INCEPTION REPORT

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Executive Summary

There have been enormous development projects in Bangladesh since its independence. All were aiming at reducing poverty, increasing literacy rate, balancing gender discrimination, ensuring health, and developing infrastructure. Sustainable livelihood for Poor Producers (SLIPP) is a project which is consummately distinct in its approach (Business Development Services approach) of implementation. SLIPP is funded by the European Commission (EC) and implemented by Traidcraft Exchange (TX) and Development Wheel (DEW) with an overall objective to reduce poverty among poor and marginalized communities in Mymensingh and Netrokona Districts by increasing income and employment opportunities. To achieve this objective, TX/DEW adopts Market Development approach where four sub-sectors have been selected through a scoping visit. Netrokona duck is one of the selected sub-sectors. This report reveals the current Netrokona duck market situation – demand-supply, current practices, operating mechanism, market dynamism, value chain actors, service market situation, relevant government policies and the constraints and opportunities. At the end the report suggests some interventions to address the constraints and opportunities.

The reasons for selecting duck in Netrokona are favorable environment for duck production, involvement of large number of people, high growth potential, opportunity for increased income, demand-supply gap, easy to enter the business and involvement of female. Among the species indigenous ones are predominant (60%). Mostly MSEs rear this kind. The farmers who are medium to large use high yielding species. Khaki Campbell (9%), Jinding (30%), and others (1%) as Indian Runner, Peiking or Beijing and Muscovy are the high yielding varieties.

Almost all households keep duck in Netrokona. The actors in this sub-sector are small-scale duck farmers (50,000), large-scale duck farmers (2400), hatchery (86), egg collecting paikers (100), arotders (15), feed and medicine sellers (115), wholesalers (50), and retailers (1500). There are six channels through which transactions of inputs and outputs are distinct in nature. Besides, there are paravets who diagnose diseases and vaccinate ducks on call. There are some NGOs as BRAC, ASA, CARITAS, Shabolombi, World Vision etc. who have different livestock training program and credit program that are helping the poor and medium farmers to different extents. Their influence on the value chain is not ignorable but not even significant. It is mainly the

duck farmers who are controlling the supply of the eggs with some variables controlling them such as their knowledge on duck cultivation, species of duck they chose, diseases of duck they face or prevent, flood water that causes much trouble with accommodation and availability of natural food.

The duck sub-sector is characterized by the following attributes:

- There are mainly two types of duck farmers – commercial and noncommercial.
- Farmers rear ducks mainly for egg production.
- Netrokona exports duck and its eggs to other districts meeting its internal demand.
- In Netrokona total number of duck farmers has increased over the years.
- Farms migrate to higher lands when water level rises and natural food becomes scarce.
- In the duck sub-sector women involvement is very high.
- Price of duck egg varies from season to season.
- Seventy percent of the total production of eggs is exported.

The duck sub-sector faces seven constraints and four opportunities under broad category of technology and product development, input supply, service provision and market Access. These constraints and opportunities can be addressed through ten interventions under three broad strategies. The strategies will aim, by the year 2012, that the MSEs of Netrokona duck sub-sector will achieve productivity increase by 80%, sales increase by at least 30%, income increase by 20% and employment generation by 20%.

After having done an extensive sub-sector study, it is found that not all upazilas are equally potential for intervention. Based on two criteria – (1) presence of marginal farmers, and (2) growth potentiality – six upazilas are highly eligible for working in this sub-sector. They are Atpara, Barhatta, Purbadhala, Sadar, Modon and Kendua in descending order.

Definitions

Noncommercial duck farming: Keeping duck as back yard poultry that involves traditional way of duck cultivation. Marginal and small duck farmers fall into this group.

Commercial duck farming: Farming of ducks for egg production on a large-scale with a view to generating profit and thereby income for livelihood. Medium and large farmers belong to this segment.

Marginal duck farmers: The duck farmers having 2-7 ducks and are reared as back yard poultry.

Small duck farmers: The duck farmers having 8-19 ducks and are reared as back yard poultry.

Medium duck farmers: The duck farmers having 20-199 ducks and are reared mainly for egg production.

Large duck farmers: The duck farmers having at least 200 ducks and are reared mainly for egg production.

Hatchery: They collect fertilized eggs from medium to large duck farmers and hatch those eggs for duckling production. They try to sell the ducklings before they are more than a week-old.

High Yielding Varieties of duck: These are the varieties that produce more eggs per year than the indigenous species. Khaki Campbell, Jinding, Indian Runner, Peiking or Beijing and Muscovy are the High Yielding Varieties of duck.

Duckling: baby ducks are called duckling irrespective of its sex.

Paravet: They are the medical practitioners who provide medical services as disease diagnosis, treatment, vaccination etc. for the livestock.

Acronyms

SLIPP	Sustainable livelihood for Poor Producers
EC	European Commission
TX	Traidcraft Exchange
DEW	Development Wheel
FGD	Focus group discussion
MT	Metric Ton
HYV	High yielding verities
COGS	Cost of Goods Sold
NGO	Non Government Organization
SWOT	Strengths, Weakness, Opportunities, Threats
DAE	Department of Agriculture Extension
BRAC	Bangladesh Rural Advancement Committee
BAU	Bangladesh Agriculture University
MSME	Micro Small Medium Enterprises
ASA	Association for Social Advancement
NLP	National Livestock Policy

1.0 INTRODUCTION

1.1 Background

Sustainable livelihood for Poor Producers (SLIPP) is a project funded by the European Commission (EC) and implemented by Traidcraft Exchange (TX) and Development Wheel (DEW) with an overall objective to reduce poverty among poor and marginalized communities in Mymensingh and Netrokona Districts by increasing income and employment opportunities. To achieve this objective, TX/DEW adopts Market Development approach where four sub-sectors have already been selected through a scoping visit to those districts to improve their competitiveness. One of the major criteria for the selection of these sub sectors addresses the involvement of poor people in those sub sectors.

Netrokona duck sub-sector emerged as one of the four potential sub-sectors through the scoping process. Now to identify the key constraints and opportunities that are hindering the growth of the sub sector and also abstaining the poor producers/farmers from actively and effectively taking part in the market system, an extensive sub-sector (duck) study has been conducted. The study has also identified service provisions and made assessment of those services. The project aims to develop/build the capacity of selected service providers so that they can efficiently and effectively render their service to the poor producers/farmers. This sub-sector study, in a way, is the second step to achieve the overall objective of the project.

1.2 Objectives

The broad objective of the SLIPP project is to alleviate poverty in Mymensingh and Netrokona. The specific objectives of the sub-sector study for duck in Netrokona are as follows:

- To clearly understand the value chain of selected sub-sector and identify bottlenecks
- To understand the market dynamics of the sub-sector
- To understand the policy environment and to identify policy related constraints
- To clearly understand the business services required to overcome the bottlenecks and the supply – demand gap analysis in the business service market.
- To identify the constraints and the opportunities within the sub-sector

- To design intervention plan for facilitating growth and competitiveness in the sub-sector
- To increase the capacity of the staff of the Implementing organization Development Wheel (DEW)

1.3 Methodology

The research applied a mix of the secondary literature review, questionnaire survey, focus group discussion (FGD), key informants interview. The overall research work was completed as outlined below.

The overall research was carried out in the following steps as

- Team Orientation
- Scoping visit to the field
- Secondary literature review and study tools development
- Field research
- Analysis and report preparation Validation workshop
- Project promotion workshop

The above-mentioned steps are discussed in details—

1.3.1 Team Orientation

The very first step was to orient the research team about the study objective and train them accordingly. A consultant conducted a two-day orientation for the study team that covered the sub-sector study methodology, value-chain mapping, identification of constraints and opportunities and also commercially viable solutions and service assessment techniques. Group work and different exercises were adopted in the orientation to let the researchers develop their knowledge on the study approach in a short time. The orientation not only helped the team develop their knowledge on sub-sector study but also facilitate the research process to achieve the objective.

1.3.2 Scoping Visit to the Field

The next step was to provide a practical orientation of the study team with the field reality and select two sub-sectors based upon the following criteria depicted in the table below.

Table 1.1: Selection Criteria for Sub-Sector in the Project Area

Selection Criteria	Example of types of information that may be used
Outreach	- Estimates on the number of enterprises for each type of firm in the sub-sector (input suppliers, producers, wholesalers, retailer etc.) - Average firm size (employees) for the different types of sub-sector firms - Average salary (monthly wages) for employees in different types of sub-sector firms
Market Demand and growth potential	- Opinions and data from key informants on market trends and sub-sector competitiveness - Information from existing statistics/studies (taking validity of this information into account) - Examples of businesses that have problems meeting demand - Comparisons within the region (based on opinions from key informants of market information)
Significance of Forward and Backward Linkages Among Domestic Market Actors	- Description of the different kinds of transactions that take place among domestic market actors in the sub-sector - An estimate of the volume and number of these transactions between firms -Availability of raw materials
Service provision	-Need and gap of business service provisions -Existing service providers and their capacity
Government priority	-Different government project and promotional initiatives -Favorable government policy
Participation of Women	- Estimate of the number of women who are self employed, own businesses or work as employees in the sub-sector (should include participation at all levels of the sub-sector)
Environmental Scanning	- Describe the macro-environmental factors and assess the impact and importance of the various environmental factors.
Technological assessment	- Technology is one of the major areas of intervention that can directly aid in development of the sub-sectors of concern. General importance of and demand for technological intervention will be assessed.
Duplication of work	- Presence of other similar project in the study areas - Extent of similarity

Source: Proposal for Sub-sector study

Based on the above, the results were presented in the following format as in table 1.4. Furthermore, the rank scale was from 1-5 based on Likert type interval scale to increase the sensitivity in the analysis. This process is described in the later section (Section 1.4).

The outcome of the scoping visit was two sub-sectors selected from each area making four sub-sectors altogether. The study team spent three days in Mymensingh and Netrokona and gathered necessary information to select the sub-sectors. Meeting key informants, visiting market places and few informal FGDs enriched the knowledge base of the study team on the pre-selected sub-sectors to narrow them down to four sub-sectors for two areas according to the criteria.

1.3.3 Secondary Literature Review

After the selection of the sub-sectors, different secondary literature were collected and reviewed to develop a general idea on the sub-sectors and the study area. Information was collected on fish farming, vegetable cultivation and duck farming in Bangladesh and also particularly focused in Mymensingh and Netrokona. Books, brochures, leaflets, manuals from public and private sources and files (soft copies) of various formats from internet were collected prior to developing the study tools.

1.3.4 Study Tools Development

The tools for field investigation, survey and interview with the key informants were designed. The tools were five questionnaires as

- Key Informant Questionnaire
- Demand side Assessment of BDS
- Supply side Assessment of BDS
- Market Assessment Questionnaire 1
- Market Assessment Questionnaire 2

These five questionnaires were prepared in Bangla as the guideline for information collection through interviews and FGDs with different value chain actors of duck sub-sector. The sampling framework was also refined and the coordination, quality control mechanism, and data handling procedure were developed and finalized.

1.3.5 Field research

The next phase was the field research where the study team investigated the sub-sector dynamics, their constraints and opportunities, commercially viable solutions and their sustainability. Before going to the field, the team was given an orientation on the sampling framework that is the questionnaire for different sub-sector actors. The study team sat together each evening to de-

brief and share their experiences. This was essential to ensure minimal error and updating. The field research was carried out in the following way.

- ***Stakeholder interview:*** Primary and secondary stakeholders were identified and underwent in-depth interviews through pre-designed questionnaire guide. In total 71 interviews were carried out in the duck sub-sector study. The stakeholder list covered producers, input suppliers, output market players, and service providers from both private and public. For broadening the knowledge, key informants were identified and in-depth interview were accomplished.

- ***Focus Group Discussion:*** Three FGDs each with arotders, retailers and duck retailers were carried out during the sub-sector study. The FGDs helped to streamline the constraints and opportunities in the relevant sub-sector context.

Table 1.2: Type and number of Respondent of Duck Sub-sector

Questionnaires	**Respondents**	**Number Of Respondents**	**Types** (1 = Structured Interview 2 = In-depth Interview 3 = FGD)
Key Informant		4	1
Demand side Assessment of BDS	Duck Farmers	14	1
Supply side Assessment of BDS	Hatchery Owners, Input Sellers	8	1
Market Assessment Questionnaire 1	Hatchery Owners	6	1
	DuckFarmers	21	1
Market Assessment Questionnaire 2	Input Sellers	10	1
	Arotders	2	1, 3
	Wholesalers (Egg)	3	1
	Retailers (Egg)	2	1,3
	Retailers (Duck)	1	1, 3
Total		**71**	

Source: Sub-sector Study

- ***Visited areas:*** Of the 10 upazilas of Netrokona District, the sub-sector study team visited 9 upazilas. The visited upazilas are: Sadar, Atpara, Barhatta, Mohongonj, Khaliajuri, Purbadhala, Madan, and Kendua. The remaining upazila Durgapur was deliberately discarded because it has recurrence of flash flood. This means sudden downfall of huge rain water from northern Meghaloyan mountainous region makes duck cultivation very much risky as the ducks might get lost with those flash flood.

Table 1.3: Log of sub-sector study visit

Date	Visited Upazilas
15/9/07	Atpara, Barhatta,
16/9/07	Madan, Kendua
17/9/07	Mohongonj, Purbadhala
18/9/07	Kolmakanda, Khaliajuri
19/9/07	Sadar

1.3.6 Analysis and report preparation

This very phase of research includes analysis of the findings from the field survey and presenting in this very report.

1.3.7 Validation workshop

There had been two day-long validation workshops in Mymensingh and Netrokona both attended by stakeholders as different value chain actors as farmers, input (feed, seed, spawn, fingerling, medicine) sellers, wholesalers, and retailers, different local NGO personnel, local GOB personnel, a BAU Professor and officials and staff from both Traidcraft and DEW.

Validation workshops, held on November 19, 2007, in Mymensingh covered dissemination and verification of the findings in the fish and vegetable sub-sector. Validation workshops, held on November 20, 2007, in Netrokona covered dissemination and verification of the findings in the duck and vegetable sub-sector. No major changes in the findings were found during the validation workshops. This indicates towards the efficiency of the field survey and analysis.

1.3.8 Project promotion workshop

On November 28, 2007 a workshop namely ***"Project Promotion and Consultation of Study Findings Workshop"*** was held at national level in Dhaka. This was attended by different value chain actors of four sub-sectors, national NGO personnel, National GOB personnel, University Professors, consultants, Traidcraft and DEW officials and a representative from European Commission.

The workshop was aimed at sharing the findings to the audience, identifying deviations of the findings, if there would be any, and seeking any constructive suggestion regarding the implementation of the project.

1.4 Justification of Selecting Netrokona Duck Sub-sector

The sub-sector (duck) study in Netrokona was followed by the scoping visit, which had the objective of selecting two sub-sectors from the district. Major selection criteria were number of Micro and Small Enterprises (MSEs), market demand and growth potential, service provision, government priority, duplication of work and significant forward and backward linkages. Fish and vegetable farming came out to be the first and second respectively among all the considered sub-sectors. Reasons for selecting duck sub-sector can be pointed out here as:

1.4.1 Favorable environment for duck production

Duck rearing needs water body, either small or large, which abounds in Netrokona. Almost 60% of the total district remains under water during and after the rainy season. This huge submerged area is called “Haor area”. Ducks can live on natural food as snail, oyster, small fish etc. and household food waste.

1.4.2 Involvement of large number of people

Around 75% of the inhabitants of Netrokona rear duck, most of them are poor. There are both large-scale farmers and small scale farmers. There are affluent people who also keep duck. Almost all poor people (about 50000 people) keep duck as rearing about 8-10 duck involves very low cost and minimal care and attention and also selling duck eggs and ducks to the market add to their income.

1.4.3 High growth potential

Most households rear ducks mainly for egg production. About 85% of them are either unaware or reluctant about better technology of duck rearing. So there is high potential for growth in the upazilas as Kendua, Atpara, Barhatta and Mohangonj. There are opportunities for both horizontal and vertical growth in this sub-sector. Horizontal growth implies the increase in number of duck farmers and increase in number of cultivated ducks. Vertical growth implies the increase in productivity of eggs.

1.4.4 Opportunity for increased income

MSEs currently get 80-120 eggs per year from a single duck with traditional rearing method. Traditional duck rearing method includes indigenous species of duck and no feeding to the ducks, that is leaving the ducks to fend for themselves. If the duck farers buy high yielding species and provide food to

them, the ducks will lay about 180-220 eggs per year. This will definitely increase their income.

1.4.5 Demand-Supply gap

Duck egg is a demand driven product. All the eggs that come to principal arots of Dhaka from major duck producing areas are readily sold to end consumers through other wholesalers and retailers. An end market survey, in Tejgaon egg arot, followed by the sub-sector study has been conducted, which reveals strong demand for duck egg.

1.4.6 Easy to enter the business

Duck rearing is a small investment business to start especially in household level for 5-10 ducks. Such small scale business needs the cost of ducklings or hatching eggs, a hen for hatching and a small cage or pen or box for keeping the duck.

1.4.7 Involvement of female

Ducks are raised mainly by the females in the MSEs. The women let the ducks out of their home in the morning and let them at dusk.

For the abovementioned reasons duck sub-sector has been selected for intervention with a view to increasing income and thus reducing poverty of the poor people of Netrokona. Below is the table that shows two sub-sectors, duck and vegetable, selected during the scoping process based on some selection criteria.

Table 1.4: Scores of Selected Sub-sectors in Netrokona.

Sl.	Sub-Sector Criteria	Weight (%)	Duck		Vegetable	
			Score (1-5)	Weighted Score	Score (1-5)	Weighted Score
1	No. of MSEs	20	5	100	2	40
2	Market Demand & Growth Potential	20	5	100	5	100
3	Significance of forward-backward linkages	15	5	75	5	75
4	Service provision	10	5	50	4	40
5	Government Priority	10	4	40	5	50
6	Participation of women	5	5	25	3	15
7	Environmental issues	5	3	15	2	10
8	Technological issues	5	4	20	5	25
9	Duplication of work	10	2	20	4	40
	Total			**445**		**395**

Source: Scoping Study Report 2007

1.5 Limitations

Some limitations impede this report to be one of the finest ones. Time, manpower and money are the ever-scarce resources that should not be considered as limitations. Nonetheless these resources to some extent shape up the quality of the sub-sector study. However, they were very well managed. The limitations that affected the study are –

- Unavailability of sufficient secondary information
- Communication blockade due to road damage and flood
- Travel time increased during the study as the fish farmers locate in clusters throughout the district.
- Though the sample was taken from all over the district, its size was too small with respect to the total number of the actors – 21 of 52,400 duck farmers, , 6 of 86 hatcheries, 10 of 115 input sellers, 2 of 15 arotders, 3 of 1500 retailers and 3 of 50 wholesalers.
- The study was more of qualitative than quantitative which emphasizes more on understanding the market system than focusing on numbers like ratio of sample size and population. This instigated to use the judgmental view of analysis.

2.0 DUCK SUB-SECTOR IN BANGLADESH

The Bangladesh poultry industry meets the local demand for chicken and duck products. There are four main sub-sectors of the industry - broiler chickens, layer chickens, native chickens and ducks. The commercial (broiler and layer) chicken farms are large-scale, highly advanced, geographically concentrated and integrated, with efficient marketing. Native chickens and ducks, on the other hand, are produced mainly through a large number of geographically diverse, small-scale, backyard enterprises, and marketing tends to be much less efficient. However, native chickens and ducks have a competitive advantage because of strong consumer preferences for their freshness and taste.

2.1 The History and Commercial Evolution

The small backyard duck sector relative to the commercial sector (broilers and layers) is facing serious constraints in production and marketing, due to market imperfections that include the lack of market information and technical know-how and the lack of access to credit, extension, and other key inputs. Bio-security concerns, highlighted by recent avian influenza outbreaks worldwide (including many other Asian countries) may impose further constraints on the backyard sector.

Among the poultry farm enterprises, duck production plays an important role in the rural economy of Bangladesh. According to Food and Agricultural Organization of the United Nations the duck production in Bangladesh is 11.7 million in 2006. (FAOSTAT online statistical service; FAO: Rome, 2007). Duck farm serves dual purpose – egg and meat. Local ducks are ubiquitous in the country and most small households under a subsistent level of management (Islam et al., 2003). Duck comprises of about 10% of the total poultry population, occupying second place to chicken in the production of table eggs in the country. It contributes major source of animal protein in Bangladesh. It can be produced at a short time at reasonable cost. It is an important component of farming system and plays a significant role to 80% rural people of Bangladesh. It provides cash income and creates employment opportunity for rural people, particularly for small and landless farmers (Khan et al., 1999). Ducks can be raised cheaper than broiler and if market is properly organized (Singh, 2001).

The future of the native duck sector appears to be uncertain. On the one hand, its products are preferred by consumers for their freshness and unique taste. On the other hand, it is uncompetitive in price and lacks consistency of quality and supply.

2.2 Duck and Bangladesh Economy

Bangladesh is mainly an agricultural country. Its agriculture consists of mostly micro, small and medium farmers. The growth of this segment means the growth of the economy. This huge segment cultivates crops and fish, produces vegetable, raises cattle and rears birds. Poultry (indigenous and broiler) and duck are the predominant ones among birds. They add a substantial amount to their household income.

Benefits of Duck Production

- Duck lays egg at very low cost as it scavenges food from natural sources (snail, oyster, small fish, etc.) and household food waste.
- It can be raised at very low care and labor.
- Its egg is larger than that of chicken thus having more nutrition.
- Its indigenous species lays egg longer than that of chicken.
- Its egg can be stored longer than that of chicken.
- Diseases of duck are less than that of chicken.

2.3 Major Species and Leading Areas

2.3.1 Major Species

Among the species indigenous ones are predominant. Mostly MSEs rear this kind. The farmers who are medium to large use high yielding species. Khaki Campbell, Indian Runner, Jinding, Peiking or Beijing and Muscovy are the high yielding varieties.

Picture 2.1: Major Species of Duck in Bangladesh

Table 2.1: Bangladeshi Species at a Glance

Species	Colour	Purpose of Production	No. of Eggs
Khaki Campbell	Feather-White, Head & Neck- Bronze	Egg	200-300
Indian Runner	Feather- White, Black, Grey, Blue, and Tan	Egg	200-250
Jinding	Feather- Mixture of White & Black, Head- Green	Egg + Meat	150-160
Peking/ Beijing	Feather- White	Egg + Meat	150-250
Mascovi	Feather- White, Black, Chocolate, and Blue,	Egg + Meat	100-125
Indigenous/ Deshi	Feather- White, Black	Egg + Meat	80-100

2.3.2 Leading Areas

Households all over Bangladesh keep duck. The practice of keeping indigenous poultry and duck is very common in Bangladesh. However, production distribution of ducks is asymmetric in the country. With some natural advantages some areas are suitable for duck production. Sunamgonj, Netrokona, Gaibandha and Kishoregonj are the main duck producing districts.

3.0 DUCK IN NETROKONA

3.1 Background/History

Netrokona comprises of ten upazilas namely Sadar, Barhatta, Mohanganj, Aatpara, Modon, Kendua, Khaliajhury, Purbadhola, Durgapur, and Kolmakanda. Large part of the Netrokona district is flood prone area. This is the low lying valley of Meghalaya mountainous region of India. A little to moderate rain in that area keeps this district under water for more than seven months. These are called the "Haor" area.

The haor area contains water for more than seven months, which is very much favorable for duck cultivation. Around 75% household rear duck both for personal consumption and for business purpose. There are several hatchers in each upazila who cannot meet the order of day-old ducklings. They follow the traditional process (rice-husk and hurricane method) of hatching, which increases wastage of eggs and mortality rate of ducklings.

Modon is the pioneer and now the largest hatchery prone upazila of Netrokona. About 15 years age two technicians from Maguria of Sylhet trained some people of Kuturi Kona village of Modon on "Rice-husk hatching method of duckling". Since then the whole upazila and gradually the whole district flourished in duck hatching and farming. Favorable environment as water logging, availability of natural food, water-way transportation, less investment etc. worked as a lubricant in the process.

3.2 Present Market Scenario

Netrokona duck sub-sector includes different actors as input sellers, duck hatcheries, duck farmers, arotders, egg-wholesalers, egg-retailers, duck-wholesalers, duck-retailers, and other private sectors as feed sellers, medicine sellers and paravets. It also includes the water bodies, infrastructure and interrelation among the actors. Below are the data at a glance on Netrokona duck sub-sector.

Table 3.1: Duck Market Scenario (Overlays)

Functions of Actors	No. of Actors	Avg. No. of Employees	Employees Involved	People Involved	% of Actors	% of People Involved
Duck Farming (Small Scale)	50000	0	0	50000	92.14	85.66
Duck Farming (Large Scale)	2400	1	2400	4800	4.42	8.22
Hatchery	86	1	86	172	0.16	0.29
Egg Collecting (Paiker)	100	0	0	100	0.18	0.17
Commissioning (Arotder)	15	0	0	15	0.03	0.03
Input Sales (Feed & Medicine)	115	1	115	230	0.21	0.39
Wholesaling	50	0	0	50	0.09	0.09
Retailing (Only groceries)	1500	1	1500	3000	2.76	5.14
Total	54266		4101	58367	100.00	100.00

Source: Sub –sector Study, Netrokona

3.2.1 The Upazilas

Duck is cultivated more or less at all the ten upazilas of Netrokona. The north-western part of Sadar upazila is mostly high land. Duck is cultivated only in ponds in small numbers. The south-eastern part is mainly haor. Large scale farms exist there.

Purbadhola:
Purbadhola is mostly a high land upazila. Crops and vegetables are cultivated round the year. Ponds are not that much available. However, duck cultivation is mostly cluster wise. That is a few parts of the upazila as Sadar, Narayandohor, Hogla Bazar, Gozakhalikanda, Jaria, Moudam and Baluchar are prominent for duck cultivation. Total demand for duck egg is higher than its supply as Purbadhola imports duck eggs from adjacent Mymensingh district and Sadar upazila of Netrokona.

At Moudam there are two hatcheries and about 25 large duck farmers having an average farm size of 500. About 80% of the inhabitants are marginal duck farmers having 8-10 ducks.

Barhatta:
Eighty percent of the households of Barhatta keep duck of about 3-10 in number as backyard poultry. Fifteen percent are commercial duck farmers and the rest 5% rear no duck. Twenty percent of the ducklings are collected from local hatcheries and the rest mostly from Madan. During flood season, large farmers move their flock of ducks to Dhormopasha, Sunamgonj due to acute shortage of natural feed and accommodation problem.

Barhatta exports duck egg meeting its internal demand. On the haat (weekly market) days wholesalers gather with their accumulated eggs from large farmers of Barhatta and adjacent Mohangonj upazila and through arotders export to outside market of Netrokona.

Mohangonj:
About 80%-85% of the households of Mohangonj rear duck. There are more than 350 large duck farmers. Khaki Campbell, Jinding and Chorui are the main species among the large farmers, which are mainly reared for egg production. Marginal farmers mostly keep indigenous species. Besides, goose is also reared for meat production. Migration to Atpara upazila and Sunamgonj district with flock of ducks is also present here. Large farmers have to give rent (Taka 5-8 thousand/ 200-300 ducks) to the owners of the water body (Jolmohal) for releasing the flock there. Local hatcheries of Mohangonj cannot meet the demand for duckling. So farmers collect them from the hatcheries of Khaliajury and Madan.

Atpara:
About 70%-80% of the households rear duck with the average flock size of 10-12. More than 400 households of the inhabitants are commercial large duck farmers. Marginal farmers hatch their duck eggs themselves using hen whereas large farmers buy ducklings from local hatchery and mostly from Madan. Large duck farmers migrate here from Mohangonj during flood season.

During the peak season of egg production, 7-8 wholesalers collect 80-90 thousand eggs per week and sell to the market of Kendua and Sadar upazila. And during the off peak season production goes down to 15-20 thousand.

Modon:
Duck is second to cow among the domestic animals of Modon. Seventy percent households rear duck here. Small farmers have an average of 10 ducks, whereas the large ones have at least 500 ducks. The large ones, who maintain ten to one ratio of duck and drake, sell their eggs to the local hatcheries. This huge supply of egg from the locality does not meet the total demand of eggs for hatching. So the hatcheries also buy eggs from duck farmers of other upazilas as Kendua and Khaliajury, which accounts to about 10%. Ducklings go to all upazilas of Netrokona, Dhobaura, Haluaghat of Mymensingh, Kishoregonj and Sylhet.

Kolmakanda:
Seventy percent of the upazila remain under water for about eight months during and after the rainy season. Communication between the unions and the villages is very tough as roads remain under water for about eight months. Boat is the only means to move from one place to another. Therefore, the sub-sector study team could not collect much information on duck cultivation.

This upazila has more than 370 farmers with an average of 300 ducks whereas the largest farm was found having 1600 ducks (the ULH shows the data but in reality the farm's duck number decreased by plague attack). Most of the villagers (80%-85%) are engaged in duck farming. wholesalers collect eggs from the farm gate and sell to arotders who then export the eggs to Dhaka. Ninety percent of the locally produced eggs are exported and the rest one percent is consumed locally.

Several NGOs have different activities here. BRAC provides training on duck rearing, vaccination etc. and then finances poor farmers. It has already trained up 270 of its members as vaccinators for different domestic animals including duck. CARITAS, ASA, Proshika, Shabolombi, and World Vision all have different activities on livestock rearing and credit program.

Kendua:
Seventy to eighty percent of the households keep duck. Among them 15-20 % are large ones having an average farm size of 200-250 with predominantly Khaki Campbell and Chorui. The small ones keep 3-20 ducks with predominantly indigenous species. There are 12 hatcheries in Kendua. They supply duckling to local duck farmers and to Kishoregonj. Wholesalers buy eggs from farmgates and local markets and also Nandail of Mymensingh district. Ninety percent of the total production of eggs goes to Dhaka and Chittagong; the rest is locally consumed.

An NGO named POPI provides credit for duck business after having attended a training program on duck cultivation. But most of the farmers do not buy duck rather spend the money on something else. As POPI does not have strong monitoring system and they care much about repayment of the loan, farmers keep on doing so.

Mortality of ducks is higher (15%-20%) in Kendua as most of the farmers lack in knowledge on disease and vaccination. Some hatcheries feel that they need to improve their knowledge and technology whereas some other think that whatever they know is enough. They consider the wastage and mortality rate of eggs and ducklings to be very normal.

Khaliajury:
Seventy five to eighty percent of the upazila remain inundated during and after the rainy season. The villages stand like islands 5-10 kilometers away from one another. Communication is troublesome and time consuming, which keeps the price of essentials higher than other upazilas.

About 70% of the households rear duck of which 85% are small ones (that is about 60% are small farmers) and 15% are large ones (that is about 10% are large farmers). Small farmers lack in knowledge on disease and vaccination which makes the mortality rate of duck 40%. Large farmers buy vaccines from

the Sadar union and vaccinate their ducks themselves. Large farmers buy ducklings from the hatcheries of Modon.

According to the duck farmers, miscreant people are the prime cause of loss of duck. Besides, some duck swim away with the water hyacinths that come with the flood water.

3.2.2 Market Dynamics

There are mainly two types of duck farmers. One is noncommercial and the other is commercial. The noncommercial ones keep 2-19 ducks. They can even be divided into two more groups as marginal (2-7 ducks) and small (8-19 ducks). The commercial ones keep at least 20 ducks. They are divided into two segments as medium (20-199 ducks) and large (>200 ducks). There are even farmers having more than 1500 ducks. Small farmers collect hatching/breeder eggs randomly and use hens for hatching. Large farmers buy day old ducklings, several weeks old ducklings for egg production. Ducks lay egg in two peak seasons.

Farmers rear ducks mainly for egg production. Large farmers' purpose is definitely egg production whereas small farmers sell both eggs and ducks in retail market time to time whenever they need money. Small farmers also consume both eggs and duck meat on several occasions. On the other hand, large farmers hardly consume their flock's egg or meat.

Netrokona exports duck and its eggs to other districts meeting its internal demand. In the haat days, at least one truck egg goes out from each of eight upazilas; Durgapur and Purbadhola do not produce much egg. Wholesalers and arotders take the eggs to the large markets of Chittagong and Dhaka as Kaptan Bazar, Tejgaon Bazar, and Karwan Bazar. Eggs go to other districts from Dhaka.

In Netrokona region, total number of duck farmers has increased over the years. Poor people used to keep ducks as they need not provide supplementary feed much. Ducks can scavenge their food from around homestead and the haor. After the inception of hatching business in this region about 15 years ago, large scale duck farming has gradually been increasing. With the inception of high yielding species and some interventions (training and financing) by some NGOs (BRAC, Shabolombi, Karitas and ASA) on duck cultivation has improved the commercial basis duck cultivation practice.

Farms migrate to higher lands when water level rises and natural food becomes scarce. Farmers take their flock to other upazilas/districts where natural food would be available. Some farmers take their flock of ducks to

their relatives; some send theirs with the flock of others and some have built houses to other places.

The predominant species of duck among the large farmers in Netrokona are Khaki Campbell (9%), Jinding (30%), Indigenous (60%) and others (1%). Khaki Campbell and Jinding are mainly used for egg production in large farms. Small farmers bother less about the species. They mainly keep indigenous (deshi) species.

In the duck sub-sector women involvement is very high. Since most of the duck farmers are of small size, the small flocks are managed by the women in the household. When the size of the flock is more than 20, a male is needed to look after it.

Price of duck egg varies from season to season. Duck lays egg between its two moulting (feather changing) periods, February – March and September – October. Therefore, during the two peak seasons of laying eggs, production of duck goes high. However, farmers get lower price for eggs during hot season, March – April to June – July.

Seventy percent of the total production of eggs is exported. The rest are consumed locally. The upazilas differ from one another with respect to the ratio of export. The following table shows that only 50% duck egg is exported from Modon because its local hatcheries buy eggs mostly (90%) from local farms. Purbadhola produces less duck egg that increases the share of local consumption.

Table 3.2: Share of Egg Export

Upazila	% of Local Consumption	% of Export
Mohangonj	5	95
Atpara	15	85
Modon	50	50
Kendua	10	90
Barhatta	20	80
Khaliajury	20	80
Kolmakanda	1	99
Sadar	20	80
Purbadhola	40	60

Source: Sub-Sector Study

3.3 Demand – Supply Analysis

In the core of any market lies demand and supply of a product. Some people have some extent of demand for goods or services and some people supply

that. It is not likely that demand and supply will always be equal. Most often demand is higher than supply as in this world of scarcity resources are limited to produce goods and provide services. Here is the demand and supply analysis of duck egg and meat, which is produced in Netrokona.

3.3.1 Demand Side

The sub-sector study found that there are strong demand for both the egg and meat of duck. There is a segment of egg consumers that prefers duck egg than poultry egg. It considers duck egg to be of indigenous kind. It also believes that duck egg has more nutrition than poultry egg. Few consumers of duck egg complained that they don't get enough steady supply of duck egg round the year.

A survey on bakeries was conducted, which reveals that they prefer duck egg to poultry egg. Even 3 – 4 years ago they used duck egg as one of their prime raw materials. However, poultry egg gradually replaced it as its supply became more regular along with lower price than duck egg. They still would buy duck egg if regular and sufficient supply of duck egg can be assured.

Duck meat is considered to be of indigenous kind and a segment of consumers consider it to be tastier than broiler and more organic. Its demand rises higher during winter.

3.3.2 Supply Side

At each haat day during the peak season of duck egg production, at least a five ton truck filled with duck eggs is exported from eight of the upazilas of Netrokona to other districts (mainly to Dhaka). These eggs go to the large arots of Tejgaon, Kaptan Bazar and Jatrabari of Dhaka and are readily sold to the wholesalers. The wholesalers sell them to retailers of Dhaka and other wholesalers and retailers of other districts. A post sub-sector study at Tejgaon egg arot found that during the lean period of egg production, wholesalers sell around 5000 eggs per day and during the peak period around 13,000 eggs per day.

3.3.3 Demand-Supply Gap

It is evident from the market survey that there is a huge demand-supply gap in the duck egg. Although ducks lay eggs more both in summer and winter, the supply of eggs is higher in winter. It is only because of the extra heat that rots the eggs sooner. This raises the cost of wholesalers and retailers before it reaches the consumers. Thus the price of eggs becomes higher as they become scarcer.

MSEs sell their ducks in their local markets and most of which are consumed locally. Only a little amount goes out to meat national demand. Large and medium farmers sell their ducks to the wholesalers or arotders that go out to other districts. These ducks lay eggs for about two years and are sold out

when they are expected not to lay eggs anymore. Besides, during flood time farmers sell their ducks when natural duck feed becomes unavailable and they cannot afford to feed them anymore. However, this bulk amount of supply cannot meet the demand of the consumers.

3.4 Operating Mechanism and Other Issues

3.4.1 Driving Dynamics

Duck cultivation varies from upazila to upazila. Modon is the hatchery prone area having 60 hatcheries. There are other 16 hatcheries in rest of the upazilas. The hatcheries take orders from local large duck farmers and duckling traders of other districts. This demand for duckling is totally buyer driven.

About 50,000 small scale household duck farmers and 2400 large scale duck farmers constitute the total duck farmers of Netrokona. The poor people of haor area find it very convenient to rear duck, which adds to their income. This part of production of eggs is producer driven.

There are large farmers who have nothing but only their homestead and a flock of ducks. They have no field for crop cultivation. Even if they do, it remains under water for more than seven months. Therefore, they cannot but rear duck. This part of production of eggs is also producer driven.

A segment of large duck farmers are well off who have taken duck farming as a business and gradually bettered their economic condition. However, the whole supply of duck egg is consumer driven. An end market survey at the Tejgaon egg arot in Dhaka was conducted after the sub-sector study, which reveals the high demand of duck egg at consumer level.

3.4.2 Influence of different actors

Analyzing the influence and power of different actors on defining key features and characteristics of the value chain reveals that the actors play different important roles in the process.

In the market, a great number of input selling companies (feed and medicine) are engaged through their distribution channel. They possess much higher potentiality through disseminating information about proper and improved duck cultivation method, disease awareness and vaccination. But they are not playing their roles accordingly thus having no influence on the value chain except controlling the supply and price of their products.

There are paravets who diagnose diseases and vaccinate ducks on call. They are saving lives of flocks of ducks but only if they are being sought. They can increase mass awareness among the duck farmers that would even increase both of the parties' income. Unfortunately they are not aware of it.

Traders of eggs as paikers, arotders, wholesalers and retailers are not controlling the price of duck eggs. The large paikers and the arotders keep in regular touch with the arotders of other big cities, especially Dhaka and Chittagong. Knowing the price of egg over phone, they buy with 20-30 taka less for per hundred pieces of eggs.

There are some NGOs as BRAC, ASA, CARITAS, Shabolombi, World Vision etc. who have different livestock training program and credit program that are helping the poor and medium farmers to different extents. Their influence on the value chain is not ignorable but not even significant.

It is mainly the duck farmers who are controlling the supply of the eggs with some variables controlling them such as their knowledge on duck cultivation, species of duck they chose, diseases of duck they face or prevent, flood water that causes much trouble with accommodation and availability of natural food.

3.4.3 Critical Issues

Duck cultivation of Netrokona is privileged with the suitable climate and environment and these led the sector to flourish. But the growth was not even. Out of ten upazillas, only Modon is famous for hatchery having the highest of 60. Only Purbadhola and Durgapur lag behind in large scale duck cultivation. However, small scale household level duck rearing is also present there. Rest of the upazilas is famous for large scale duck cultivation though hindered with several constraints.

Productivity among the large duck farmers is definitely higher than that of the small ones as the latter do not keep high yielding exotic species. Besides, they lack in awareness and knowledge on proper duck cultivation and diseases. Introduction of high yielding varieties and dissemination of information of duck rearing better to the farmers will provide them the opportunity to increase their productivity and income. This would make a vertical expansion.

3.5 Actors in the Sub-sector

3.5.1 Input Sellers

Input sellers include feed sellers and medicine sellers. Feed sellers are mainly poultry feed sellers. In Netrokona some medicine sellers are specialized for animal and bird. The rest keep medicines for animal and bird along with those

for human. Medicine sellers buy medicines of different drug producing companies and vaccines from the staff of Upazila Livestock Hospital.

3.5.2 Hatchery

Hatcheries collect fertilized eggs from large scale egg producers. The egg producers keep 10% male duck in their flock so that eggs get fertilized because the hatcheries demand so. Hatcheries hatch eggs with traditional rice-husk technology that takes 28-30 days for the ducklings to come out. They sell day old duckling to several days' (2-8) old duckling to duck farmers who would go for egg production. Most of the time they take orders from large duck farmers and duckling paikers who also take orders from other large duck farmers of other districts.

The sub-sector study found that local hatcheries produce around 21,50,000 ducklings per year, of which 21,28,500 (90%) is purchased by local large farmers and the rest 21,500 (10%) goes outside market as export through duckling traders of Mymensingh, Kishoregonj and Sylhet.

Table 3.3: Cost Benefit Breakdown of Duck Hatchery

Item	**Cost (Tk.)**	**Remarks**	**Calculation**
Establishment	28	The set up of hatchery costs 22000 taka having 10 years of lifetime (avg productivity 25000 ducklings per hatchery per year)	(Tk 22000/ 10years/ 25000 ducklings) * 315 ducklings
Egg	2625	10% unfertilized eggs and 30% wastage during hatching; total 40% wastage; to get 315 ducklings 525 eggs are needed	Tk 5 * 525 eggs
Feed	83	Average duckling keeping days are 3.5 days (ducklings are sold out between 1 to 7 days of hatching)	5 gm per duckling * 315 ducklings * 3.5 days = 5.5 kg * tk 15
Transportation	175	Orders about 1500 eggs from each farmer and carrying cost is 500 tk.	(500/1500)*525
Employee	25	Temporary labor costs 2000 tk for a month	(2000/25000)*315
Rice husk	260	20 kg rice husk needed for 525 eggs	Tk 13 * 20 kg
Cost of Goods Sold (COGS)	**3196**		
Selling price	**4725**	Average duckling price is 15 taka	Tk 15 * 315
Net Operating Income	**1529**		

Average Yield = 25000 ducklings
Total cost (Approximately) = 25000 * 10.5 = Tk 253750
Total sales = 25000 * TK. 15 = Tk. 375000
Total Profit = Tk. 121250 per year; Approximately Tk 10100 per month
Unit cost = Tk. 3196/315 = Tk 10.15
Unit selling price=Tk. 15

3.5.3 Duck Farmers

Duck farmers are divided into distinctly two groups. One is noncommercial and the other is commercial. Noncommercial duck farmers are of two types – marginal (2-7 ducks) and small (8-19 ducks). Commercial ones are of two types too – medium (20-199 ducks) and large (>200 ducks).

Most medium and large duck farmers buy one to seven day(s) old duckling from hatcheries and keep on rearing them for egg production. Most of the time, they place orders for ducklings beforehand so as to ensure the procurement of ducklings. Some buy several weeks' duck from other farms so that they do not have to bother about feeding and rearing till egg production. They keep a duck as long as it is productive and sell it after about two years. By the time they sell a flock of aged egg-producing ducks, they raise another flock to fill in.

Marginal and small farmers preserve duck eggs from their own flock. Seldom, they buy duck eggs from markets or neighbors for hatching. They do not bother about eggs of high yielding varieties. Most of the small farmers sell the eggs they get directly to local markets. Besides, there are small paikers who collect eggs from them roaming from door to door.

Large Farmers (300 Ducks)

Assumptions:
Average size of large farms is 300 ducks.
Mortality rate of ducklings while carrying is 5%.
Mortality rate of ducks while rearing is 10%.
Farmer provides vaccine of cholera and plague.
Farmer sells duck egg at his farm gate.
Average egg productivity of duck is 225.
The farm is on farmer's own land.
Farmer does not migrate during flood season.
Farmer needs not lease water body for the flock to swim and search food.
Farmer vaccinates the flock by a paravet.

Table 3.4: Cost Benefit Breakdown of Large Duck Farmer

Item	**Cost (Tk.)**	**Remarks**	**Calculation**
Duck Nest	2750	9 feet X 27 feet	
Duckling	4500	Buys 315 ducklings to sustain 300 ducklings	300 @ 15 taka
Transportation	600	Distance might increase or decrease the cost	300 @ 2 taka
Feed (Starter)			
Feed (Rest of the year)	132000	40 kg rice per day per 300 duck	10 tk/kg * 40 kg * 330 days
Vaccination	300	Vaccines for cholera and plague	300 @ 0.50 tk * 2
Vaccinator (Paravet)	300		300 @ 0.50 tk * 2
Medicines and Vitamins			
Vitamin A, D, & E	960	60 ml-60 tk for 75 ducks, 4 times a year	4 bottles @ 60 tk * 4 times
Ciprosol	240	100 ml-240 tk for 4000 ducks, (Only 7.5 ml is needed for 300 ducks, the rest is spoiled)	
Flamil	125	100 gm-125 tk for 4000 ducks (Only 7.5 ml is needed for 300 ducks, the rest is spoiled)	
Rudivit	1500	100 ml-125 tk for for 100 ducks, 4 times a year	125 tk * 3 * 4 times
Enbavit L	420	1 kg- 140 tk for 100 ducks	140 tk * 3
AB par	150	100 gm 50 tk for 100 ducks	50 tk * 3
Cost of Goods Sold (COGS)	**143845**		
Selling price	**212625**	Mortality rate 10%, avg productivity 225 eggs/year, avg price 350 tk per 100 eggs	270 ducks * 225 eggs * 3.5 tk (42 tk per dozen)
Net Operating Income	**68780**	Monthly income is 5731 that is only from selling duck eggs	68780/12 = 5731.67

Yield= 270 ducks * 225 eggs =60750 eggs
Unit cost= Tk. 143845/60750 = 2.36 tk
Unit selling price=Tk. 3.5

Table 3.5: Cost Benefit Breakdown of Small Duck Farmer

Small Farmers (10 ducks)

Item	Cost (Tk.)	Remarks	Calculation
Duck Nest	333	5 feet X 5 feet with expected life of 3 years	1000/3 = 333 tk
Duckling		Farmer hatches his own duckling	
Feed	312	Provides least feed (2 kg per month), ducks scavenge food from homestead and other water bodies	24 kg * 13 tk
Vaccination		Does not vaccinate	
Cost of Goods Sold (COGS)	**645**		
Selling price	**1350**	Mortality rate 50%, avg productivity 90 eggs/year, avg price 3.00 tk per egg	5 ducks * 90 eggs * 3 tk (36 tk per dozen)
Net Operating Income	**705**	Monthly income is 58.75 that is only from selling duck eggs	705/12 = 58.75

Yield= 5 ducks * 90 eggs = 450 eggs
Unit cost= Tk. 645/450 = 1.43 tk
Unit selling price=Tk. 3

3.5.4 Paikers

Paikers are the collectors of duck eggs. There are two types of them – small and large. The small ones buy eggs from small duck farmers moving from door to door of several villages. Then they sell it to local arotders who also act as trader.

The large paikers collect eggs mainly from the farm gates of the large farms keeping rapport with them. In some cases they provide advance money to the farmers so that they sell their eggs only to them. Paikers also collect eggs and ducks directly from the farmers at haats and bazaars of different villages, unions and upazilas.

With the blessing of mobile phone, paikers know the selling price of egg at the arot of Dhaka. Then they pay the farmers 30-40 taka less than that for per 100 eggs. They sell it to the local arotders. Some wholesalers also play the role of arotders.

Assumptions:
Paiker buys from farm gate.
He sells to arotder of Upazila haat.

Table 3.6: Cost Benefit Breakdown of Duck-egg Paiker

Item	Cost (Tk.)	Remarks	Calculation
Egg	212625	270 ducks * 225 eggs = 60750 eggs @ 3.5 tk costs 21265 tk purchased from a large farmer during 10 months (4 haats in a month)	
Crate	6075	30 eggs per crate that is 2025 crates @ 15 tk (lifetime of 5 years)	(2025 * 15 tk)/5 years
Transportation	6000	Farm gate to arot (40 times in a year)	40 times * 150 tk
Commission to arot	7217	3% commission	240572 tk * 0.03
Cost of Goods Sold (COGS)	**231917**		
Selling price	**240572**	Wastage 1% while carrying	60143 * 4tk (48 tk per dozen)
Net Operating Income	**8655**	This yearly income is only from buying eggs from one large duck farmer	

Unit cost= Tk. 231917/60750= 3.81 tk
Unit selling price=Tk. 4

3.5.5 Arotders

Arotders buy eggs from large farmers and paikers both small and large. Paikers sell their eggs to the local arotders. Arotders also work as traders. They sell eggs to other arotders of other districts and wholesalers of local market. From a local haat the collection of eggs are sent to other district by truck. On top of the truck, sometimes, arotders send flock of ducks also to sell.

3.5.6 Wholesalers

Local wholesalers buy eggs and ducks from local arotders. They sell it to local retailers. Wholesalers of Dhaka or Chittagong or any other districts other than Netrokona buy bulk amount of eggs from their local large market/arot. In the arots wholesalers buy from wholesalers/ arotders of Netrokona through local arotders.

Table 3.7: Cost Benefit Breakdown of Duck-egg Wholesaler

Item	Cost (Tk.)	Remarks	Calculation
Egg	240572	The same amount purchased from paiker through arot	60143 * 4tk
Transportation	3000	Arot to Dhaka by truck	
Commission to arot	7426	3% commission	247548 tk * 0.03
Cost of Goods Sold (COGS)	**250998**		
Selling price	**265230**	Wastage 2% while carrying	58940 * 4.5 tk (54 tk per dozen)
Net Operating Income	**14232**	This income is only from selling eggs once to Dhaka	

Unit cost= Tk. 250998/60143= 4.17 tk
Unit selling price=Tk. 4.5

3.5.7 Retailers

Retailers buy eggs from the wholesalers and sell to local market. Most of the small duck farmers take their eggs and ducks to local markets for retailing their products.

Table 3.8: Cost Benefit Breakdown of Duck-egg Wholesaler

Item	Cost (Tk.)	Remarks	Calculation
Egg	265230	The same amount purchased from Wholesaler	58940 * 4.5 tk
Transportation	3600	2 times a month from wholesaler to own selling place	150 tk * 2 * 12
Cost of Goods Sold (COGS)	**268830**		
Selling price	**288800**	Wastage 2% while carrying	57760 * 5 tk (60 tk per dozen)

Net Operating Income	**19970**	Retailers are lees likely to buy 58940 eggs per year because this implies that they sell about 160 eggs per day which is very unusual	

Unit cost= Tk. 268830/58940= 4.56 tk
Unit selling price=Tk. 5

Table 3.9: Profit margin and Value addition

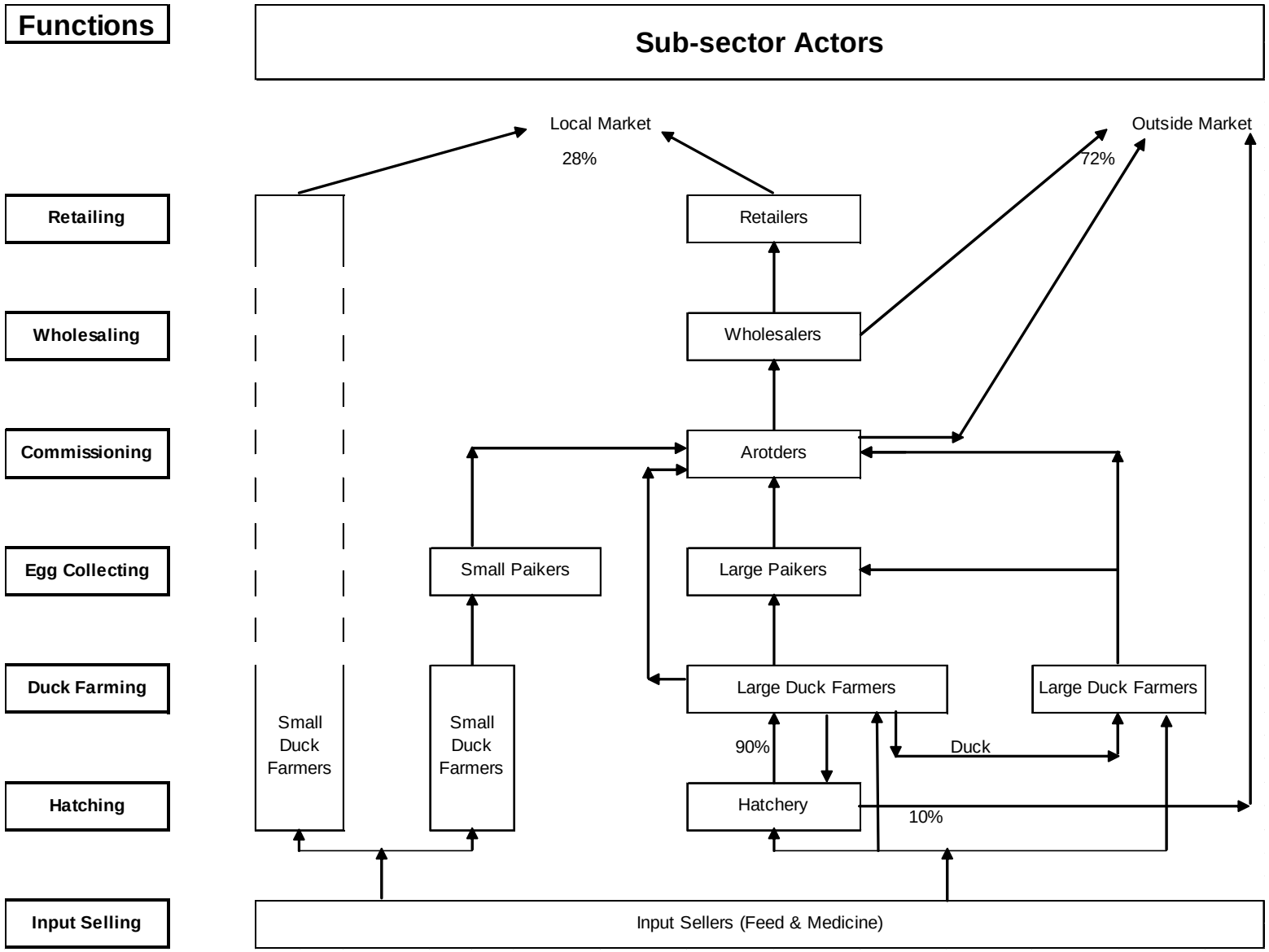
Value Chain Actor	Unit Selling Price	Unit Cost	Profit/Unit	Profit Margin %	Distribution of Value Addition	Distribution of Profit
Hatchery	-	-	-	-	-	-
Farmer	3.5	2.36	1.14	32.57%	70%	54%
Paiker	4	3.81	0.19	4.75%	10%	9%
Wholesaler (exporting to Dhaka)	4.5	4.17	0.33	7.33%	10%	16%
Retailer (Dhaka)	5	4.56	0.44	8.80%	10%	21%

3.6 Sub-sector Map

The sub-sector map shows six channels through which the value chain actors of the duck sub-sector of Netrokona are interconnected. The map incorporates the trading of duck feed and medicine, duck and eggs of duck.

For better visibility the sub-sector map is given in the next page.

Figure: Sub-Sector Map



3.7 Sub-sector Channels

Channel 1: Input Seller and Small Duck Farmer
This is the most common scenario of the whole district. There are about 50,000 small duck farmers who keep about 8-10 duck round the year. They use the egg of their own parent ducks for next year's hatching. They use a hen for hatching as ducks are very unrest to sit for hatching. They themselves sell their duck eggs to the local market. Only a few of them buy some feed (paddy) from feed sellers.

Channel 2: Input Seller, Small Duck Farmer, Small Paiker, Arotder, Wholesaler and Retailer
The small duck farmers also hatch their own ducklings using duck eggs and hen. Small paikers come and collect eggs from them and then they sell to arotders. Only 10% of the total small farmers shown in channels 1 and 2 buy additional feed for their ducks.

Channel 3: Input Seller, Hatchery, Large Duck Farmer, Large Paiker, Arotder, Wholesaler and Retailer
Hatcheries sell ducklings to the large farmers. The latter rear it for egg production and later sell eggs in bulk amount to the large paikers who come to their doors for the eggs. These large farmers consider taking the eggs to the markets troublesome in terms of sufferings, egg wastage and extra cost. So they do not sell to the arots of local market rather sell to the paikers. The large paikers, sometimes, pay the duck farmers advance money to ensure their purchase. They sell the eggs to the arotders.

Both hatcheries and large duck farmers buy feed from the feed sellers. The hatcheries have to feed the ducklings until they are being sold. And the large duck farmers have to feed the ducks as long as they lay eggs. Only the farmers buy medicines and vaccines from the medicine sellers.

Channel 4: Input Seller, Hatchery, Large Duck Farmer, Arotder, Wholesaler and Retailer
This channel is almost the same as the previous one. The only difference is that the large duck farmers sell their duck eggs to the arotders as they can avail the cost of transportation, have access to market information through cell phone. This type of large duck farmers are better off than the ones in the previous channel.

Channel 5: Large Duck Farmer (1), Large Duck Farmer (2), Large Paiker, Arotder, Wholesaler and Retailer
The first large farmers in the channel sell their 3-4 month old ducks to other farms as they cannot afford to feed them anymore due to shortage of natural food during flood and also nesting problem for water logging. The second large

farmers prefer to buy this 3-4 month old flock as need not feed them for the ages they (ducks) have passed. These ducks are almost ready for laying eggs. When the ducks lay eggs, the farmers sell them to large paikers who then sell to arotders.

Channel 6: Large Duck Farmer, Large Duck Farmer, Arotder, Wholesaler and Retailer

This channel is almost the same as the previous one except the large farmers sell their eggs to the arotders. The reason for doing so is discussed in channel 4.

3.8 Cross-cutting Issues

3.8.1 Gender issue

In case of the small scale duck farming, engagement of women is enormous: letting the ducks in and out of the box/home of ducks, and feeding. On the other hand, males feed the large flock of ducks. Either the duck farmers themselves or hired employee do this work. However, no example is found where women are hired to provide feed to ducks. When the number of duck exceeds 20, an additional person is needed to look after them all the time so that the ducks do not enter crop fields, get lost or hunted/ stolen by others. Farmers then either engage their male family members or hire a male labor for this purpose.

3.8.2 Environmental issue

Farmers use no chemicals or any other harmful substance that pollutes environment. Ducks of small farms scavenge food waste and other waste materials thus clean up the surroundings of the homestead. Surprisingly, the use of fertilizers, pesticides and chemicals in the crop fields during the dry season is gradually reducing the amount of natural feed that were available previously.

3.9 Constraints and Opportunities

Constraints are the problems that are impeding the sub-sector to grow further and opportunities are the issues that yet to achieve or address. So both constraints and opportunities call for identification and analysis for designing intervention plan.

3.9.1 Constraints

Farmers' lack of knowledge on disease identification leads to high mortality rate that result in their low income.

Mortality rate of ducks both for small and large scale due to disease outbreak (duck plague and cholera out break) is higher. They can not identify diseases and are not even aware of the diseases of duck. They do not know the symptoms of the diseases. The most common diseases of duck are "Duck Plague" and "Cholera". As they do not know what to do to keep the ducks safe from these diseases, their ducks are more vulnerable to diseases.

Farmers' lack of knowledge on vaccine dosage (application and timing) leads to high mortality rate that reduces their income.

Some farmers are little aware of the diseases. However, they lack knowledge on the application and timing of vaccination. Some farmers vaccinate their ducks once and are not aware of the booster dose, which is required to keep the ducks safer.

Unavailability of vaccines at local markets leads to death of ducks that ultimately reduces duck farmers' income.

No private sector exists in Bangladesh with the vaccines of duck. Only the government supplies vaccines that are very meager. The Upazila Livestock Hospitals get the supply of the vaccines from the government. They provide some of it to the ones who go to them and sell the rest to drug stores who later sell to the farmers at a high rate (at least 60 taka per 100 ml ampoule).

Each vaccine of 100 ml ampoule can be used to 95 to 100 ducks. As MSEs have only a few numbers, they do not even think about vaccinating their ducks.

Farmers' lack of knowledge on management technique makes ducks more susceptible to disease attack and yielding less egg that reduces egg productivity and increases mortality rate of duck, which consequently reduces MSEs income.

Ducks of MSEs scavenge their food as snail, oyster, and small fish from natural water bodies and from the surroundings of homestead, where food waste like stale and rotten food are dumped. MSEs care less about the feed of duck. Thus their ducks become more vulnerable to diseases thus increasing the mortality rate.

Besides, the home of ducks should be kept as dry as possible spreading rice husk and timber powder. Farmers being unaware of this keep the ducks in an unhealthy environment. So the production of eggs decreases.

Farmers' lack of knowledge on balanced diet leads to lower egg production leading to lower egg productivity that results in lower income of the farmers.

MSEs take it for granted that their ducks will be fed on nature. They think that whatever the eggs they get are sufficient. They do not know about the balanced diet, amount of protein, mineral, salt, fiber, etc., for ducks, which would increase the productivity of ducks.

The sub-sector study found that feeding more to ducks leads to more productivity, which the MSEs are not aware of. This lack of knowledge on feeding of ducks results in lower productivity. If the ducks are fed more and the diet is more balanced containing a proper mix of nutrients, the productivity is sure to increase.

Reduction in the feed from natural sources leads to increased cost of production and decreased rate of laying eggs.

Feed for duck from natural sources are declining gradually mainly for two reasons. One is the increase in commercial duck cultivation and the other is use of pesticides, fertilizers, and chemicals in the crop fields during dry season. This reduction in natural feed is leading to reduction in egg production of ducks. Besides, the farmers' cost of feed has gone up.

Hatcheries' lack of knowledge on new technology leads to decrease hatchability rate and increased waste while hatching, which results in higher production cost and low productivity of the hatcheries.

Hatcheries use age-old rice-husk technique for hatching eggs. This results in 15% wastage of eggs while hatching. They sometimes cannot properly control temperature (which is supposed to be different at different stages of hatching) of the hatching room, though some of them claim that they are expert on measuring the exact temperature feeling only by their hands.

Average hatchability rate, at present, among the hatcheries is 60%, which would be about more than 80% in normal if they are exposed to new improved technologies.

Unfertilized breeder eggs decrease the hatchability rate of the hatchery that leads ultimately to reduced income of both the hatchery and the duck farmers.

Medium and large duck farmers supply breeder eggs to the hatcheries. But about 10% eggs do not get fertilized as they do not maintain proper ratio of the male and female ducks in their flocks. This leads to increased cost of duckling production for hatcheries, which ultimately raises the cost of duckling for the farmers. Therefore, the farmers are to be motivated to keep the proper ratio of male and female ducks in their flocks.

Lack of knowledge of the paravets (village livestock physician) about diseases diagnosis and vaccine doses results in high mortality rate of ducklings that ultimately reduces income of the duck farmers.

There are paravets in all upazilas of Netrokona who lack in knowledge. Some of them are retired staff of Upazila Livestock Hospital. They now practice at upazila level with the experiences they have had. There are some others having passed mere S.S.C. who have had a training course of 3-6 months on livestock rearing. They know very less than they should have to serve the livestock rearing farmers.

3.9.2 Opportunities

Introduction of highly productive and new varieties will increase the income of the small duck farmers.

MSEs now keep indigenous species that lay about 80-100 eggs per year. If they are introduced with new varities that are currently being cultivated by the large farmers, they will get 150-250 eggs per year depending upon the feeding to the ducks because normally high yielding varieties produce more eggs and additional feed increases their productivity.

Establishment of market linkage with high end market (Super markets in Dhaka or other cities as its natural products) will lead to market access of the duck farmers and thus increase their income.

Duck farmer now sell their eggs of duck to the paikers and arotders of their locality. They receive the price whatever they are offered. If they are linked with the high end markets as supermarket stores in large cities, they will have increased income.

Production of snails and duckweeds and preservation of duck feed for off-season will reduce the cost of production that will increase the income of the duck farmers.

Duck feed in nature becomes unavailable during the flood season. Some farmers then send their flocks to other places to keep them alive through feeding. Some farmers sell their flocks finding no other way. Some can manage the survival of their flocks. If the production of snail and duckweed can be introduced and then preserved, farmers can save their flock and continue egg production. This will definitely increase their income.

Introduction of fish-duck culture as an integrated farming to the MSEs will increase their income ensuring horizontal expansion in the sub-sector.

MSEs having ponds can be introduced to fish-duck culture that will increase their income substantially. This culture is cultivating fish in the pond over which duck nest will be set up on a 'mancha'. Duck stool will fall into water, which will be taken by fish thus reducing the cost of fish cultivation. On the other hand, ducks will have a swimming and bathing place for them. For this a common labor will do, which is also a reduction in cost of this fish-duck culture.

Table 3.10: Constraint Matrix

Category	Constrains / Opportunity	Commercially Viable Solutions (potentials)	Existing Service Providers
Constraints			
Technology and product development	Farmers' lack of knowledge on disease identification leads to high mortality rate that result in their low income.	*Improving dissemination of information on duck cultivation techniques and usage of inputs to the duck farmers through medicine and vaccine sellers* *Improving dissemination of information on duck cultivation techniques and disease management through paravets*	*Medicine and vaccine sellers, ULO, and paravets*
Technology and product development	Farmers' lack of knowledge on vaccine dosage (application and timing) leads to high mortality rate that reduces their income.	*Improving dissemination of information on duck cultivation techniques and usage of inputs to the duck farmers through medicine and vaccine sellers* *Improving dissemination of information on duck cultivation techniques and disease management through paravets*	*Medicine and vaccine sellers, ULO, and paravets*
Input	Unavailability of vaccines at local markets leads to death of ducks that ultimately reduces duck farmers' income.	*Linking paravets with the government bodies to collect vaccines and medicines regularly*	*Medicine and vaccine sellers,*
Technology and product development	Farmers' lack of knowledge on management technique makes ducks more susceptible to disease attack and yielding less egg that reduces egg productivity and increases mortality rate of duck, which consequently reduces MSEs income.	*Improving dissemination of information on duck cultivation techniques and disease management through paravets*	*Paravets*
Technology and product development	Farmers' lack of knowledge on balanced diet leads to lower egg production leading to lower egg productivity that results in lower income of the farmers.	*Improving dissemination of information on duck cultivation techniques and usage of inputs to the duck farmers through feed sellers*	*Feed sellers*
Technology and product development	Hatcheries' lack of knowledge on new technology leads to decreased hatchability rate and increased waste while hatching, which results in higher production cost and low productivity of the hatcheries.	*Building the capacity of the hatcheries to reduce wastage of hatching eggs, increase productivity and increase the quality of the ducklings.*	

Category	Constrains / Opportunity	Commercially Viable Solutions (potentials)	Existing Service Providers
Service provision	Lack of knowledge of the paravets (village physician) about diseases diagnosis and vaccine doses results in high mortality rate of ducklings that ultimately reduces income of the duck farmers.	*Facilitating to improve the knowledge level of existing paravets on duck cultivation and disease management and to create new ones*	
Input	Reduction in the feed from natural sources leads to increased cost of production and decreased rate of laying eggs	*Introduction of snail and duckweed cultivation and preservation of duck feed for off-season*	
Input	Unfertilized breeder eggs decrease the hatchability rate of the hatchery that leads ultimately to reduced income of both the hatchery and the duck farmers	*Improving dissemination of information on duck cultivation techniques through hatcheries*	
Opportunities			
Input	Introduction of highly productive and new varieties will increase the income of the small duck farmers.	*Building the capacity of the hatcheries to reduce wastage of hatching eggs, increase productivity and increase the quality of the ducklings.* *Facilitating group purchase of high yielding variety ducklings from hatcheries and medicines and vaccines from medicine seller*	
Market Access	Establishment of market linkage with high end market (Super markets in Dhaka or other cities as its natural products) will lead to market access of the duck farmers and thus increase their income.	*Facilitating group selling of eggs and ducks to ensure higher price*	
Input	Production of duckweeds and preservation of duck feed for off-season will reduce the cost of production that will increase the income of the duck farmers.	*Introduction of snail and duckweed cultivation and preservation of duck feed for off-season*	
Technology and product development	Introduction of fish-duck culture as an integrated farming to the MSEs will increase their income ensuring horizontal expansion in the sub-sector.	*Introduction of fish-duck culture as an integrated farming to the MSEs*	

3.10 Competitiveness Analysis (SWOT)

Competitive analysis shows the competitiveness of something in terms of its internal and external factors. Strengths and Weaknesses are the internal factors, whereas Opportunities and Threats are the external factors. This analysis is also called SWOT analysis.

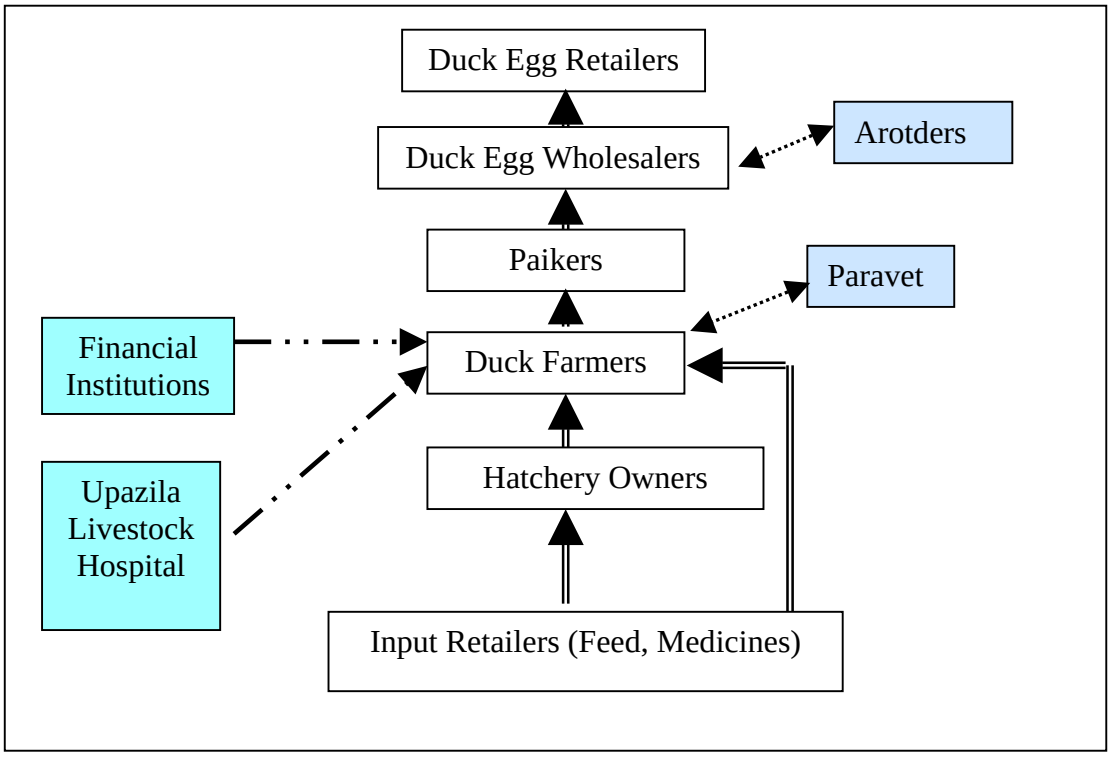
Strengths	**Weaknesses**
• Availability of water bodies • Availability of natural food for duck in haor area • Very less cost for small scale duck rearing • The MSEs are very much known to duck rearing for ages • Continuous cash inflow for the MSEs by selling eggs and ducks	• Marginal farmers lack knowledge on disease identification and vaccination • Unavailability of vaccines at local markets • Farmers' lack of knowledge on management technique • Farmers' lack of knowledge on balanced diet • Hatcheries' lack of knowledge on new technology • Lack of knowledge of the paravets about diseases diagnosis and vaccine doses
Opportunities	**Threats**
• Average egg productivity can be increased through increasing that of small and marginal duck farmers • Unmet national demand • Introduction of highly productive and new varieties • Establishment of market linkage with high end market • Production of duckweeds and preservation of duck feed for off-season • Introduction of fish-duck culture as an integrated farming • Increasing price of chicken egg due to increase in feed cost might pave the way for duck egg to substitute chicken egg	• Flood sometimes forces farmers to sell their flock of ducks • Outbreak of diseases can increase the mortality rate of ducks drastically

4.0 SERVICE MARKET ASSESSMENT

In any market system there are exchanges of goods and services. Goods are transacted for money. But services are not always transacted for money. They are often provided free of cost, which act as a powerful string to tie up the relationship among the value chain actors. Thus provision of services in a market system strengthens a sub-sector.

Services in duck sub-sector calls for attention as they are very much evident and playing vital roles in the value chain of the duck market. Different value chain actors are receiving different services from different ones. The existing services in the whole district are not equally in practice throughout the region. So here arises the need for assessing the service market – the analysis of existing services, service providers, demand and supply side and the future of these services.

Figure 4.1: Service Market Scenario



In the service market system of duck sub-sector, duck farmers, hatcheries and input sellers are in the demand side as they need information regarding their production and selling. They need information and/or service on egg hatching, duck management, duck cultivation technique, feeding, new technology, disease diagnosis, vaccination – dosage and timing, and finance. On the other hand, there are various service providers around this sub-sector. In this context, capacity of these service providers plays a pivotal role for the growth of the enterprises at different level of value chain.

The demand and supply situation for different services will be analyzed in the following segments. Dynamics of service market will be analyzed around the value chain actors of the sector, since demand for services varies from actor to actor; this variability is evident in terms of their nature, availability, optimality and so on so forth. Therefore, in the following segments of the chapter, first of all different services each value chain actors need to grow will be identified and then existing suppliers of these services will be analyzed in terms of their capacity, quality and availability to gauge the efficiency of the service market around the value chain in the sub-sector in consideration.

Commercial duck farming has come a long way in Netrokona region. Commercial duck farmers spread all over the ten upazilas though their existence is not symmetric throughout the district. On the other hand, small and marginal duck farmers locate all over the district more evenly than the medium and large ones.

4.1 Services in Duck Sector in Netrokona

4.1.1 Farmers:

Farmers are the ultimate producers of the value chain. Small and marginal duck farmers preserve duck eggs from their own flock. Seldom, they buy duck eggs from markets or neighbors for hatching. They do not bother about eggs of high yielding varieties. Medium and large producers have a strong backward linkage with hatcheries and have a forward linkage with the traders and others buyers. Some of them sell their eggs to the hatcheries for duckling production.

They seek and receive services from several sources. The sub-sector study identified the services duck farmers need and the required services are mostly in the form of information, knowledge and skills:

Appropriate proportion of duck and variety:

Farmers do not know about how many ducks are to keep in how much space, which variety is better for egg production. Field experience suggests that most of marginal and small farmers do not have that appropriate knowledge on these issues. Albeit these are very basic information, some of them get this information from other resource farmers and paravets only if they ask them. Another source of this sort of information is Upazila Livestock Hospital. However, none of these sources are efficient enough to provide much needed essential information like this.

Disease diagnosis:

Diseases to duck are common. Duck plague and cholera are the two fatal diseases to ducks. Once affected with these two contagious diseases, the ducks start to die very quickly, even within two days. Most of them do not know the symptoms of the diseases. Farmers go to Upazila Livestock Officers, Veterinary Surgeons, private livestock practitioner, and paravets for duck's disease identification and treatment. That is there are both public and private sources for this purpose.

Finance:

Marginal and small duck farmers currently do not need financial support. But the medium and large ones do. Though Netrokona is environmentally vulnerable due to water logging, it is very much suitable for duck cultivation. Nonetheless, most of the medium and large duck farmers have only a flock of ducks for their livelihood. Sometimes their flock dies of diseases. Sometimes they get compelled to sell out the whole or part of the flock as they cannot bear the expenses of feeding. There arises the question of financing support. At present they get it from some local branches of Nationalized Banks. Other money lending institutions as NGOs are reluctant to provide them with credit since the farmers will not be able to repay the early and frequent installments.

Market Access:

Marginal and small duck farmers sell their eggs in two ways. One part goes directly to the local market and sell. The other part do not go to the market, rather they sell to the egg collectors who come to their home. Medium and large duck farmers sell their eggs mostly through paikers of this kind who always keep contact with them for the regular supply of the eggs.

4.1.2 Hatcheries

Hatcheries collect eggs from medium and large duck farmers who maintain ten to one ratio of female to male duck. Although they pay those farmers a higher price for maintaining such ratio, they do not get hundred percent fertilized eggs. About 10% eggs come unfertilized.

Later while hatching, about 30% eggs get wasted. This is mainly because of the age old rice-husk method they use. The hatcheries have taken it for granted that 30% wastage is normal and quite acceptable. Some of them are interested to adopt new technology while some others are reluctant.

Hatching technique:

The sub-sector study found that some hatcheries want to learn new techniques of egg hatching so that wastage of eggs gets minimized. Besides, they want to reduce the hatching period, which is now 28-30 days. This segment of hatcheries is ready to pay for the service but there is currently nobody from whom they get this service.

Satisfaction Level of the Information Seekers

Duck farmers are no way satisfied with the service they seek and get. As most of the Upazila Livestock Hospitals are located at the upazila that are far from the villages, farmers are sometimes reluctant to visit there. Farmers want the livestock officers and veterinarians to come to their homes and look into their ducks. There are some paravets in their locality but their knowledge level and skill are not sufficient. Some farmers blame that they sometimes fail to identify and diagnose diseases of the ducks. Though most of the duck-egg producers sell to the paikers, they get a bit of lower price than they could have got if they would go to the market themselves.

4.2 Supply-Side – The Information Providers

According to the professions of the information providers, four types of service providers were identified- (a) People involved in duck farming e.g. hatchery and duck farmer (b) People selling inputs e.g. feed, vaccine and medicine (c) Government and NGOs and (d) Consultancy firm and individual consultant.

4.2.1 Upazila Livestock Hospital

There are only one veterinarian surgeon and one livestock officer at each Upazila Livestock Hospital. They claim that they cannot visit to all the duck farmers of the upazila. It is better that the farmers visit them to the hospital. They claim that they remain busy all day long with providing services to other livestock (cow, goat, poultry etc.) keepers' problems.

4.2.2 Hatcheries

Medium and large duck farmers collect ducklings from the hatcheries. The latter can be a potential for providing services to the duck farmers. If they can disseminate proper information on duck rearing to the duck farmers, they are most likely to get 100% fertilized eggs. But most of the hatcheries do not know about proper duck rearing process. They only hatch eggs for duckling. Hatcheries sell one-day-old to a-week-old duckling. Farmers themselves come to the hatcheries for collecting duckling and/or ducks for their farms. Some of the new entrants in this business ask the hatcheries about duck rearing. However, they do not get satisfactory information.

4.2.3 Input Sellers

Input sellers buy feed and medicine from different companies or distributors. These companies and distributors provide them with the promotional information that they need to sell and resell their products. Therefore, the input sellers have very limited capacity to provide much needed information on various technical aspects of duck cultivation. There are, however, exceptions and few retailers exist who actually can provide service to their clients and interestingly enough they have best business in their vicinities.

4.2.4 Resource Farmers

There are the lead farmers and playing key role of this region. They are resourceful and more adoptive to new technologies. They know duck cultivation better and dare to experiment new things on their projects. They are often very much helpful to same type of farmers but poor farmers also often come to them for vaccination, disease identification, knowing duck rearing techniques and market information. Farmers go to them when they face any difficulty and trouble regarding duck cultivation. The resource farmers sometimes vaccinate flock of ducks of the medium and large farmers in exchange for fee.

4.2.5 Paravets

Paravets are the veterinary doctors who provide medical services to the farmers regarding livestock. They charge fee for the service they provide. Mainly medium and large duck farmers seek for the services of paravets. Marginal and small ones are least bothered about the diseases and vaccination of their ducks. Paravets possess knowledge on diseases and vaccination on almost all domestic animals. This means they are jack of all trades but master of none. Some of them are retired ULH staff who have started individual consultancy on their own. They mostly depend on their experience. Some of the paravets are only a little trained by some program of GOB or NGO. Their education and knowledge level is very poor. They cannot provide the duck farmers with the sufficient information and services that they need. Being helpless, the duck farmers cannot call in anybody else but them.

4.2.6 Formal and Informal Money Lenders

Government banks have low-interest rate loan programs for the poor farmers. But the procedure of getting that loan is cumbersome. Different kinds of paper works as ownership proof of own land, irregularity, mismanagement, corruption etc. made it almost impossible for the poor duck farmers to acquire a loan. Furthermore, those loans are not for duck rearing rather is available for agricultural purpose. There are some NGOs as ASA, BRAC, Caritas, Shabolombi who are lending money to duck farmers. Besides, there are village mohajons (money lender) who lend money at a very high interest rate. Farmers sometimes,

seeing no other way, borrow from them. Surprisingly, the sub-sector study found that some local moneylenders excuse interest and even the principal amount when the poor farmers are at stake.

4.2.7 Paikers

They collect eggs from the duck farmers taking their baskets, crates and transports to the farm house. Their service reduces the pains of the farmers taking their eggs to the market. Nonetheless, the farmers accuse them of not giving fair price of the eggs.

4.3 Conclusions on the Service Market

Irrespective of size, the hatcheries, and duck farmers need various services. Field experiences suggest that there lie different problems on the demand side of services. The value chain actors in some instances fail to realize the need for service; in other instances they need the service but either they are not ready to pay for the service or they don't know the source of service. Moreover, the duck farmers expressed their dissatisfaction about the quality of the service that they are currently availing. From the demand side, this market can be characterized as the market which has a high awareness of the need for quality information on egg hatching and duck cultivation techniques.

This awareness, however, has not yet translated into need or effective demand. On the other hand, from the supply side, service providers in most cases lack the capacity of providing such technical services. Moreover, to many of the service providers the incentive of providing such service is not very clear and they fail to identify their market and demand of their services. As a result the service market of duck sub-sector is performing inefficiently at sub-optimal level.

This market is the classical weak market situation where the service users are not really ready to pay for the services and eventually the service providers do not find this market lucrative enough. Therefore, innovative steps should be taken to promote the embedded service and service provision firstly from and to the value chain actors. Once the duck farmers get the benefit of using such

services, they will eventually get habituated in paying for the transactional services. At the same time, some ground-breaking initiatives should be taken to improve the public benefit service.

In the end, the duck farmers can be linked directly with the higher markets like those of Dhaka and other districts. Besides, they can even be linked with the industry where duck egg can be and is used as a raw material.

5.0 POLICY RELATED ISSUES

5.1 Introduction

Policy is a set of interrelated decisions taken by a political actor or group of actors concerning the selection of goals and the means of achieving them within a specified situation where those decisions should, in principle, be within the power of those actors to achieve.[1] Thus, policy making is a process, and not simply a choice. Performance of businesses is affected by wide range of variables, both internal and external. The internal factors are constituted of production efficiency, backward linkage and skilled manpower and so on so forth. The external factors include social, political, legal issues. Therefore, growth of any sector or business to a large extent depends on the nature of business environment. The business environment is guided by policies. Policies not only control or guide the relationship between or among the sectors but also relationship within the sector. The policy environment has therefore both sectoral and cross-sectoral role to play. Different studies have shown that there exists a positive correlation between business growth and conducive policy environment and fisheries is no different. However, there is no specific policy on duck cultivation, input supply, vaccine production and supply, veterinary etc. National Livestock Policy in general includes policies related to duck cultivation, its input and marketing and other issues.

In the subsequent segments national livestock policy will be reviewed to identify effectiveness of these sets of policy frameworks in creating an enabling environment so that duck cultivation at a commercial level can grow at a faster rate. The discussions will also aim at identifying the weakness in policy formulation as well as executing or implementing which eventually impedes growth of the sector in the region.

[1] William Jenkins in Policy Analysis: A Political and Organizational Perspective (1978)

5.2 Livestock Policies

A National Livestock Policy was drafted in 1992, but it was not officially approved. Recently, the Ministry of Fisheries and Livestock has prepared a National Livestock Policy (NLP), 2005 as a part of a comprehensive community livestock and dairy development project. There are two distinct objectives- supply of adequate livestock and livestock products for human consumption and supply of animal power and animal wastes for crop production and product processing.

Objective of Livestock Policies

The Ministry of Fisheries and Livestock is the implementing ministry that is the authority to accomplish the objectives of livestock policies. The objectives of Livestock Policy and Action Plan, 2005 are:

- Improvement of small scale poultry and dairy farming replicating CLDDP
- Reform of DLS, enforcement of law and regulations towards animal feeds, vaccines and privatization of veterinary services
- Adoption of breeding policy, and
- Establishment of livestock insurance development fund and livestock credit food

5.3 Policy Related Constraints

Most of the problems in policy formulation and implementation arise because of the overlaps of the ministerial domains that are not clearly defined and demarcated. Thus, demarking the domain of each ministry and establishing accountability in adhering to the defined limits of domain seems a serious issue to be addressed in formulating and implementing any meaningful policy. The policy documents are generally based on notional ideas and lack any serious analysis on the need base of growers and other stakeholders of the sector.

5.3.1 Poultry (Duck) Development Constraints

The main constraints identified in the NLP are:

- **Lack of infrastructure to provide poultry services to farmers located at distant areas:** The policy paper has failed to set a clear strategy about how to reach the farmers living at distant places. Normally the government services are located at thana level, however the NLP fails to set forth the guideline to reach these services to the farmers living at remote places.

- **Lack of quality control facilities for inputs:** Maintenance of quality of all the relevant inputs like medicine, vaccines, biological products, feed and feed ingredients, chicks, eggs, birds etc are imperative to ensure higher productivity in duck sector. Quality assurance has two different aspects; one setting the quality standard for inputs especially for feeds and on the other hand installing proper and effective mechanism to ensure quality check on a regular basis. Sub study experience suggests that in Netrokona duck sector none of these two aspects are present. In the NLP there is no policy framework for fisheries, let alone standards for inputs. As a result, the whole market is stuck in low quality trap both at input and out put level.

- **Lack of organized input and output marketing system:** The duck raisers in the region seriously lack proper market linkage and poor market linkage is inhibiting them from obtaining better price on their produce. Unlike fisheries or vegetables, government has no policy guideline to improve the market linkage of these growers in duck sector through establishing collection points.

- **Poor institutional support for credit and technical advice:** As the specification about this sector is not there in the NLP, the public financial institutions do not offer any specific loan facilities to the growers in this sector. Moreover, growers in this sector are mostly household based and in most cases they are not credible for formal credits. Lack of guideline is actually accentuating the credit problems for the poor growers in this sector.

- **Lack of guideline on public private partnership:** Public institutions lack the resource and capacity to deliver range of much needed services to the value chain actors. The policy however, fail to provide any guideline to encourage participation of private sector in providing those services, therefore for the lack of effective private public partnership the huge potential of the sector cannot be realized.

6.0 A CASE STUDY

It was the year 1974 when Md. Shahed's father left him with no fortune. Shahed was only a boy of 12 when he became an orphan. His father died untreated of some disease that they did not know. He had his mother a brother and three sisters to look after as the eldest son of the family. His mother could not afford to feed them properly let alone educate them. So Shahed had to start contributing to family income. He chose his father's profession – day laborer.

To his dismay, Shahed could not continue with his profession as he fell sick due to hard labor and lost his physical strength for several years. He then had to think of some other livelihoods. His house is only a few plots away from notorious low haor area. This iniquitous swampy area became a boon when he started rearing duck.

Shahed started with only five ducks. He used to sell the eggs to the nearby market once a week. Two years later he thought of increasing the number ducks. Thus every year he kept on increasing the number. For this he used to keep one or two he-ducks in the flock so that he could get fertilized eggs. He used hens for hatching the eggs. Some of the eggs got rotten, some ducklings died of diseases, and some were taken away by mongooses, foxes and falcons. Thus his flock of ducks could never be more than fifty. Some 15 years ago he got acquainted with high yielding varieties. He sold out his indigenous flock and bought ducklings of high yielding species – Khaki Campbell.

These ducks laid more eggs than that of previous kind. Seeing the profit in two seasons he increased the number up to 100. The very next year 60 of his ducks died of some disease. He did not even know what happened to them. He could do nothing but lament and blame his luck. This thing kept on happening every year. He did not even know what to do. He starts with more than 100 ducklings but that declined to almost quarter. His entire flock

died of twice. One day he heard about Upazila Livestock Hospital (ULH) providing vaccines and other treatments. He now knows that vaccines might prevent his flock from dying at a mass rate. He went to ULH several times but did not find vaccines available. Now he does not care that much about vaccinating the ducks and consulting a veterinary doctor.

When the ducks stop laying eggs during their molting, the six-member family of Shahed falls into great trouble as they have no other income source. Then Shahed either sells some of his ducks or take loan for subsistence of the family and also for the flock of duck. He never approached to any banks or other financial institutions. He manages it from a money lender (Mohajon) of his village at 25%. Terms of repayment are promised but time of repayment and interest on the principal amount can be relaxed. As Shahed says, "Why should I go to banks or NGOs, whereas he (Mohajon) sometimes forgo my interest payment and sometimes does not mind late payment? Besides, I don't have to pay in installment."

When the sub-sector study team reached his house, they found one of his ducks lying dead on the ground along with other ducks in the pen. His duck number was then reduced to 50 out of 300. Whereas his brother's entire flock of 200 ducks died several weeks ago. The family has no other income source to live on. They now only think that what to do……

7.0 MARKET DEVELOPMENT STRATEGY

7.1 Introduction

Analysis of Netrokona duck sub-sector demonstrates that the environment is highly suitable for duck cultivation. Duck egg and meat has unmet market demand and potential to increase the productivity thus increase the income of MSEs who rear ducks.

7.2 Working Area

It has been discussed earlier in chapter 1 about the justification of selecting duck sub-sector in Netrokona. After having done an extensive sub-sector study, it is found that not all upazilas are equally potential for intervention. Based on two criteria – (1) presence of marginal farmers, and (2) growth potentiality – six upazilas are highly eligible for working in this sub-sector. They are Atpara, Barhatta, Purbadhala, Sadar, Modon and Kendua in descending order.

The sub-sector study found Modon to be the highest hatchery (60) containing upazila and Kendua to be the highest large duck farm (400) containing upazila. Kolmakanda (372), Mohangonj (357), Atpara (350) follow Kendua. Marginal duck farmers spread all over the district. Khaliajury is seemingly an upazila of islands during flood season. Therefore, much information could not be collected on this upazila. Durgapur could not be visited due to communication blockage. Besides, no secondary data could be collected on duck sub-sector from either district or national level.

Table 7.1: Area Potentiality Matrix for Duck Sub-sector in Netrokona

Upazila	Ranking in terms of Criteria		Total Score	Area Potentiality
	Presence of Marginal Farmers	Growth Potentiality		
Sadar	3	4	7	**4**
Barhatta	2	1	3	**2**
Durgapur	10	10	20	10
Purbadhala	4	3	7	**3**
Mohongonj	7	7	14	7
Atpara	1	2	3	**1**
Kendua	6	5	11	**6**
Kolmakanda	8	8	16	8
Khaliajury	9	9	18	9
Modon	5	6	11	**5**

Source: Sub-sector study

7.3 Vision

By the year 2012, The MSEs of Netrokona duck sub-sector will achieve –

- Productivity increase by 80%,
- Sales increase by at least 30%,
- Income increase by 20%, and
- Employment generation by 20%

Marginal duck farmers now keep indigenous duck species that produce an average of 100 (80-120) eggs per duck per year. After the SLIPP's intervention they are expected to keep on rearing high yielding varieties that are supposed to produce an average of 200 (180-220) eggs per duck per year. This change suggests an increase in egg productivity by 100 percent. It is assumed that the MSEs will not provide much additional feed to their ducks. So egg productivity is not likely to increase by 100 percent. Being conservative, it can be said that it will increase at least by 80 %, which is up to at least 180 eggs per duck per year.

The MSEs are expected to increase their consumption of egg and of course increase the sales. A likely increase of sales by 30% does not mean a proportional increase in income because the MSEs will incur some additional expenses while buying exotic species and providing feed to them.

There also will be other considerable positive impact like improvement of nutrition and also poverty alleviation, if the proposed interventions are rightly materialized.

Besides, mortality rate of ducks is 50% among the MSEs. The vision has chiefly included the MSEs that are currently engaged in rearing indigenous duck having very low productivity and high mortality rate.

Productivity will be increased by introducing high yielding varieties, reducing mortality rate, improving cultivation technique, reducing wastage while hatching and preservation and linking to the market. It means that market will experience faster growth rate by engineering systemic changes that would improve its productivity and add to MSEs income. Adaptability attitude of actors in primary stage to change and incorporating new knowledge will act as lubricating factor in achieving this target.

7.4 Strategies

To achieve the vision stated above, SLIPP will resort three broad strategies. There might be several interventions under each strategy. The interventions, however, are suggested by analyzing the present market situation. Since market situation

changes and market development approach is flexible in its nature, the interventions may also change in time to comply with the changes.

One of the operational strategies will be to facilitate formation of producer groups so that they can get the access to the hatcheries for joint purchase and to the market for joint selling to get higher price.

Strategy 1: Improved Cultivation Practice
To improve the duck cultivation practice of the MSEs that can reduce mortality rate, increase egg production and reduce production cost

Strategy 2: Input Availability and Usage
To make duck related inputs and services available to the MSEs and have them used properly

Strategy 3: Market Access
Mobilize the MSEs to accrue benefits through better market access

7.5 The Intervention Plan

Following intervention plans are constructed based on the strategies.

7.5.1 Strategy 1

Improving dissemination of information on duck cultivation techniques and usage of inputs to the duck farmers through medicine and vaccine sellers
Usually ducks are more resistant to diseases. However, whenever they are exposed to any disease, they start dying very fast. As farmers do not know the symptoms of duck diseases, they cannot understand what to do. Then they run to the Upazila Livestock Hospital for advice. With the advice of the Upazila Livestock Officer (ULO) they go to medicine seller to purchase medicines for the ducks. Here the medicine sellers will play a very important role if they are trained, through the medicine manufacturing companies, about the diseases and cures of duck, service to the farmers will be sustainable for long term.

The sub-sector study found no local medicine manufacturer producing any vaccines. The government allots vaccine to upazilas based on the requisition of the ULOs. However, the supply is always scarce. The ULOs and other staff of the ULH sell the vaccines to the local medicine sellers who later sell them at higher prices. Thus medicine and vaccine sellers will be providing information, on duck rearing techniques and the usage of the inputs, to the MSEs. The intervention here will capitalize the transactional relationship to strengthen the service market.

Improving dissemination of information on duck cultivation techniques and usage of inputs to the duck farmers through feed sellers

Common practice of duck cultivation is that the cultivator provides feed when the age of the ducklings is 1 to 35 days, so the feed sellers are not attached with them for the rest of the cultivation process. Nevertheless, their influence to the duck farmers is countable. Therefore, the feed sellers can even play a vital role in disseminating information to the duck farmers.

Feed sellers usually sell feeds of birds, fish etc. MSEs now rarely feed their ducks. They do not give them ready feed rather only rice. That is not sufficient anyway. They will be encouraged by other market actors to follow better cultivation technique for better productivity. Sufficient feeding increases the productivity of ducks. When the farmers will start giving their ducks some ready feed, the feed sellers will provide information on duck cultivation technique and input usage.

Improving dissemination of information on duck cultivation techniques through hatcheries

Medium and large farmers provide eggs to the hatcheries for duckling production. About 10% of those eggs are unfertilized that increases the cost of production of the hatcheries and ultimately purchasing cost of ducklings which is like a vicious cycle. Hatcheries here can play a vital role if they disseminate proper information on duck cultivation to the duck farmers. This will ultimately reduce the cost of production of both the parties.

Introduction of fish-duck culture as an integrated farming to the MSEs

The sub-sector study did not find the practice of fish –duck integrated cultivation system, which is very much attractive in terms of income generation. This process requires less cost as it has some common cost objects as pond, residual of ducks as feed for fish, labor etc. Moreover, ducks swim and create waves in the pond water that generates oxygen into the water, which is required for faster growth of fish. If the farmers are introduced with fish-duck integrated farming, their income will be increased significantly.

7.5.2 Strategy 2

Facilitating group purchase of high yielding variety ducklings from hatcheries and medicines and vaccines from medicine seller

Currently, the MSEs do not buy ducklings from hatcheries, as they already have eggs of ducks from their previous flock. They also buy eggs from neighbors and markets and use chickens to hatch. The MSEs will be facilitated to form groups so that they can have access to better hatched ducklings.

On the other hand, marginal farmers now do not use medicines and vaccines for their ducks. If groups are formed, they will be able to buy medicines and vaccines jointly that would be cost effective and in turn very much fruitful to them.

Facilitating to improve the knowledge level of existing paravets on duck cultivation and disease management and to create new ones

Existing paravets have low level of knowledge on diseases, medicine, vaccine and other related issues. Their capacity will be improved through trainings taken by the experts. Besides, the number of paravets is few in the district that will be increased by identifying, selecting, and providing trainings.

Linking paravets with the government bodies to collect vaccines and medicines regularly

Now there is a very scarce supply of vaccines of duck diseases. They are available mainly with the Upazila Livestock Officers (ULOs) and Veterinary Surgeons (VSs) of Upazila Livestock Hospitals (ULHs). Besides, some drug stores of Upazila Sadar purchase this scanty supply from them and later sell at a higher rate. There are few paravets at present, who collect these vaccines from ULH offices and provide the vaccination services to the farmers. The intervention will capitalize this relationship and strengthen it further.

Improving dissemination of information on duck cultivation techniques and disease management through paravets

Paravets vaccinate the ducks. They will be providing proper information on duck cultivation and management; diseases and cures. After they will have been trained on the pertinent issues, they will start working as additional information providing will give them larger customer base.

Introduction of duckweed cultivation and preservation of duck feed for off-season

During flood season the duck farmers suffer a lot with the acute shortage of natural feed in the environment. The farmers often sell their flocks if they fail to feed the ducks and migrate. If duck weed are produced during the dry season and then preserved, the cost of feed will be less to the farmers.

Building the capacity of the hatcheries to reduce wastage of hatching eggs, increase productivity and increase the quality of the ducklings.

The hatcheries now use rice-husk technology for hatching the duck eggs. They manually control the temperature of the hatching room. This causes wastage of around 30% eggs. If the hatcheries can be introduced with new technologies, their cost of production will be increased that will also ease marginal and large farmers to buy ducklings at lower costs. Better hatched ducklings will become high productive ducks.

7.5.3 Strategy 3

Facilitating group selling of eggs and ducks to ensure higher price

MSEs now retail their eggs and ducks to the local market at comparatively lower price than the medium and large farms. When there will be a group in a locality facilitated by SLIPP, they will be able to sell their products jointly. They will be gathering their products together and sell it to some wholesaler or arotder through one or some of their group members. This will make them able to know the ongoing market rate and other market related information.

Besides, they can jointly communicate with the high end market like super stores or departmental stores to supply both eggs and processed meat.

Table 7.2: Priority Setting of Interventions

Sl.	Interventions	Contribution in			Ranking
		Productivity	Profitability	SME Outreach	
1	Improving dissemination of information on duck cultivation techniques and usage of inputs to the duck farmers through medicine and vaccine sellers	High	Medium	Medium	5
2	Improving dissemination of information on duck cultivation techniques and usage of inputs to the duck farmers through feed sellers	Low	Medium	Low	11
3	Introduction of fish-duck culture as an integrated farming to the MSEs	Medium	High	Medium	6
4	Facilitating group purchase of high yielding variety ducklings from hatcheries and medicines and vaccines from medicine seller	High	High	High	1
5	Facilitating to improve the knowledge level of existing paravets on duck cultivation and disease management and to create new ones	High	Medium	High	2
6	Linking paravets with the government bodies to collect vaccines and medicines regularly	Low	Medium	Medium	9
7	Improving dissemination of information on duck cultivation techniques and disease management through paravets	High	Medium	Medium	4
8	Introduction of duckweed cultivation and preservation of duck feed for off-season	Medium	High	High	3
9	Building the capacity of the hatcheries to reduce wastage of hatching eggs, increase productivity and increase the quality of the ducklings.	Medium	Medium	Medium	8
10	Facilitating group selling of eggs and ducks to ensure higher price	Medium	High	Medium	7
11	Improving dissemination of information on duck cultivation techniques through hatcheries	Low	Medium	Medium	10

8.0 CONCLUSION

There is no such project in Bangladesh aiming at poverty reduction and income increase of poor farmers through duck cultivation. SLIPP will get the privilege in doing so.

The beauty of Market Development approach lies in its flexibility to accommodate the changes within the market. The study shows that Netrokona has huge potential in duck sub-sector and a number of interventions suggested in this report can act as the stimulant to turn that potential into reality. But obviously, according to the change of the market situations, new interventions may come up and at the same time, some proposed interventions might drop down.

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Annexure

Key Informant Questionnaire

nvm সাব-সেক্টর বিষয়ে অভিজ্ঞজনের জন্য প্রশ্নমালা

নাম		**প্রতিষ্ঠান**	
পদবী/পদ			
ঠিকানা		**উপাত্ত সংগ্রহকারী**	
ফোন		**তারিখ**	

১) আপনার প্রতিষ্ঠান কি কি কার্যক্রম পরিচালনা করে থাকে?
২) কারা সাধারনত আপনাদের কার্যক্রমে অংশগ্রহন করে অর্থাৎ টার্গেট গ্র□প কারা?
৩) নেত্রকোনার হাঁস চাষ সম্প্রসারন ও উন্নয়ন বিষয়ক বা হাঁস চাষীদের জীবনযাএার উন্নয়ন বিষয়ক কি কি কার্যক্রম আপনারা পরিচালনা করেন?
৪) আপনার মতে কোন কোন সমস্যা নেত্রকোনার হাঁস চাষ সম্প্রসারন ও উন্নয়নে বাধা হিসেবে কাজ করছে?
৫) এই সমস্যাগুলো কিভাবে সমাধান করা যায়? কে কিভাবে এই সমাধানে অংশ নিতে পারে?
৬) আপনি কি সামনে নতুন কোন সম্ভাবনা দেখতে পা□ছন? কোন কোন ক্ষে্এে? কিভাবে?
৭) সরকারের ও অন্যান্য প্রতিষ্ঠানের কোন কোন নীতিমালা/পলিসি হাঁস চাষ উন্নয়নে ও সম্প্রসারনে অবদান রাখছে? নেত্রকোনার ক্ষে্এে সেটা কি প্রযোজ্য হ□ছ?
৮) সরকারের ও অন্যান্য প্রতিষ্ঠানের কোন কোন নীতিমালা/পলিসি বা এর বাস্তবায়ন হাঁস চাষ উন্নয়নে ও সম্প্রসারনে কি প্রতিবন্ধকতা হিসেবে কাজ করছে? করে থাকলে সেগুলো কি কি?
৯) নেত্রকোনার হাঁস সাব-সেক্টর বিষয়ে আর কে কে ভাল তথ্য দিতে পারবে? (তার নাম, ফোন নং ও যোগাযোগের ঠিকানা)

Note: Try to collect secondary information (report, Brochure etc.)
উল্লেখ্য: যত বেশী সম্ভব রির্পোট ও তথ্য ভিত্তিক পুস্তিকা সংগ্রহ করতে হবে

Questionnaire for Assessing Supply Side of BDS

DËi`vZv		DcvË msMnKvix	
¯vb/ wVKvbv		e¨emvi aiY e¨emvi eqm	
‡Uwj‡dvb, †gvevBj, B-‡gBj		KZ Rb Kgx	¯vqx: A¯vqx: cwiewiK:

১. পণ্য উৎপাদন/ বিক্রয়ের ক্ষেত্রে সাধারণত আপনি কি কি ধরনের সেবা/ সার্ভিস/ পরামর্শ প্রদান করেন?

২. আপনার সেবা/ সার্ভিস/ পরামর্শ প্রদানের ধরন বিবরন করুন।

- কাকে
- কতজনকে (সিজনে)
- কখন (সময়কাল - সিজনে কোন সময় সাধারণত সেবা দিতে হয়)
- কোথায় (স্থান - নিজ ব্যবসাস্থলে/ নিজে গিয়ে)
- অন্যান্য

৩. আপনার মত এই এলাকায় আর কারা এবং কতজন এই ধরনের সেবা/ সার্ভিস/ পরামর্শ প্রদান করেন? (নাম, ঠিকানা, ফোন)

৪. আপনি সাধারণত কিভাবে এই ধরনের সেবা/ সার্ভিস/ পরামর্শ প্রদান করেন? (Fee/ Embedded/ Free) Fee হলে কত?

৫. সেবা প্রদান করতে যে খরচ হয় তা আপনি কিভাবে তুলে আনেন? (পণ্যের মূল্য থেকে/ প্রজেক্ট থেকে/ ঋণ কার্যক্রম থেকে/ অন্যান্য)

৬. সেবা দিতে গিয়ে আপনার/ আপনাদের সাধারণত কি কি ধরনের সমস্যা হয়? ব্যাখ্যা করুন।হ

৭. এই সব সমস্যা কিভাবে সমাধান করেন?

৮. এই সব সমস্যা সমাধানে আপনার কোন পরিকল্পনা আছে? থাকলে ব্যাখ্যা করুন।

৯. আপনার সেবার মান কি অন্যদের চেয়ে ভাল? হলে কেন/ কিভাবে? (দাম/ মান/ সেবা দেয়ার পদ্ধতি/ অন্যান্য)

১০. কাস্টোমার বাড়ানোর জন্য আপনি কি কি সুবিধা দেন? (বাকীতে বিক্রয়/ ভাল মান/ মাঠে গিয়ে ক্রেতার সমস্যা দেখে আসেন/ অন্যান্য)

১১. আপনার সেবার মান আরও বাড়াতে হলে কি করা উচিত বা কি ধরনের সহযোগিতা আশা করেন? ব্যাখ্যা করুন।

Questionnaire for Assessing Demand Side of BDS

DËi`vZv		DcvË msMnKvix	
¯vb/ wVKvbv		e¨emvi aiY e¨emvi eqm	
‡Uwj‡dvb, †gvevBj, B-‡gBj		KZ Rb Kgx	¯vqx: A¯vqx: cwiewiK:

১. আপনার ব্যবসায় পরিচালনার জন্য কার কার কাছ থেকে কোন ধরনের সেবা/ সার্ভিস/ পরামর্শ নিয়ে থাকেন? (নাম, ঠিকানা, ফোন)

২. আপনি ঐ সমস্ত ব্যক্তি/ প্রতিষ্ঠানের কাছ থেকে কি কি বিষয়ের জন্য কি কি ধরনের সেবা/ সার্ভিস/ পরামর্শ নিয়ে থাকেন?

৩. আপনি কেন সেবা/ সার্ভিস/ পরামর্শ নিয়ে থাকেন? (সহজে পাওয়া যায়/ পরামর্শ কাজে লাগে/ কম দাম/ উৎপাদন বাড়াতে / বিক্রী বাড়াতে/ অন্যান্য)

৪. এই সেবা/ সার্ভিস/ পরামর্শ কিভাবে, কখন, কোথায় নিয়ে থাকেন? (পরামর্শ গ্রহণের পদ্ধতি, স্থান ইত্যাদি)

৫. সিজনে এই সমস্ত ব্যক্তি/ প্রতিষ্ঠানের কাছ থেকে কত বার এই সেবা/ সার্ভিস/ পরামর্শ নিয়ে থাকেন?

৬. আপনার মত এই এলাকার আর কতজন এই সেবা/ সার্ভিস/ পরামর্শ নিয়ে থাকেন? **(তাদের সংখ্যা ও % হার)** তাদের সেবা/ সার্ভিস/ পরামর্শ নেবার কারণসমূহ আপনার জানা আছে কি?

৭. এই সেবা/ সার্ভিস/ পরামর্শের জন্য বিনিময়ে কিছু দিতে হয়? হলে কিভাবে? ব্যাখ্যা করুন।

৮. এই সেবা/ সার্ভিস/ পরামর্শ পেয়ে কি আপনি সন্তুষ্ট? সন্তুষ্ট হলে কেন/ সন্তুষ্ট না হলে কেন না? (মূল্য/ গুণগত মান/ সার্ভিস দেবার পদ্ধতি/ যোগাযোগ সহজ/ অন্যান্য)

৯. আপনার মতে কিভাবে এই সব সেবা/ সার্ভিস/ পরামর্শ আরও উন্নত করা যায়?

১০. যদি কোন সেবা/ সার্ভিস/ পরামর্শ কারও কাছ থেকে না নিয়ে থাকেন তবে তা কেন নেননি? ব্যাখ্যা করুন।

১১. আপনার ব্যবসায়ের উন্নয়নের জন্য যদি এই ধরনের সেবা/ সার্ভিস/ পরামর্শ জন্য টাকা দিতে হয়/ খরচ করতে হয় , তবে কি আপনি এই সেবা/ সার্ভিস/ পরামশ নিবেন? যদি হ্যা হয় তবে সেক্ষেত্রে সেবা/ সার্ভিস/ পরামশ কিভাবে, কখন, কোথায় কি মানসম্পন্ন সেবা/ সার্ভিস/ পরামশ নিতে চান?)

১২. এই সব সেবা/ সার্ভিস/ পরামর্শের মূল্য কত হলে ভাল হয় বলে আপনি মনে করেন?

- সাধারণ চাষ পদ্ধতি/ বিক্রী বিষয়ক পরামর্শ ঃ
- রোগবালাই নির্ণয় ও এর প্রতিকার ঃ
- প্রশিক্ষণ ঃ
- অন্যান্য বিষয় ঃ

Market Assessment Questionnaire 1

‡bÎ‡Kvbv AÂ†ji nvm Pvl

mve‡m±i we‡kmY gj¨vqY wb‡`wkKv - 1

ZwiL: e¨emvi aiY: nvm Pvlx, n¨vPvix

DËi`vZv		DcvË msMnKvix	
¯vb /wVKvbv		e¨emvi eqm	
‡Uwj‡dvb, †gvevBj, B-‡gBj		KZ Rb Kgx	¯vqx: A¯vqx: cwiewiK:

e¨emv cwiPvjbvi eYbv

eQi	nv‡mi/ ev"Pvi msL¨v	cKi/ Ni/ e · Gi msL¨v	eQ‡i KZ evi Pvl K‡ib	‡gvU LiP	‡gvU weKqgj¨	Avq
2007						
2006						
2005						
2004						

GQvov AeKvVv‡gvMZ Ab¨vb¨ Z_¨ -

nv‡mi Ni wbgvb/ wWg †_‡K ev"Pv †dvUv‡bvi Rb¨ wewfb chw³/hšcwZ I AeKvVv‡gvMZ Ab¨vb¨ Z_¨

Av‡M wK wK Rv‡Zi nvm/ nv‡mi ev"Pv Drcv`b I wewµ Ki†Zb (kZKiv nvi) :

(hZ †ekx Z_¨ †hvMvo Kiv hv‡e ZZ fv‡jv)

GLb wK wK Rv‡Zi nvm/ nv‡mi ev"Pv Drcv`b I wewµ K†ib (kZKiv nvi)| GB cwieZ‡bi Kvib wK?

(hZ †ekx Z_¨ †hvMvo Kiv hv‡e ZZ fv‡jv)

GB e¨emvq Avmvi Ges Pwj‡q hvevi KviY

GKK bv †hš_ Aswk`wi‡Zi e¨emv (e¨vLv Ki"b)

ebbv	mgm¨v /m¤vebv	mgm¨v /m¤vebv msMkô mwfm
(‡ePv †Kbv msµvš Z_¨vejx)		
1. Kvi Kv‡Q Avcwb Avcbvi cY¨ (nvm/ nv‡mi ev”Pv / wWg) weµq K‡ib ? `B Rb †µZv m¤ú‡K we¯wiZ ejb| (†Kv_vKvi)		
2. bM‡` bv evKx‡Z wewµ K‡ib ? cb¨ wKfv‡e cwienb K‡ib ? cwienb LiP †K enb K‡i ?		
3. evRv‡i wK Avcbvi c†Y¨i (nvm/ nv‡mi ev”Pv / wWg) h‡_ó Pwn`v Av‡Q ? (e¨vLv Ki“b)		
4. MZ wZb eQ‡i Avcbvi c‡Y¨i Pwn`v †Kgb wQj, †e‡o‡Q bv K‡g‡Q? (cRwZ mn) - evov Kgvi Kvib e¨vLv Ki“b|		
5. Pwn`v chvß n‡j I †Kb †µZv tekx tekx cwigv‡b wKb‡Q bv ev tekx `v‡g wKb‡Q bv ? tekx `v‡gi Avkvq †Kvb bZb cRwZi nv†mi Drcv`b/ e¨emv ïi“ K‡i‡Qb wK ? (ebYv Ki“b)		
6. MZ wZb eQ‡i Avcbvi c‡b¨i `vg wK iKg †e‡o‡Q ev K‡g‡Q? ‡Kb †e‡o‡Q ev K‡g‡Q ?(wZb eQ‡i gj¨ msMn Ki‡Z n‡e)		
7. †Kbv/tePvq c†Y¨i `vg Avcwb wKfv‡e wbavib K‡ib?		
8. c†Y¨i wewµ evov‡bvi Rb¨ wK wK cšv Aej¤b K‡ib ? Ab¨iv G e¨vcv‡i wK cšv Aej¤b K‡i? ‡Kvb ai‡bi cRwZi nvm/†ib/†cvbvi Pwn`v me‡P‡q tekx ? †Kb ?		
Kvi KvQ †_‡K wK‡bb Ges Kvi Kv‡Q weµq K‡ib - wP‡Gi gva¨‡g cwZ av‡c gj¨ ms‡hvRb (UvKvq) E‡jL Ki“b cwZevi Pv‡li Rb¨		
chw³ / cY¨ Dbqb		

1. Ercv`b/weµ‡qi †¶‡Î Avcwb wK wK ai‡bi c×wZ, chw³ I hšcwZ e¨envi K‡ib? †Kb K‡ib? GB me c×wZ, chw³ I hšcwZ e¨envi †Kv_v †_‡K wk‡L‡Qb? (wWg †dvUv‡bvi c×wZ, nv‡mi ev"Pv cvjb, e"wWs, evQvBKiY, wWg msi¶Y, Ni ^Zix, N‡ii e¨e¯vcbv, wjUvi, e"Wvi MvW, Zvcgv‡Îv wbqšY, Av`Zv I evq PjvPj, cwb I Lv`¨ mieivn, ev"Pvi Rb¨ †g‡Si RvqMvi cwigvb, cwb‡Z ev"Pv Qvovi mgq, e¨e¯vcbv, †ivMevjvB, wUKv c`vb I Gi cwZ‡iva e¨e¯vcbv)		
2. bZb †Kvb chw³/c×wZ m¤ú‡K Avcbvi wK †Kvb avibv Av‡Q hv Avcbvi Ercv`b/weµq ew×‡Z mvnvh¨ Ki‡Z cv‡i ? (†m¸‡jv m¤ú‡K ebbv w`b)		
3. eZgv‡b Pvl c×wZ ev bZb †Kvb cRwZi †¶‡Î Avcwb wK we‡kl †Kvb c×wZ/chw³/hšcwZ/†KŠkj e¨envi K‡i‡Qb? K†i _vK‡j, Zvi e¨envi ‡KŠkj m¤ú†K Avcwb Kvi/†Kv_v †_‡K †R‡b‡Qb?		
4. e¨emv evov‡bvi Rb¨ Avil wK wK chw³, †KŠkj, c×wZ I DcKiY `iKvi Av‡Q e‡j g‡b K‡ib? G¸wj †Kv_v †_‡K cvIqv †h‡Z cv‡i e‡j Avcwb g‡b K‡ib		
5. †µZvi Pwn`v Abhvqx Avcwb wKfv‡e nvm/ nv‡mi ev"Pv / wW‡gi ¸bMZ gvb i¶v K‡ib ? Avi G ¸bMZ gvb Avcwb wKfv‡e wbwðZ K‡ib?		
DcKib msµvš Z_¨vejx		
wewfb DcKi‡bi bvg	e¨eüZ cwigvb	LiP
Lv`¨ DcKib		
ev"Pv		
wUKv c`vb		
Jla		
Ni/ evm¯vb ^Zix		
wWg †dvUv‡bvi Rb¨ c‡qvRbxq DcKib		
Ab¨vb¨ (wbw`ó Ki"b)		

1. wK wK EcKib e¨envi K‡ib ? (Lv`¨ DcKib, nv‡mi ev"Pv, wWg †dvUv‡bvi Rb¨ c‡qvRbxq DcKib, evm¯vb ^Zix i DcKib, Rxevbbvkk, wUKv c`vb, Jla, wfUwgb) G¸wj mwVK/cwigvbMZ e¨envi m¤ú‡K Avcwb Kvi KvQ †_‡K Z_¨ ev civgk ‡bb ? †Kb ?		
2. Kvi KvQ †_‡K GB EcKib¸wj mvavibZ wK‡b _v‡Kb (bM`/evKx)? EcKib we‡µZviv wK Avcbv‡`i †K Avawbk ev bZb Pvl c×wZ ev bZb DcKi‡bi h_v_ e¨envi m¤ú‡K Z_¨ w`‡q mvnvh¨ K‡ib ? (†Kvb †Kvb †¶‡Î, e¨vLv Ki"b)		
3. EcKib †Kbvi mgq wK wK mgm¨vq co‡Z nq ? EcKi†bi ¸bMZ gvb, `vg, mghgZ cvlhv GBme wel†q wK Avcwb mšó?		
4. Avcbvi wK bZb †Kvb we‡kl EcKib m¤ú‡K Rvbv Av‡Q? †mUv wK Kv‡R jvM‡Z cv‡i? (e¨vL¨v K‡ib)		
5. GKv bv wK‡b KLbl wK th‡_fv‡e ‡Kvb wKQ wK‡b‡Qb? (n¨v/bv - e¨vLv Ki"b)		
e¨e¯vcbv l cwZôvb msµvš Z_¨vejx		
1. Avcwb GKvB wK e¨emv †`Lv‡kvbv K‡ib? Ab¨ Avi †K †K e¨emvq mn‡hwMZv K‡i _v‡K (EcKib †Kbv, Lvevi ^Zix, Lvevi ‡`qv, ZËveavb, wnmve ivLv, evRviRvZKib, e¨emv cwiKíbv)? e¨vL¨v Ki"b| (†Kvb mgm¨v?)		
2. Avcbvi e¨emvi †Kvb †Kvb cwµqvi mv‡_ gwnjvi h³ (ev"Pv †Kbv, Lvevi ‰Zix, Lvevi ‡`qv, ZËveavb, Ab¨vb¨)? DËi bv n†j †Kb bv?		
3. cY¨ Ercv`b/weµq cwµqvq Avcwb Qvov wK evB‡ii Ab¨ †Kl h³ Av‡Q †h Avcbvi e¨emvi mv‡_ mivmwi m¤ú³ bv? hw` _v‡K, Zvn‡j †Kb Avcwb A‡b¨i mnvqZv wb‡"Qb? - e¨vL¨v Ki"b|		
4. e¨emv evov‡bvi Rb¨ e¨e¯vcbv welqK wK wK fvj Ávb _vKv DwPZ e‡j Avcwb g‡b K‡ib ? Avcbvi Ávb evov‡bvi c‡qvRb Av‡Q wK? (_vK‡j †mUv †Kvb †Kvb †¶‡Î)		
A_vqb msµvš Z_¨vejx		
1. Avcwb wK wb‡Ri UvKvq e¨emv K‡ib ? e¨emv cwiPvjbvq cwR ev bM` UvKvi wK †Kvb mgm¨v Av‡Q?		

2. cwRi mgm¨v n‡j †Kv_vq Kvi Kv‡Q cwRi Rb¨ wM‡q‡Qb ? (e¨vsK, GbwRI, eÜ, gnvRb, Ab¨vb¨) wKfv‡e avi wb‡q‡Qb ev †Kb avi cvb bvB ? wKiKg mgm¨vi m¤§Lxb n‡q‡Qb ? - e¨vL¨v Ki“b		
bxwZgvjv msµvš Z_¨vejx		
1. e¨emv cwiPvjbvq miKvix bxwZgvjv m¤ú‡K Avcbvi wK †Kvb avibv Av‡Q? miKvix †Kvb bxwZ wK Avcbvi e¨emv cwiPvjbvq mnvqK n‡”Q ? †Kvb bxwZ wK cwZeÜKZv mwó Ki‡Q?		
2. e¨emv cwiPvjbvq I m¤cmvi‡b †Kvb †Kvb wbqgKvbb mnvqK fwgKv ivL‡Z cv‡i e‡j Avcwb g‡b K‡ib?		
e¨emvi cwi‡ek msµvš Z_¨vejx		
১) অবকাঠামোগত সমস্যা ব্যবসার বৃদ্ধিতে কিভাবে বাধাঁগ্রস্থ করছে? **(বিদ্যুৎ,পানি,টেলিযোগাযোগ,গুদাম,বাজার ,অন্যান্য)**		
2. GB mgm¨v¸wj wKfv‡e mgvavb Kiv †h‡Z cv‡i e‡j Avcwb g‡b K‡ib?		
e¨emvwqK mwgwZ msµvš Z_¨vejx		
1. Avcwb wK †Kvb mwgwZi mv‡_ h³? (mwgwZi bvg I wVKvbv)		
2. mwgwZ wK wK KvR K‡i _v‡K? mwgwZi m`m¨ nIhvq wK jvf n‡”Q? mwgwZ Avcbv‡`i e¨emv evov‡bvi Rb¨ wK wK Ki‡Z cv‡i?		
mvgvwRK I e¨emvwqK bxwZgvjv / `wqZ‡eva msµvš Z_¨vejx		
(cwiev‡ii AskMnb ,gwnjv I wkï kwgK wb‡qvM,cwikwgK)		
cwi‡e‡ki Eci ivIvqwbK EcKi‡bi cfve : ivIvqwbK EcKib e¨env‡ii d‡j wK †Kvb mgm¨v t`Lv w`‡”Q ?		
mwVK fv‡e bxwZgvjv †g‡b e¨emv Kivi †¶‡Î mgm¨v wK wK ?		

Avcbvi g‡Z Avcbvi e¨emvi cavb wZbwU mgm¨v/m¤vebv
Avcbvi g‡Z GB mve‡m±‡ii cavb wZbwU mgm¨v/m¤vebv

Market Assessment Questionnaire 2

‡bÎ‡Kvbv AÂ†ji nvm Pvl

mve‡m±i we‡kmY gj¨vqY wb‡`wkKv - 2

ZwiL:

e¨emvi aiY: DcKiY we‡µZv, nv‡mi ev"Pv we‡µZv / mieivnKvix, nvm †ecvix, (eo, ‡QvU, gvSvix)
AvoZ`vi, LPiv nvm we‡µZv, LPiv wWg we‡µZv, cvBKvix wWg we‡µZv

DËi`vZv		DcvË msMnKvix	
¯vb /wVKvbv		e¨emvi eqm	
‡Uwj‡dvb, †gvevBj, B-‡gBj		KZ Rb Kgx	¯vqx: A¯vqx: cwiewiK:

e¨emv cwiPvjbvi eYbv

eQi	wewb‡qvM	†gvU weKqgj¨	LiP	Avq	eQ‡i KZ evi
2007					
2006					
2005					

Av‡M wK wK Rv‡Zi/ ai‡Yi nvm/ nv‡mi ev"Pv / wWg ev DcKiY weµx Ki‡Zb (kZKiv nvi) :
(hZ †ekx Z_¨ †hvMvo Kiv hv‡e ZZ fv‡jv)

GLb wK wK Rv‡Zi/ ai‡Yi nvm/ nv‡mi ev"Pv / wWg ev DcKiY weµx K‡ib (kZKiv nvi) :

GB e¨emvq Avmvi Ges Pwj‡q hvevi KviY :

ebbv	mgm¨v /m¤vebv	mgm¨v /m¤vebv mswkó mwfm
(‡ePv †Kbv msµvš Z_¨vejx)		
1.Avcbvi c‡Y¨i gj †µZv Kviv ? (†µZvi aib , †µZvi Ae¯vb ,BZ¨w` ) †Kb Zviv Avcbvi KvQ †\_‡K cY¨ (nvm/ nv‡mi ev”Pv / wWg/ DcKib) µq K‡i ? Avcbvi †gvU e¨emvi KZ Ask nvm msµvš? (DcKiY we‡µZvi Rb¨)  (†mevi aib †hgb ,av‡i wewµ,wewµi mv‡\_ Z\_¨ c`vb, weµ‡qvËi †mev ,BZ¨w`)		
2.Avcbvi wK †Kvb gwnjv †µZv Av‡Q ? hw` \_v‡K, Zvn‡j Zv‡`i bvg, †ckv (nvm Pvlx/ nv‡mi ev”Pv Drcv`bKvix/ mieivnKvix) Ges wVKvbv ejb |		
3.‡ePv †Kbvi †¶‡Î bM‡` bv evKx‡Z wewµ K‡ib ? e¨vL¨v Ki"b| evKx‡Z wewµ Ki‡j wK mvavib g‡j¨i †P‡q †ekx `v‡g wewµ K‡ib? (‡Kb ? e¨L¨v Ki"b)		
4.cb¨ wKfv‡e cwienb K‡ib ? ‡ePv †Kbvi †¶‡Î cwienb LiP †K enb K‡i ?		
5.c†Y¨i µqgj¨/ weµqgj¨ Avcwb wKfv‡e wbavib K‡ib? e¨vL¨v Ki"b		
6.MZ wZb eQ‡i Avcbvi c‡b¨i `vg wK iKg †e‡o‡Q ev K‡g‡Q? ‡Kb †e‡o‡Q ev K‡g‡Q ?(Kgc‡¶ wZbwU cavb c‡b¨i wZb eQ‡ii gj¨ msMn Ki‡Z n‡e) e¨vL¨v Ki"b		
7.evRv‡i wK Avcbvi c†Y¨i (nvm/ nv‡mi ev”Pv / wWg/ DcKib) h‡_ó Pvwn`v Av‡Q ? (e¨vLv Ki"b)		
8.Avcwb wK bZb †Kvb we‡kl cb¨ ‡ePv-‡Kbv K‡i‡Qb / †mev w`‡"Qb ? e¨vL¨v K‡ib | ‡Kv_v †_‡K GB cb¨/ †mev m¤ú‡K avibv †c‡q‡Qb ?		
5.Pvwn`v chvß n‡j I †Kb †µZv †ekx †ekx cwigv‡b wKb‡Q bv ev †ekx `v‡g wKb‡Q bv ? Avcwb †Kb Avcbvi e¨emv m¤cmvib K‡i‡Qb bv ? (e¨vL¨v Ki"b)		
10.MZ wZb eQ‡i Avcbvi c‡Y¨i Pvwn`v †Kgb wQj,†e‡o‡Q bv K‡g‡Q? (wZb eQ‡ii Z_¨ msMn Ki"b, e¨vL¨vmn)		
11.c†Y¨i wewµ evov‡bvi Rb¨ wK wK cšv Aej¤b K‡ib ? †Kb K‡ib?/ †Kb K‡ib bv? (e¨vL¨v Ki"b)		

µq I DcKiY mieivn msµvš Z_¨ejx		
1.Avcwb †Kv_v †_‡K wK wK ai‡bi DcKiY ev cY¨ msMn/ µq K‡ib ? †Kb ILvb †_‡K msMn K‡ib? DcKiY ev cY¨ msM†ni ‡¶‡Î †Kvb ¸i“ZcY cwieZb G‡m‡Q ? (gvb, `vg, mieivn, BZ¨vw`)		
2. †Kbvi †¶‡Î bM‡` bv evKx‡Z †K‡bb ? (e¨vL¨v Ki“b)		
3.‡Kbvi mgq wK wK mgm¨vq co‡Z nq ? c†b¨i ¸bMZ gvb,`vg ,mghgZ cvIhv GBme wel†q wK Avcwb mšó (e¨vL¨v Ki“b)		
4. Avcwb wKfv‡e Avcbvi c‡Y¨i (nvm/ nv‡mi ev”Pv / wWg/ DcKib) ¸bMZ gvb i¶v K‡ib ? (e¨vL¨v Ki“b)		
5.GKv bv wK‡b , KLbI wK †hŠ_fv‡e ‡Kvb wKQ wK‡b‡Qb? (n¨v /bv - e¨vLv Kiƒb) Avcbvi KvQ †_‡K †µZviv KLbI wK GKv bv wK‡b †hŠ_fv‡e/ GKmv‡_ cY¨ µq K‡i‡Q? (e¨vL¨v Ki“b)		
Kvi KvQ †_‡K wK‡bb Ges Kvi Kv‡Q weµq K‡ib cwZ av‡c gj¨ ms‡hvRb E‡jL Ki“b cwZevi Pv‡li Rb¨		

(e¨emv I cY¨ Dbqb msµvš Z_¨vejx)		
1.Avcwb wKfv‡e AvaywbK DcKiY/ cRwZ/ c×wZ m¤‡Ü Rv‡bb ?		
2.bZb †Kvb AvaywbK DcKib ,cRwZ I c×wZ m¤‡Ü Avcbvi wK †Kvb avibv Av‡Q hv Avcwb e¨envi Ki‡Z Pvb Ges Zv Avcbvi e¨emv ew×‡Z mvnvh¨ Ki‡Z cv‡i ?		

3.eZgv‡b Pvl /weµq c×wZ ev bZb †Kvb DcKi†bi/ cRwZi †¶‡Î Avcwb wK we‡kl †Kvb c×wZ/ chw³/ hšcwZ/ †KŠkj e¨envi K‡i‡Qb? K†i _vK‡j,Zvi e¨envi †KŠkj m¤ú‡K Avcwb Kvi KvQ †_‡K †R‡b‡Qb? (e¨vL¨v Ki“b)		
4. bZb cb¨ wewµi ‡¶‡Î †Kv¤úvwb Avcbv‡K wKfv‡e mn‡hwMZv K‡i ? (e¨vL¨v Ki“b)		
5. e¨emv evov‡bvi Rb¨ wK wK bZb cY¨ ,chw³,†KŠkj /c×wZ I DcKiY `iKvi Av‡Q e‡j g‡b K‡ib? (e¨vL¨v Ki“b)		
(bxwZgvjv msµvš Z_¨vejx)		
1. e¨emv cwiPvjbvq miKvix bxwZgvjv m¤ú‡K Avcbvi wK †Kvb avibv Av‡Q? (eYbv Ki“b)		
2. e¨emv cwiPvjbvq I m¤cmvi‡b †Kvb †Kvb wbqgKvbb mnvqK fwgKv ivL‡Z cv‡i e‡j Avcwb g‡b K‡ib?		
3. miKvix †Kvb bxwZ ev wbqgKvbb wK Avcbvi e¨emv cwiPvjbvq mnvqK n‡”Q/ cwZeÜKZv mwó Ki‡Q? e¨vL¨v Ki“b		
(e¨emvi cwi‡ek msµvš Z_¨vejx)		
1.AeKvVv‡gvMZ mgm¨v e¨emvi ew×‡Z wKfv‡e evavM¯ Ki‡Q ? (we`¨r/ cwb/ †Uwj‡hvMv‡hvM/ ¸`vg/ evRvi/ Ab¨vb¨)		
2.GB mgm¨v¸wj wKfv‡e mgvavb Kiv †h‡Z cv‡i e‡j Avcwb g‡b K‡ib ?		
e¨emvi mwgwZ msµvš Z_¨vejx		
1.Avcwb wK †Kvb mwgwZi mv‡_ h³? (mwgwZi bvg I wVKvbv)		
2. mwgwZ wK wK KvR K‡i _v‡K ? mwgwZi m`m¨ nIhvq wK jvf/ ¶wZ n‡”Q ? mwgwZ Avcbv‡`i e¨emv evov‡bvi Rb¨ wK wK Ki‡Z cv‡i ?		
mvgvwRK I e¨emvwqK bxwZgvjv / `wqZ‡eva msµvš Z_¨vejx		
(cwiev‡ii AskMnb , gwnjv I wkï kwgK wb‡qvM, cwikwgK)		
cwi‡e‡ki Eci ivIvqwbK EcKi‡bi cfve : ivIvqwbK EcKib e¨env‡ii d‡j wK †Kvb mgm¨v t`Lv w`‡”Q ?		
mwVK fv‡e bxwZgvjv †g‡b e¨emv Kivi †¶‡Î mgm¨v wK wK ?		

3 Major constraints/opportunities of this business: Avcbvi g‡Z GB e¨emvi cavb wZbwU mgm¨v /m¤vebv
3 Main constraints/opportunities of the sub-sector: Avcbvi g‡Z GB mve‡m±‡ii cavb wZbwU mgm¨v / m¤vebv