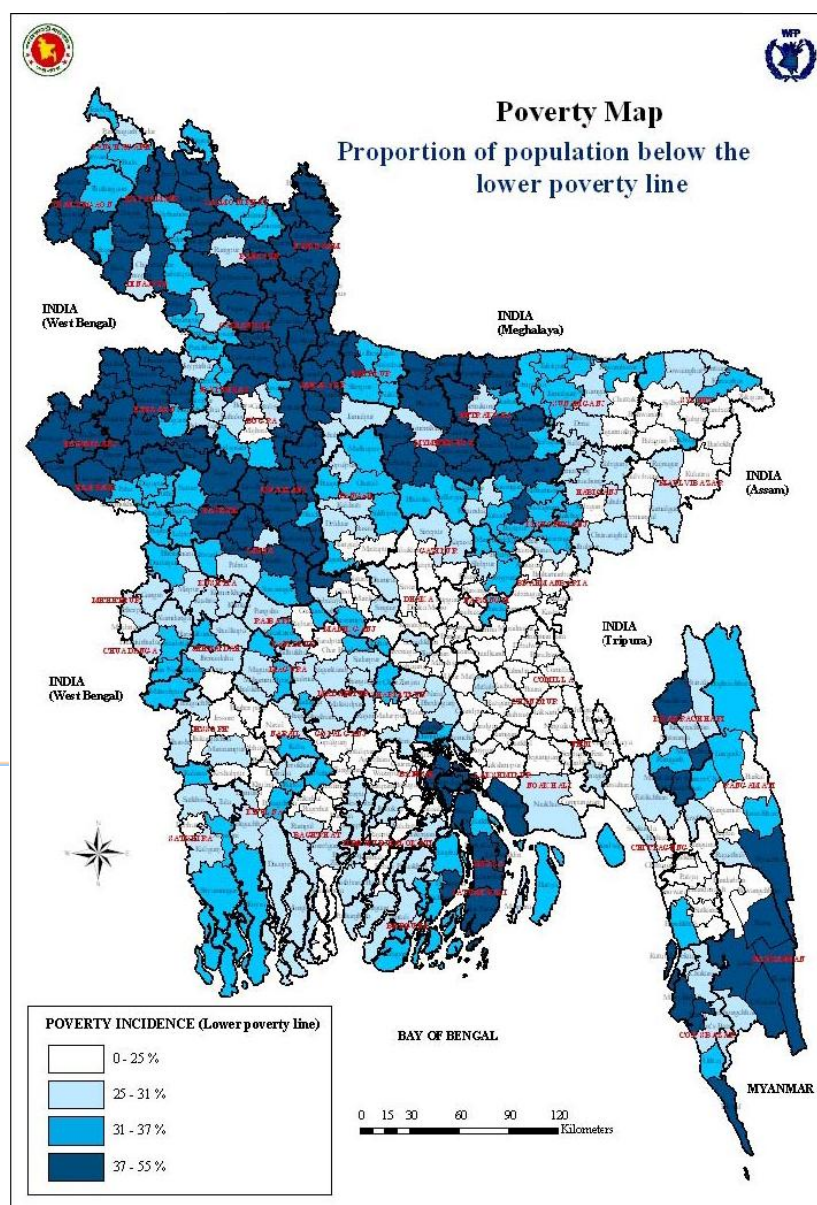
Strengthening the Dairy Value Chain in Bangladesh

Dinajpur	Khanshama	16273	11597	8142	5202	2,838	856	20%
Dinajpur	Parbotipur	31425	21376	13327	8025	6,416	1,871	5%
Gaibandha	Gaibandha	39872	34435	17636	11852	12,482	3,051	6%
Gaibandha	Gobindagonj	58496	47412	27720	18595	10,394	3,582	10%
Gaibandha	Polashbari	29515	25259	14611	10223	7,151	2,550	15%
Gaibandha	Sadullapur	33241	27817	16905	11526	7,478	2,281	10%
Gaibandha	Saghatta	30268	25852	13716	9272	8,012	2,726	8%
Gaibandha	Sundargonj	48465	41575	23510	15249	14,878	5,213	8%
Joypurhat	Akkelpur	18306	14853	8498	6439	3,185	1,223	3%
Joypurhat	Joypurhat	28027	23138	14675	10544	4,725	1,797	11%
Joypurhat	Kalai	17915	13651	7731	5268	3,099	1,498	9%
Joypurhat	Khetlal	15577	11886	7109	4939	2,773	1,482	11%
Joypurhat	panchbibi	28550	21753	13182	9164	3,911	1,496	10%
Kurigram	Char Rajibpur	7489	5616	2067	1284	3,692	1,154	15%
Kurigram	Nageswari	36792	27867	13930	8097	11,183	3,756	8%
Kurigram	Phulbari	16907	13501	6465	3949	4,848	1,767	12%
Kurigram	Rajarhat	21682	18156	9612	5723	5,227	1,522	15%
Kurigram	Rowmari	19478	14688	4965	3065	7,041	2,006	20%
Kurigram	Ulipur	44228	37519	19726	12122	14,154	4,078	15%
Naogaon	Badalgachi	27860	23137	14716	10409	3,763	1,650	12%
Naogaon	Manda	46534	37306	21024	14483	10,045	4,740	10%
Naogaon	Mohadebpur	35519	25642	15410	9513	6,273	2,948	12%
Naogaon	Naogaon	31108	26002	12772	9446	7,844	2,355	12%
Naogaon	Potnitala	26718	17174	8168	4944	4,883	2,281	20%
Naogaon	Sapahar	14899	8399	4628	3072	1,393	2,895	23%
Nilphamari	Domar	23534	16190	8571	5879	4,745	1,420	19%
Nilphamari	Jaldhaka	35081	27740	11538	8336	5,977	1,918	10%
Nilphamari	Kishorgonj	34730	28918	12253	8948	5,824	1,882	8%
Nilphamari	Saidpur	10333	7938	4167	2702	4,216	615	8%
Rangpur	Badargonj	29891	22064	11954	7457	6,072	1,907	12%
Rangpur	GangaChara	27325	23844	10878	7362	6,395	2,298	20%
Rangpur	Kawnia	16939	14054	8035	5159	6,346	1,503	15%
Rangpur	Mithapukur	64536	51341	30561	19899	12,726	4,241	7%
Rangpur	Pirgacha	35984	30617	17669	11310	11,095	3,722	12%
Rangpur	Taragonj	14315	10933	5646	3984	2,709	1,229	10%
Sirajgonj	Belkuchi	20299	5749	5749	4098	5,560	635	12%
Sirajgonj	Kazipur	28186	21519	10184	7207	6,872	2,301	15%
Sirajgonj	Raigonj	29053	23407	13617	8363	6,032	2,183	10%
Sirajgonj	Sirajgong	31256	26063	14015	9222	10,538	1,435	17%
Sirajgonj	Ullapara	46259	36743	17088	10716	9,674	2,683	5%

5.3 Thana level lower poverty incidence

5.4 Flood affected districts

Flood Affected Districts & GoB Estimates of Affected Populations:



5.5 Area prioritization for milk production and value chain

District	Thana	Rank	District	Thana	Rank
Bogra	Adamdighi	46	Dinajpur	Birgonj	14
	Dhunat	15		Birumpur	49
	Dubchanchia	30		Bochagonj	35
	Gabtal	24		Chirirbandar	37
	Sariakandi	17		Fulbari	50
	Sonatala	7		Khanshama	16
Joypurhat	Akkelpur	32	Gaibandha	Parbotipur	47
	Joypurhat	21		Gaibandha	45
	Kalai	33		Gobindagonj	3
	Khetlal	5		Polashbari	6
	Panchbibi	13		Sadullapur	44
Naogaon	Badalgachi	25	Kurigram	Saghatta	9
	Manda	4		Sundargonj	12
	Mohadebpur	11		Char Rajibpur	36
	Naogaon	43		Nageswari	39
	Potnitala	27		Phulbari	28
	Sapahar	38		Rajarhat	29
Sirajgonj	Belkuchi	18	Nilphamari	Rowmari	26
	Kazipur	20		Ulipur	31
	Raigonj	19		Domar	34
	Sirajgong	51		Jaldhaka	8
	Ullapara	1		Kishorgonj	10
			Rangpur	Saidpur	22
				Badargonj	41
				GangaChara	2
				Kawnia	42
				Mithapukur	40
				Pirgacha	23
				Taragonj	48

5.6 Milk Production and Value Chain Data Sheet

District	Thana	Cattle size	Size of milking cows	Existing milk production	Relative point Availability and access to inputs and markets	Price of milk per kg
Bogra	Adamdighi	84,000	9,000	8,000	6	15
Bogra	Dhunat	90,000	12,000	11,000	8	16

District	Thana	Cattle size	Size of milking cows	Existing milk production	Relative point Availability and access to inputs and markets	Price of milk per kg
Bogra	Dubchanchia	33,090	11,700	29,800	7	20
Bogra	Gabtali	88,195	15,110	26,540	6	16
Bogra	Sariakandi	87,040	23,000	102,500	6	17
Bogra	Sonatala	90,500	37,920	75,840	7	17
Dinajpur	Birgonj	245,000	105,000	65,000	3	17
Dinajpur	Birumpur	44,834	9,000	7,000	6	18
Dinajpur	Bochagonj	60,000	15,000	10,000	7	16
Dinajpur	Chirirbandar	92,500	12,000	36,000	3	15
Dinajpur	Fulbari	51,696	11,500	8,480	4	15
Dinajpur	Khanshama	50,223	21,650	23,223	8	16
Dinajpur	Parbotipur	38,600	10,300	26,000	5	17
Gaibandha	Gaibandha	34,712	6,750	8,600	7	18
Gaibandha	Gobindagonj	136,845	2,736,900	60,000	7	15
Gaibandha	Polashbari	150,000	60,000	30,000	7	16
Gaibandha	Sadullapur	69,627	11,025	13,230	5	20
Gaibandha	Saghatta	339,088	15,504	9,263	9	18
Gaibandha	Sundargonj	393,626	16,215	10,000	8	18
Joypurhat	Akkelpur	33,300	10,300	30,900	7	20
Joypurhat	Joypurhat	97,881	33,007	50,500	2	20
Joypurhat	Kalai	63,765	27,000	16,000	6	17
Joypurhat	Khetlal	110,000	45,000	40,000	7	19
Joypurhat	panchbibi	113,979	42,000	73,250	6	19
Kurigram	Char Rajibpur	25,500	1,500	1,000	8	21
Kurigram	Nageswari	71,000	7,900	7,500	7	17
Kurigram	Phulbari	95,795	12,000	6,000	7	16
Kurigram	Rajarhat	50,656	14,000	25,000	7	18
Kurigram	Rowmari	48,400	2,500	1,800	9	22
Kurigram	Ulipur	78,953	11,214	12,000	7	20
Naogaon	Badalgachi	85,093	10,726	12,500	7	17
Naogaon	Manda	161,790	66,241	95,000	6	18
Naogaon	Mohadebpur	121,907	43,030	32,000	6	20
Naogaon	Naogaon	75,500	19,500	38,000	1	20
Naogaon	Potnitala	63,500	24,030	31,239	5	18
Naogaon	Sapahar	46,451	22,713	26,324	6	16
Nilphamari	Domar	68,035	22,776	22,758	6	20
Nilphamari	Jaldhaka	210,000	45,500	14,000	7	16
Nilphamari	Kishorgonj	182,935	26,000	13,500	8	17
Nilphamari	Saidpur	90,150	25,415	35,850	4	20
Rangpur	Badargonj	62,518	26,228	32,432	2	20

District	Thana	Cattle size	Size of milking cows	Existing milk production	Relative point Availability and access to inputs and markets	Price of milk per kg
Rangpur	GangaChara	331,540	91,570	25,000	7	16
Rangpur	Kawnia	85,000	25,000	12,000	4	17
Rangpur	Mithapukur	148,204	31,837	9,000	3	21
Rangpur	Pirgacha	98,205	40,000	18,000	5	17
Rangpur	Taragonj	52,380	20,300	24,105	4	16
Sirajgonj	Belkuchi	135,000	36,000	39,000	6	21
Sirajgonj	Kazipur	60,500	15,000	25,000	8	25
Sirajgonj	Raigonj	48,290	19,088	55,480	7	24
Sirajgonj	Sirajgong	85,000	30,000	28,000	3	22
Sirajgonj	Ullapara	1,083,660	70,000	188,412	6	18

5.7 Areas identified as Remote, feasible to milk transportation and vulnerable to shocks

<i>District</i>	<i>Thana</i>	<i>District</i>	<i>Thana</i>
Bogra	Dhunat	Dinajpur	Bochagonj
	Sariakandi	Gaibandha	Gaibandha
Naogaon	Badalgachi		Saghatta
	Manda		Sundargonj
	Mohadebpur	Kurigram	Nageswari
Sirajgonj	Belkuchi		Phulbari
	Kazipur		Rajarhat
Rangpur	GangaChara		Ulipur
	Kawnia	Nilphamary	Domar
	Pirgacha		Jaldhaka

5.8 Scoping Meeting participant list

Organization	Name	Designation
Pran Dairy, Pran Group:	Nurul Islam	(General Manager)
Pran Dairy Pran Group:	Naimul Bashar	(Chief of Dairy)
Rangpur Dairy:	Fakruzzaman	(Chairman)
Rangpur Dairy:	Ashra Hossain	(Project Manager)

Milk Vita:	Assaduzzaman	(Deputy Director)
Livestock:	Dr. Habib	(Professor Pathology)
Care Bangladesh:	Zaheedul Islam	(APC-EDU Head Office)
Care Bangladesh:	Reazul Islam	(APC EDU Rangpur Regional Office)

5.9 Field Survey Respondent list

SI	Name	Address	Contact No
1	Md Abdul Hannan	Durgapur Bazaar	O1558323842
2	Dr. M A Wadud	Maohoan, Naogaon	O1712190644
3	Md Abdul Mannan	Choroibari, Ullapara, Sirajgang	
4	AKM Fazlul Haque	ULO, Ullapara, Sirajgang	
5	Md. Nurhunain Mondol	Mukomdogachi, Belkuchi, Sirajgang	
6	Dr. Gulam Mustafa	ULO, Belkuchi, Sirajgang	O1711146223
7	Dr. Mamun ur Rashid	ULO, Joypurhut, Joypurhut	O1712110929
8	Masuda Akhter	Joypurhut	O172662546
9	Dr. Belal Hossain	ULO, Kalai, Kalai, Joypurhut	O1716205381
10	Kazi Jweel, sharul	Hatiur, Kalai, Joypurhut	O1724860927
11	Fazlul paravat	Nishchinta Bazaar, Khetlal, Joypurhut	O1724215567
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13	Md. Al-Mamun Hossain	ULO Akkelpur, Joypurhut	O1718578020
14	Md. Ibrahim Ali	Akkelpur, Joypurhut	O1719617276
15	Dr. Bapin Bhine Kendo	ULO, Panchbibi, Joypurhut	O1721544784
16	Md. Azim	Gupalpur, Panchbibi, Joypurhut	O1711303181
17	Md Ziel Hossain	Dhunot Hospital More, Dhunot, Bogra	O1716870608
18	Dr. Krinsha Mohon Halder	ULO, Dhunot, Bogra	O1716853619
19	Md. Muniruzzaman	Bogra Sadar, Bogra	O1711283476
20	Md. Abdur Rashid	ULO, Bogra Sadar, Bogra	O1711902834
21	Dr. Md. Mizanurr Rahman	Dupchanchia, Bogra	
22	Md. Bellal Hossain	Pakpara, Dupchanchia, Bogra	
23	Sree Shadhon Chandro	Dhupchanchia, Bogra	O1729829151
24	Md. Tarikol Hossain	ULO, Sonatola	
25	Abdul Kalam	Upazilla Gate, Sonatola, Bogra	O1712441616
26	Dr. Md. Shahed Alam Khan	ULO, Raigonj, Sirajgonj	O1711014340
27	Dr. Nurul Islam	Badalgachi	O1716298527
28	Md. Masud rana	Mastapara, badalgachi	O1712193540
29	Dr. Yusuf Abdullah Harun	ULO, Shibgong, Bogra	O1718306162
30	Taizul Islam	kazipur, Sirajgonj	O1718953329
31	Dr. Md Toffazzel Hossain	Sirajgang sadar, Sirajgong	O1712091349
32	Abdul Mannan Shekh	Mayadhangora, Modhopara, Shibgang	O1712237806

SI	Name	Address	Contact No
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34	Md. Rafayal karim	Sariakandi, Bogra	01731495389
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36	Dr. Golam Mawla	ULO, Gabtali, Bogra	01716024332
37	Dr. Md Fazlul Haque	ULO, Patnitola, Naogaon	01716076719
38	Mozibur	Shuzil, Patnitola, Naogaon	
39	Motiar	Shapahar, Naogaon	
40	Shaifaddin	ULO, Shapahar, Naogaon	01715651220
41	Abdul Salam Shaner	ULO, Manda, Naogaon	01712172033
42	Dr. TAM Saiful	ULO, Fulbari, Dinajpur	01718027740
43	Dr. Razul karim	TLO, Gobindogang, Gaibandha	
44	Ashok Gosh	Shahpara, Gobindogang, Gaibandha	
45	Dr. Saiful Islam	ULO, Fulchari, Gaibandha	
46	Aminul Islam	Thana, BBS office, Fulchari, Gaibandha	01712831706
47	Md. Khurshid Alam	Fulchari, Gaibandha	
48	Dr. Md Mekkaram Hossain	DLO, Gaibandha	01712149068
49	Mr. Saiful Islam	Jogotjani, Polashbari, Gaibandha	
50	Abul Kalam Azad	Polashbari, Gaibandha	
51	Md. Abu Bakkar Siddique	Thana, BBS Office, Polashbari, Gaibandha	01724621844
52	Dr. Barek	ULO, Shagata, Gaibandha	
53	Md. Mokbul Hossain Pradhan	Thana, BBS Office, Shagata, Gaibandha	
54	Md. Latif Monsur	Ullabazar, Saghata, Gaibandha	
55	MA, Sayed Akand	ULO, Sundargang, Gaibandha	01716974376
56	Md. Abdur Rahim	ULO, Sundargang, Gaibandha	
57	Sri Mukul Chandra	Karnepara, Sundargang, Gaibandha	01713715327
58	Dr. Uttam Kumar Das	ULO, Sadullahpur, Gaibandha	01712135657
59	Sree Poretous Sharma	Thana, BBS Office, Sadullahpur, Gaibandha	
60	Md. Jahedul Alam	Jobeda Rice Mill. Sadullahpur, Gaibandha	01712560605
61	Md. Saban Ali	ULO, Nageshawri, Kurigram	
62	Dr. Altaf Hossain	ULO, Nageshawri, Kurigram	01712730105
63	Golam Mostofa	Nandan Unnanyon Society, Ulipur, Kurigram	01716057256
64	Sree Vabendranath	Chakinpasha pathak para, Razarhat, Kurigram	01725448826
65	Masudur Rahman	TLO, Razarhat, Kurigram	
66	Dr. Nazmul Hossain	ULO, Rawmari	
67	Dr. Nazmul Haque	ULO, Rawmari	
68	Md. Tajul Islam	Fulbari, Kurigram	
69	Doulot Hossain	Panimachkuti, Fulbari, Kurigram	
70	Md. Fazlul karimulla	Birgang	01714570274
71	Sree Suman Gosh	Singra, Birgang	
72	Lotifurur Rahman	ULO, Khanshama, Dinajpur	01712763244
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74	Syed Abu Taher	BBS office Birampur	01712649020
75	Md. Gulam Mostafa	Amorpur, Chirirbandar	01195187281

SI	Name	Address	Contact No
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78	Dr. Sirazul Haque	ULO, Shetabgong, Dinajpur	O1718835654
79	Md. Fazlul Haque	BBS Office, Shetabgang, Dinajpur	O1717729613
80	Dr. Nazrul Huda Sarkar	ULO, Saidpur, Nilphamari	O1819467371
81	Dr. Md. Rafiqul Alam	Domar, Nilphamari	O1712727439
82	Mr. Mamun	Dhoronigang, Doamr, Nilphamari	
83	Sree Bijoy Chandra Sharker	Kishorganj, Nilphamari	O1724222558
84	Md. Elias Rahman	Kalikapur, Kishorgang, Nilpahamari	
85	Md. Thezur Rahman	Cherengi, Jaldhaka, Nilphamari	
86	Md. Abdus Salam	ULO, Jaldhaka, Nilphamari	
87	Dr. Md. Azharul Islam	DLO, Rangpur	O1718627214
88	Dr. Reazuddin Ahmed	ULO, Badargong, Rangpur	O1712505243
89	Md. Abdul Wahed	Mostafapur, Badargang, Rangpur	
90	Md. Nayan Miah	ULO, Gongachara, Rangpur	
91	Noor Alam	Gogachara, Rangpur	
92	Dr. Mir Faruk Hossain	ULO, Kawnia, Rahngpur	
93	Ruhul Amin	Nizpara, Kawnia, Rangpur	O1713764704
94	Md, Abdul Bahar Siddique	ULO, Mithpukur, Rangpur	
95	Akhteruzzaman	Doulotpur, Mithapukur, Rangpur	O1713710645
96	Md. Abu Bakkar Siddique	ULO, Pirgacha, Rangpur	
97	Md. Khairul Islam	Pabetrozar, Pirgacha, Rangpur	
98	Dr. Dulal Chandra Bhadra	ULO, Taragang, Rangpur	O1714256480
99	Md. Motiar Rahman	Old chowpathi, Taragong, Rangpur	

5.10 Field Survey Questionnaire

Questionnaire for Area Feasibility Study for Milk Value Chain Project

Name:**Address & ph number:****Upazila:****Name of the interviewee**

1. What is the average income per month of HH in this Upazila and how many? BBS

Average Income	% or Number of HH	% or Number of HH Involve in Dairy	% or Number of women Involve in Dairy
Less 2100			
2200 to 5000			
Above 5000			

2. Information on cattle Population and Milk Production of this Upazila?

Total cattle Population	Total Number of Milking Cow	Total Milk Production per day

3. How many or what percentages of women headed HH engage in milk production?

4. What is the production volume of this upazila _____? What is the selling price _____?

5. What is the situation (availability, accessibility and affordability) of support services for the dairy farmers?

Support Service	Availability	Accessibility	Affordability
Financial			
Micro credit NGO			
Bank			
Health			
Vaccination			
Treatment			
Inputs			
Feed			
Fodder			
Milk Preservation			
Milk Selling point			

6. What are the major shocks (natural disasters, Monga and others) happens in this area and how much are effected?

Shocks	% Of people effected	% of dairy farmer effected	Duration per year	Results of the shocks
Flood				
Monga				
Drought				
Others				

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