

Baseline Study Report
on
‘Market System Development of Safe Poultry and Poultry Products’



Submitted to
Society Development Committee (SDC)
Goailchamot, Faridpur

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ACRONYM

FGD	:	Focus Group Discussion
IDI	:	In Depth Interview
KII	:	Key Informant Interview
RMTP	:	Rural Micro Enterprise Transformation Project
PKSF	:	Palli Karma- Sahayak Foundation
PO	:	Partner Organization
IFAD	:	International Fund for Agricultural development
DANIDA	:	Danish International Development Agency
ME	:	Micro- Enterprise
SDC	:	Society Development Committee
DAE	:	Department of Agricultural Extension
DLS	:	Department of Livestock Services
LSP	:	Local Service Provider
ULO	:	Upazila Livestock Officer
VS	:	Veterinary Surgeon
AD -AI	:	Assistant Director, Artificial Insemination
PDO	:	Poultry Development Officer
HHs	:	Household Survey
DOC	:	Day Old Chick
FCR	:	Feed Conversion Ratio
TOR	:	Terms of Reference

Glossary

Some of the most commonly used indicators in the log frame are:

Terms	Definitions Used
<i>Activity:</i>	Actions taken or work performed in a project to produce specific outputs by using inputs, such as funds, technical assistance and other types of resources.
<i>Assumption:</i>	External factors (i.e. events, conditions or decisions) that could affect the progress or success of a project or program. They are necessary to achieve the project objectives, but are largely or completely beyond the control of the project management.
<i>Baseline information:</i>	Information – usually consisting of facts and figures collected at the initial stages of a project – that provides a basis for measuring progress in achieving project objectives and outputs.
<i>Baselines survey:</i>	An analysis describing the situation in a project area – including data on individual primary stake-holders – prior to a development intervention. Progress (results and accomplishments) can be assessed and comparisons made against it. It also serves as an important reference for the completion evaluation.
<i>Benchmark:</i>	Reference point or standard against which performance or achievements can be compared. A benchmark might refer to what has been achieved in the past, by other comparable organizations, or what could reasonably have been achieved under the circumstances.
<i>Beneficiaries:</i>	The individuals, groups or organizations who, in their own view and whether targeted or not, benefit directly or indirectly from the development intervention.
<i>Capacity-building:</i>	The processes through which capacity is created. This is an increasingly key crosscutting issue in poverty alleviation projects.
<i>Community:</i>	A group of people living in the same locality and sharing some common characteristics.
<i>Completion evaluation:</i>	An external evaluation that occurs after project completion.
<i>Completion:</i>	The final phase in the project cycle, when a project completion report is produced. “Lessons learned” are identified and the various project completion activities take place. It can include an end-of-project evaluation.
<i>Consultant:</i>	Consultant" means a Person under contract with a Procuring Entity for providing intellectual and professional se
<i>Cost effectiveness:</i>	Comparison of the relative costs of achieving a given result or output by different means (employed where benefits are difficult to determine).

- Cost-benefit analysis:*** The comparison of investment and operating costs with the direct benefit or impact generated by the investment in a given intervention. It uses a variety of methods and means of expressing results.
- Effect:*** Intended or unintended change resulting directly or indirectly from a development intervention.
- Effectiveness:*** A measure of the extent to which a project attains its objectives at the goal or purpose level; i.e. the extent to which a development intervention has attained, or is expected to attain, its relevant objectives efficiently and in a sustainable way.
- Efficiency:*** A measure of how economically inputs (funds, expertise, time, etc.) are converted into outputs.
- Evaluation:*** A systematic (and as objective as possible) examination of a planned, ongoing or completed project. It aims to answer specific management questions and to judge the overall value of an endeavor and supply lessons learned to improve future actions, planning and decision-making. Evaluations commonly seek to determine the efficiency, effectiveness, impact, sustainability and the relevance of the project objectives.
- External evaluation:*** Evaluation of a project carried out by IFAD's Office of Evaluation and Studies and implementing partners.
- Feedback:*** The transmission of evaluation findings to parties for whom it is relevant and useful so as to facilitate learning. This may involve the collection and dissemination of findings, conclusions, recommendations and lessons learned from experience. Specifically in the context of evaluation, to return and share the evaluation results with those who participated in the evaluation
- Goal:*** The higher-order program or sector objective to which a development intervention, such as a project, is intended to contribute. Thus it is a statement of intent.
- Impact:*** The changes in the lives of rural people, as perceived by them and their partners at the time of evaluation, plus sustainability-enhancing change in their environment to which the project has contributed. Changes can be positive or negative, intended or unintended. In the log frame terminology these “perceived changes in the lives of the people” may correspond either to the purpose level or to the goal level of a project intervention.
- Independent evaluation:*** An evaluation carried out by entities and persons free of control by those responsible for the design and implementation of the development intervention.
- Indicator:*** Quantitative or qualitative factor or variable that provides a simple and reliable basis for assessing achievement, change or performance. A unit of information measured over time that can help show changes in a specific condition. A given goal or objective can have multiple indicators.

- Inputs:** The financial, human and material resources necessary to produce the intended outputs of a project.
- Interim evaluation:** A project evaluation undertaken by IFAD's Office of Evaluation and Studies toward the end of the project implementation period (about one year before the loan closing date) when IFAD is considering a request to finance a second phase or a new project in the same area. An interim evaluation is a key opportunity for IFAD, the government, implementing partners and primary stakeholders to learn together from experience before embarking on the design of a follow-up project.
- Joint evaluation:** An evaluation to which different institutions and/or partners contribute.
- Lessons learned:** Knowledge generated by reflecting on experience that has the potential to improve future actions. A lesson learned summarizes knowledge at a point in time, while learning is an ongoing process.
- Logical framework approach:** An analytical, presentational and management tool that involves problem analysis, stakeholder (LFA) analysis, developing a hierarchy of objectives and selecting a preferred implementation strategy. It helps to identify strategic elements (inputs, outputs, purpose, goal) and their causal relationships, as well as the external assumptions (risks) that may influence success and failure. It thus facilitates planning, execution and evaluation of a project.
- Logical framework matrix:** Also known as “log frame” or “log frame matrix”. A table, usually consisting of four rows and four columns, that summarizes what the project intends to do and how (necessary inputs, outputs, purpose, objectives), what the key assumptions are, and how outputs and outcomes will be monitored and evaluated.
- M&E (learning) plan:** An overall framework of performance and learning questions, information gathering requirements (including indicators), reflection and review events with stakeholders, and resources and activities required to implement a functional M&E system.
- M&E (learning) system:** The set of planning, information gathering and synthesis, and reflection and reporting processes, along with the necessary supporting conditions and capacities required for the M&E outputs to make a valuable contribution to project decision-making and learning.
- M&E framework:** An overview of the M&E system developed during the design phase of a project and included in the project appraisal report.
- M&E matrix:** A table describing the performance questions, information gathering requirements (including indicators), reflection and review events with stakeholders, and resources and activities required to implement a functional M&E system. This matrix lists how data will be collected, when, by whom and where.
- M&E unit:** The generic title used for units at both the project and sectorial levels responsible for M&E.
- Means of verification:** The expected source(s) of information that can help answer the performance question or indicators. This is found in the third column of the standard log frame. It is detailed further in the M&E matrix.

Mid-term evaluation: An external evaluation performed towards the middle of the period of implementation of the project, whose principal goal is to draw conclusions for reorienting the project strategy.

Mid-term review (MTR): An elaborate version of a supervision mission, with the same actors, that sometimes questions the design of the project. There is no standardized format and so can range from a supervision mission to a full-scale mid-term evaluation-like exercise.

Monitoring and evaluation: The combination of monitoring and evaluation which together provide the knowledge required for: (M&E) a) effective project management and b) reporting and accountability responsibilities.

Monitoring: The regular collection and analysis of information to assist timely decision-making, ensure accountability and provide the basis for evaluation and learning. It is a continuing function that uses methodical collection of data to provide management and the main stakeholders of an ongoing project or program with early indications of progress and achievement of objectives.

Narrative summary: The first column of the log frame matrix in which the inputs, outputs, purpose and goal are formulated. See “Objective Hierarchy”.

Objective hierarchy: The different levels of objectives, from activities up to goal, as specified in the first column of the log frame. If the project is designed well, realization of each level of objectives in the hierarchy should lead to fulfilment of the project goal.

Objective: A specific statement detailing the desired accomplishments or outcomes of a project at different levels (short to long term). A good objective meets the criteria of being impact oriented, measurable, time limited, specific and practical. Objectives can be arranged in a hierarchy of two or more levels (see “Objective hierarchy”).

Objectively verifiable indicators: A group of criteria (not necessarily measurable) used to verify the degree of accomplishment (foreseen or actual) of the sectorial purpose, the objective, and the inputs and outputs of a project. They can be quantitative, and therefore both verifiable and measurable, or qualitative, and therefore only verifiable.

Outcome: The results achieved at the level of “purpose” in the objective hierarchy. In IFAD's terminology, outcome is part of impact (result at purpose and goal level).

Output indicators: Indicator at the output level of the objective hierarchy, usually the quantity and quality of outputs and the timing of their delivery.

Outputs: The tangible (easily measurable, practical), immediate and intended results to be produced through sound management of the agreed inputs. Examples of outputs include goods, services or infrastructure produced by a project and meant to help realize its purpose. These may also include changes, resulting from the intervention, that are needed to achieve the outcomes at the purpose level.

Participatory evaluation: A broad term for the involvement of primary and other stakeholders in evaluation. The primary focus may be the information needs of stakeholders rather than the donor.

Participatory impact monitoring: A continual immediate assessment of the impact, used to control and steer purposes. It is characterized by the way actors at various levels attempt to collaborate in order to reflect on the impacts.

Performance: The degree to which a development intervention or a development partner operates according to specific criteria/standards/guidelines or achieves results in accordance with stated goals or plans.

Primary stakeholders: The main intended beneficiaries of a project.

Process evaluation: An evaluation aimed at describing and understanding the internal dynamics and relationships of a project, program or institution.

Process monitoring: The activities of consciously selecting processes, selectively and systematically observing them to compare them with others, and communicating about what has been observed to learn how to steer and shape the processes.

Project completion report: The report that describes the situation at the end of a development intervention, including lessons learned. The project completion report (PCR) is the responsibility of the borrower (i.e. the government).

Project evaluation: Evaluation of an individually planned development intervention designed to achieve specific objectives within a given budget and time period.

Project impacts: The changes in a situation that arise from the combined effects of project activities, or the extent to which the goal or highest-level project objectives are achieved. Impact also refers to any unintended positive or negative changes that result from a project. Impact sometimes means anything achieved by the project beyond direct outputs.

Project: An intervention that consists of a set of planned, interrelated activities designed to achieve defined objectives within a given budget and a specified period of time.

Purpose: The positive improved situation that a project or program is accountable for achieving.

Qualitative: Something that is not summarized in numerical form, such as minutes from community meetings and general notes from observations. Qualitative data normally describe people's knowledge, attitudes or behaviors.

Quantitative: Something measured or measurable by, or concerned with, quantity and expressed in numbers or quantities.

Resources: Items that a project has or needs in order to operate, such as staff time, managerial time, local knowledge, money, equipment, trained personnel and socio-political opportunities.

Result: The measurable output, outcome or impact (intended or unintended, positive or negative) of a development intervention.

- Review:*** An assessment of the performance of a project or program, periodically or on an as-needed basis. A review is more extensive than monitoring, but less so than evaluation.
- Sample:*** The selection of a representative part of a population in order to determine parameters or characteristics of the whole population.
- Stakeholders:*** An agency, organization, group or individual who has a direct or indirect interest in the project/program, or who affects or is affected positively or negatively by the implementation and outcome of it. In this Guide, primary stakeholders is the term used for the main intended beneficiaries of a project.
- Sustainability:*** The likelihood that the positive effects of a project (such as assets, skills, facilities or improved services) will persist for an extended period after the external assistance ends.
- Target group:*** The specific group for whose benefit the project or program is undertaken, closely related to impact and relevance.
- Target:*** A specified objective that indicates the number, timing and location of that which is to be realized.
- Validation:*** The process of cross-checking to ensure that the data obtained from one monitoring method are confirmed by the data obtained from a different method.

Executive Summary

The baseline study conducted for the sub project 'market system development of safe poultry and poultry products' under the **Rural Micro Enterprise Transformation Project (RMTP)** implemented by the Society Development Committee. The sub-project started functioning in 2020 and to be continued till 2025. The sub-project has been designed to establish sustainable growth of poultry value chains with comparative advantage, market demand, growth potential, and backward-forward linkages to small farmers and micro-entrepreneurs. The project is being executed in 5 Upazilas (Sadar, Sadarpur, Charbhadrasan, Boalmari and Bhanga) of Faridpur district by setting a target of enhancing the income of 70% small entrepreneurs, so that 30-50% farm households would be able to add nutritious food to their regular diet. The study investigated the existing poultry value chain of the targeted locality by collecting detailed information on intensity of poultry farm, volume of household poultry rearing scenario including the market demand of poultry birds, its growth potential, and backward/forward linkages to small farmers and micro-entrepreneurs. The survey was also focused to find out the level of family income/expenditures of the households, status of food security, and nutrition of farmers and service providers across poultry value chains. The field data collection of the baseline study was done during April to June 2023 through questionnaire survey, FGD and KII, and the inferences were drawn based on the information of local small poultry farm holders.

The field research (survey) generated information from the representative sampled households of them 39% were found with the age of young work force i.e. 18 to 35 years of age group, and the rest 59% at the age group of over 35 years. But none of the sampled respondents were found under the age of 18 years. The education level of the sampled farmers (poultry rearer) was not very appreciable, 18% are without schooling, 41% with education level of only class V, 36% up to class X while only 3% SSC and 1% HSC or above. Majority households (64%) have their family size 4-5, while only 7% have 1-2 members/family. Considering land resources, the surveyed households are found very poor, 74% have only 10-20 decimal land, and only 14% are marginal farmers with more than 50 decimal lands. The family income of the households varied widely by locations (Upazilas) but on an average income of households per annum is Tk 2,51,112/-, which indicated their farm category as landless to marginal.

Out of the households, 90% families are rearing deshi poultry and 69% rearing deshi ducks. The average numbers of deshi chicken and duck per family is 8.65 and 5.43 respectively. Out of the Upazilas, highest number of poultry birds/family found in Boalmari (13.24) followed by Vanga (9.00), Sadarpur (7.90), Sadar (7.83) and Char Bhadrason (5.27). Similarly the number of duck per households was observed highest in Sadar Upazila (8.63) followed by Boalmari (6.92), Sadarpur (4.83), Char Bhadrason (4.63) and Vanga 2.40. The results indicated that there is enough scope to improve the poultry resources in respect of number/household and breeds of the poultry in the project area. The average number of poultry sold/household/year was 2.65 with highest in Sadar 4.59 and Boalmari 3.18 and eggs sold/household/year 141.81. The average size of marketable poultry was 1.04 Kg. The monthly income of households from egg was Tk 170/- per month and from poultry Tk 88/- per month. The family income from poultry is higher with the households living in the semi-urban to urban areas than the non-accessible char areas.

The farm households mostly sell their poultry to the neighbors or local markets while only few respondents sell through agencies or under contract farming systems. Marketing is not found a problem to the households poultry producers but important to the farm owners, who followed contract farming technique (with agent or contact farming etc.) Only 5% respondents practicing poultry marketing through local agent or under contact farming. Small/medium poultry farm entrepreneurs available (very few only 3-4 farms in the locality) in the project area have established connection with the backward and forward business people to ensure quality feed and to achieve good price of their products. The average selling price of poultry per kg is Tk 354/- and duck Tk 394/- per kg (average marketable size of poultry is 1.04 Kg). The average selling price of eggs in the locality is Tk 14.40 per piece. Considering the market price in the cities, the prices mentioned by the respondents are quite satisfactory and in some cases higher than the urban price.

As reported 19% respondents are out of the accessibility of poultry health services rendered by any of the concerned organizations, 50% respondents getting poultry health services from DLS, 53% from NGOs, 44% from LSP but none accepted to receive any services poultry clinic or poultry association. As informed the poultry mortality in Sadar Upazila is 40% followed by 36% in Sadarpur, 35% in Banga, 30% in Boalmari and 32% in Charbhadrason. Based on the report of poultry mortality (%), it may be assumed that the intensity of disease incidences in poultry is very high in the locality. The results indicated that there is enough scope to reduce the disease incidences of poultry through introducing proper vaccine and extension services. Almost 80% respondents heard about the presence of poultry hatchery in their locality and 20% have no idea of poultry hatchery. Similarly 64% respondents replied positively regarding availability of poultry processing plants in the area while 36% does not have any idea of processing plants. None of the respondents know about the availability of vermi-compost in the locality. On an average there are 1.45 small poultry farms (100 to 500 birds) in the surveyed area, 1.52 medium poultry farms (5001 to 1000 birds) and 0.59 large farms (1001 to 2000 birds) in the locality. As reported 93% respondents are rearing their poultry under semi scavenging systems of feeding. The respondents take 217.86 gm fish/week/person; 225.52 gm meat consumed/person/week and 2.80 numbers of eggs eaten/person/week. While 320.34 ml milk was taken per person per week.

After analyzing the information it could be concluded that the availability of poultry resources including poultry products in the project area are still poor and income of target households from poultry products are very minimum. The income of the targeted households from poultry resources is found only 1-2% of their total family income and for family expenditures they are mainly relied upon other than poultry incomes (98-99% of the family income). And it could be assumed that there is enough scope to increase the family income through introducing proper extension services of poultry by reducing the disease incidences in their household deshi chicken and duck.

1. Introduction

The sub project “market system development of safe poultry and poultry products” under the **Rural Micro Enterprise Transformation Project (RMTP)** implemented by the Society Development Committee (SDC).

After signing contract, the team of consultants reviewed the available project documents and attempted to draft the inception report of the baseline study. The inception report elaborated the ways (methodologies) this baseline study to be carried out during the next 3 months’ time. The report included short introduction, background of the project, approach and methodology (procedures for field implementation of the study), and the survey tools were used for carrying the study.

1.1 Background

The project titled ‘Market System Development of Safe Poultry and Poultry Products’ jointly financed by Palli Karma-Sahayak Foundation (PKSF) and the International Fund for Agricultural Development (IFAD), has been implementing in Five (5) Upazilas of Faridpur district by the organization “Society Development Committee”. The project is working to increase income, ensure food security and improve family nutrition of marginal and small farmers and poultry related backward and forward market entrepreneurs. The sub-project is also work on value addition at various levels, expansion of financial services for enterprise development, and strengthening of the institutional framework for the development of safe eggs, meat and meat products of the value chain. Efforts will be made to scale up and expansion of enterprises through efficient production methods and strong market linkages of marginal and small farmers. If the sub-project is implemented, the income of 70 percent of the entrepreneurs increases by at least 50 percent and 30 percent of the project members will be able to add nutritious food to their regular diet.



Figure 1: Popularly used poultry shed in the surveyed locality

The value chain analysis of the sub-sector has been undertaken while taking up the sub-project. The study found several constraints to the development of the livestock sub-sector, the problems in the project area are - inadequate supply of purebred chicks & quality feeds, conventional farming management, poor farm biosecurity, lack of quality livestock services, untrustworthy poultry & egg production, poor processing facilities, lack of ICT & financial services, improper use of farm waste and poor market linkages for safe egg and meat production and so on. Besides, it is not possible to sell locally produced animal products at competitive prices. There are 9.5/19 thousand farmers under the sub-project and 0.5/1 thousand service providers in strengthening backward and forward markets. Working to solve the problems mentioned in the project area will increase the sales of safe eggs, meat and meat products by at least 30 percent and increase net profit by at least 20 percent of 80 percent of the entrepreneurs.

1.2 The Project Areas

Under the Faridpur district, 5 Upazilas constituted the project area.

The area of the project are as follows:

District	Upazilas	Number	No. of Beneficiaries
Faridpur	Faridpur Sadar	1	2000
	Sadarpur	1	1950
	Charbhadrasan	1	1650
	Boalmari	1	2000
	Bhanga	1	2000
	Total	5	9600

A baseline study of the project interventions will give a clear-cut picture about the current status of the project beneficiaries in terms of income, food diversification, social status, exiting poultry value chain, market system development well as availability of the safe egg, meat products, which will help to achieve the objectives of the project. If the sub-project is implemented, the income of 70 percent of the entrepreneurs will increase by at least 50 percent and 30 percent of the project members will be able to add nutritious food to their regular diet as described in the Term of Reference.

1.3 Objectives of the Project

The objectives of the project are:

- **Goal:** To increase the income, food security, and nutrition of farmers and service providers across poultry value chains.
- **Development Objective:** The sustainable growth of poultry value chains with comparative advantage, market demand, growth potential, and backward & forward linkages to small farmers and micro-entrepreneurs.
- **Outcome:** The outcomes are- a) The project participants will adopt improved production methods and establish sustainable market linkages, and b) The enterprises will have access to sustainable financial services.
- **Immediate result:** Increased use of information technology on farms and improved farm management practices will result in a 10 percent reduction in overall poultry mortality, gain in body weight as per the growth chart, and a 10 percent reduction in production costs. The linkage of institutional and non-institutional buyers will increase sales of poultry and poultry products (including waste) by 25 percent and prices by 10 percent. Local-level processing plants will be set up, 10 percent of the total poultry production will be processed in local plants, frozen meat will be sold locally and nationally through sub-contracting, the establishment of commercial compost production plants using farm/kitchen market waste and make a linkage with big buyers to sell poultry products/by-products following the cross-cutting (gender, nutrition, climate change & environment) issues. The backward and forward market's linkage with the poultry farmers will gradually increase, wages increase by 10 percent and an additional 15 percent of employment opportunities will be created.

1.4 Objectives of the Assignment

The main objectives of the assignment are:

- To Assess the socio- economic conditions of the project beneficiaries especially for poultry entrepreneurs in the project areas;
- To assess the market system of safe poultry and poultry products and identify the market constraints
- To provide a detailed analysis of the value chain and provide recommendations on how the selected target group can be engaged in the value chain in different roles (Supplier of input, producer, processor, transporter, traders and so on)

1.5 An Approach to the procedures for conducting the baseline study

The Consultant proposed that for conducting the baseline study, household survey for quantitative data were the main activities through physical presence. In addition, both KII and FGD were conducted also for qualitative data in physically. To augment approach from amongst the poultry entrepreneurs, some key informants were selected. And also some key informants were selected from DAE, DLS, Feed sellers, Poultry medicine sellers etc. The opinion of beneficiary groups were taken about the pattern of life and living before the project interventions as an approach. Farmers are now becoming more conscious towards their empowerment. Various awareness programs have given new sense of confidence among women. The development interventions are now multi-dimensional in rural areas. The importance laid down for irrigation development in rural areas by this project is a milestone towards increasing earning opportunities of poor people, overall socio-economic development of the project areas and increase food production to help the country achieve self-sufficiency in food.

The baseline study requires the below documents:

- (i) Implementation status of Project and Poultry producers Group list
- (ii) Result based monitoring/ Logical Framework

1.6 Respondents

1. Beneficiaries of the project for household survey and FGD (Poultry producer Groups)
2. DLS and DAE officials (DLO, Upazila Agriculture Officer, PDO, VS, ULO etc.) for KII
3. Feed seller, Poultry medicine sellers, Poultry worker for KII
4. NGO representatives for KII

The respondents were selected following stratified random sampling techniques so that in study area men are selected. Since 100% member of the group were found women as per project provision. Number of samples to be taken showed in the matrix form in the section of sample size in other section.

Besides, opinions of the GoB officials of field level offices and other relevant agencies were also be taken through KII.

1.7 Scope of Work

The study team will perform following tasks and activities, but not limited to:

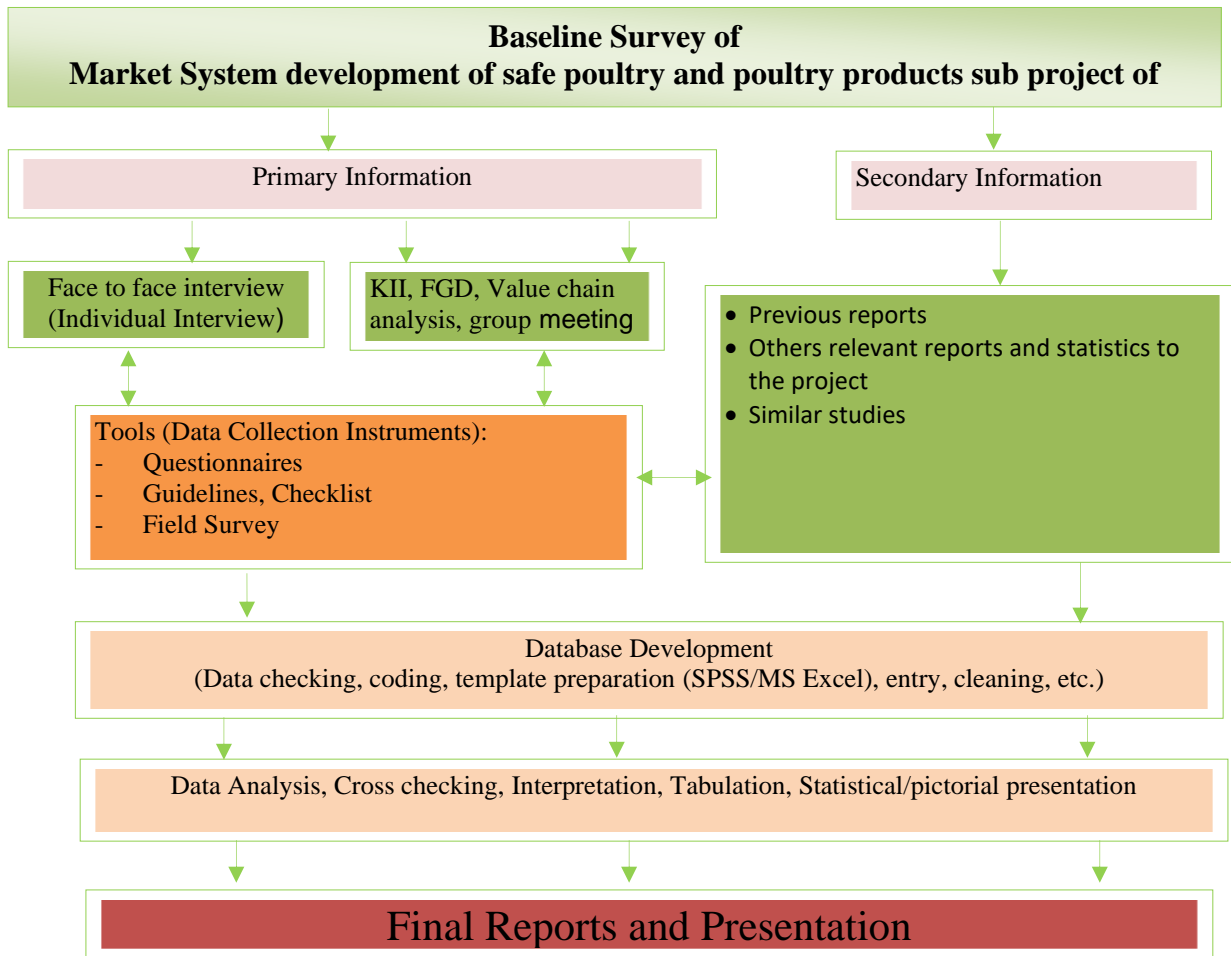
- Review background documents that provide the context of smooth implementation of this project to achieve the project outcomes
- Prepare an inception report with detailed methodology, timeline, team plan and draft data collection tools, analysis plan and outline of final report, based on the desk review, project log frame and detailed schedule of activities and share with project team
- After finalization of the data collection tools will translate in Bangla
- Deploy enumerator for quantitative data collection
- Facilitate one (1) day long training for enumerators on appropriate use of tools, data collection, data quality and analysis for the baseline study
- Undertake data collection, ensure data quality and reliability, data process, clean and analysis.
- Sharing findings after field data collection with project team and RDRS/PKSF for feedback
- Submission draft report to project team
- Incorporate the feedback after sharing and reviewed by project team and prepare a final report on the findings of the study
- Submit final baseline report and all relevant documents
- Facilitate validation workshop
- Ensure the best quality of work e.g., accuracy of collected data.

2. Methodology

2.1. Theme of the baseline study

The baseline study was followed mixed approach combining qualitative and quantitative method for data collection. Data and information were carried out from both primary and secondary sources. Primary data and information were collected through both the qualitative and quantitative manner. As part of quantitative, 390 household-level primary data collected through survey. In addition, FGD (10), KII (18), Value chain analysis for safe poultry and poultry products (5) and Group meeting with LSP were applied for collecting qualitative information from project related stakeholders such as farmer group, input and output market actors, government officials (DLS, DAE, BLRI etc.) project staffs, etc. As a part of literature review, the study team will go through different documents by which they captured secondary information.

- The Consultant followed mixed methods i.e., quantitative and qualitative from primary and secondary sources.
- Quantitative information collected through structured questionnaire (interview schedule) as purposive random sampling techniques which in ToR, it is mentioned of 390 samples
- Qualitative information collected through PRA methods (KII, FGD, value chain analysis and group meeting).
- Secondary document reviewed and triangulated as supplementary to the primary information both for quantitative and qualitative



A combination of the following theme was applied in carrying out the study:

- i) Inception phase; Desk review, inception report (detailed work plan, tools and evaluation questions)
- ii) Field exercise phase; Team orientation, filed plan, data collection.
- iii) Data analysis phase; Data curing, synchronizing, analysis and template preparation and Triangulation
- iv) Reporting phase; Draft report, final report presentation

There are sequential interrelated processes, such as

- **Inception phase:** Kick-off meeting, document review (RMTP) documents, sub-project documents, Progress Reports etc.), study questions finalization, data collection instruments preparation, test of DCI, details of methodology and inception report submission

- **Field exercise phase** -Team orientation, enumerators training, field test, field plan, data collection (quantitative – Household survey and qualitative-FGDs, KIIs, value chain analysis and group meeting with LSP)
- **Data analysis phase:** Data cleaning, synchronizing, curing, database development, template preparation, analysis and triangulation;
- **Reporting phase:** Draft report and presentation to SDC project team; validation workshop and final report with recommendation.

2.2 Quantitative sampling of the evaluation

Determination of Sample size:

The primary units of sampling are the project beneficiary households in the project area. A representative sampling approach was undertaken. To determine sample size, 95% confidence level, with an accuracy rate or amount of admissible error margin of 5% were considered. The following sampling approach and statistical formula was applied for the sampling.

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{z^2 \cdot p \cdot q + (N - 1)e^2}$$

Where,

n = Sample size

N = Population size =9600

e = Precision rate or amount of admissible error in the estimate=0.05

p = Proportion of defectiveness or success for the indicator=0.50

q = $1-p = 0.50$

z = Standard normal variable at the given level of significance=1.96

By putting the values into the above formula, total sample size will be **370** for this baseline study which distributed proportionately. Another 20 reserve samples will be added to make the total sample size 390. The below table shows the proposed proportionate sample size for the baseline study-

Table 1: Proposed Proportionate Sample Size for quantitative data collection

Sl.	Name of district	Name of Upazila	Population	Proposed Proportionate Sample Size	Reserve sample (5% additional)
1	Faridpur	Bhanga	2000	77	4
		Sadarpur	1950	75	4
		Char bhadrasan	1650	64	4
		Faridpur Sadar	2000	77	4
		Boalmari	2000	77	4
Total			9600	370	20

List of project beneficiaries and LSPs to be provided by the project before field plan, data collection for sample randomization, i.e. selection of sample respondents.

2.3 Quantitative data collection tools

Household Survey: The household survey was carried out using random sampling techniques through structured questionnaires to capture quantitative information from the beneficiaries (Landless, Marginal, Small and Medium poultry producer farmers) who are HH respondents (head). A structured questionnaire developed through a rigorous and systematic process in-consultation with SDC and PKSF. The survey covered 370 beneficiaries with 20 reserve samples made total 390 (Focusing on landless, marginal, small and medium poultry farmer) households from the respective five upazila.

2.4 Qualitative Information Collection Tools and Techniques

Focus Group Discussion (FGD)

During the field visit **10 FGDs** were conducted with the project beneficiaries (marginal and small and medium poultry producer farmer) groups. Proper FGD protocols were followed to conduct FGD (ethics, gender priority, do no harm policy to be ensured). In order to maintain quality data collection, the FGDs were conducted by gender priority.

FGD (small group of 7 to 12 people) were used to lead open discussion through a skilled moderator to gather semi-structured qualitative data. The pre -selected participants (balanced to the extent feasible by gender, age, and any other relevant factors) discussed issues and concerns based on a list of key themes drawn up by the moderator. These sessions encouraged free flowing discussion about the activity. An in-depth FGD checklists were used for collection of qualitative information to assess present condition of the beneficiaries. This information triangulated by repeated interview with NGO



Figure 2: FGD event in Sadar Upazila during field survey

workers (Mr. Murad Hossain, BDO, Value Chain Project, SDC, Faridpur) and beneficiaries (Ms. Nargis, Char bhadrasan and Mr. Korshed Hossain, Faridpur Sadar). The focal person from SDC/RMTP arranged the beneficiaries (marginal, small and medium poultry producer farmers) as per schedule.

Table 2: List of FGD conducted for baseline study

Sl.	Name of district	Name of Upazila	Types of respondents		Number of FGD
			Women	Men	
1	Faridpur	Bhanga	1	1	2
		Sadarpur	1	1	2
		Charbhadrasan	1	1	2
		Faridpur Sadar	1	1	2
		Boalmari	1	1	2
Total			5	5	10

KII with Stakeholders

Relevant Key informants' interview (18) were conducted with SDC/RMTP representative to learn deeply about the project and assess their support and linkage with producer groups. An in-depth checklists were used for data collection. DLS and BLRI representatives were taken interview for KIIs. Poultry Development Officer from Fraidpur District have also engaged for interview of this study to learn their knowledge or awareness status about the project. Key informants' interview were conducted with other



Figure 3: KII event in Boyalmari Upazila during survey exercise

important stakeholders of the project like Market Traders (Input, output, Online Market representative, Super shop representative) Company representative (Feed, Medicine, poultry products, DOC seller) retailers, market actors, Hatchery, vaccinator, and service providers from the project area.

List of KIIs for qualitative data collection is shown in below table-

Sl. No.	Type of informants	Number of KII
1	Vaccinator and LSP	2
2	Government agencies-DLS (DLO, VS, TLO, AD-AI, Manager, Dairy farm, Filed Assistant	5
3	Market actors- Feed company, DoC company, medicine seller, inputs seller, poultry entrepreneur, whole seller	8
4	Hatchery	1
5	Representative from NGOs and SDC	2
Total		18

Group meeting with LSP:

Two (2) group (each with 15 members) meetings with LSP (from 400 listed LSPs) were conducted which used to validate findings from quantitative research methods by providing a deeper understanding that statistics cannot. It will be the perfect sources to understand the true feelings and perceptions of selected target beneficiaries.

Value chain analysis

Five (5) Value chain analysis to be conducted during the baseline data collection to learn the present market system and status of the beneficiary.

#	Name of Upazila	Number of value chain mapping
1	Bhanga	1
2	Sadarpur	1
3	Char bhadrasan	1
4	Faridpur Sadar	1
5	Boalmari	1
Total		5

2.5 Details of the Baseline Study Steps

First Step:

The **first step** of the study reviewed of secondary documents to extract existing information from proposal, previous reports, relevant statistics, indicators of the project. Then questionnaire and tools were reviewed for primary information.

Selecting output and outcome Indicators

The consultants have developed a set of indicators for the baseline study with the consideration of logical framework. The indicators are usually measurable. The indicators are very important in conducting a baseline study of a project. The relevant documents, field visit and the opinion of some the key informants have been considered to develop indicators. Based on this and on the analysis of the requirements set in the TOR and those found after subsequent discussions with the client the consultant developed a list of indicators. These indicators are selected with the based on TOR and project matrix on project logical framework.

Some of these identified indicators are given in the following table:

Indicators

Annual income of households

Annual Income from the Poultry farming

Production value and volume

Poultry sales value and profit
Major constraint of Poultry value chain
Challenges of safe poultry products
Identify the poultry value chain actors
Market promotion
Access to sustainable financial services
Adoption of improved production methods
Establish sustainable market linkages
Use of good poultry husbandry practices
Use of poultry innovative technology
FCR (Food Conversion Ratio)
Poultry Mortality
Use of antibiotics in the poultry farming
Increasing sales of poultry and poultry products
Access to broiler processing plant
Access to market (Institutional and non institutional)
Food surplus or shortage of households
Knowledge on impact on climate change in poultry farming
Access to backward and forward market linkage
Increasing employment creation etc.

Data collection Tools Development:

In-consultation with SDC, data collection tools were developed and tested to finalize the questionnaires and other data collection instruments.

Team formation, Orientation and training

The consultant deployed skilled enumerators and field team for this survey. The team conducted one day orientation (training) on the methodology of the data collection, use of tools, and variable of the output evaluation, and data quality management.

Second Step: Field Survey

Field Data Collection:

The **second step** was to collect the primary data including qualitative and quantitative information through face-to-face interview with beneficiary respondents. Simultaneously, KIIs and FGDs were conducted with key experts and traders'/market actors and service providers, DLS representative, NGO representatives using structured questionnaires. Value chain analysis also conducted for market analysis of poultry sector.

Individual interview - Face to Face Interview (F2F):

Face to Face Interviews (F2F) were conducted with 390 respondents from the project intervention areas.

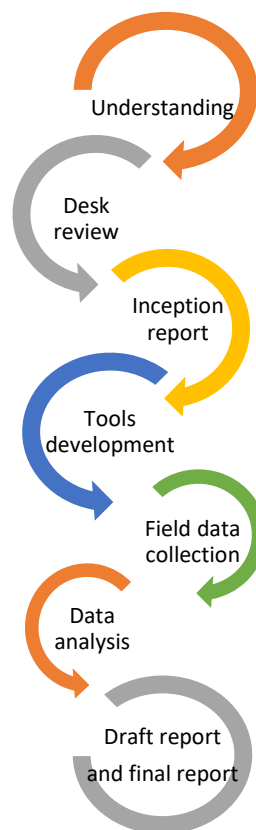


Figure 4: Steps of the evaluation

FGDs and KIIs:

As mentioned above, 10 Focused Group Discussions (FGD) and 18 Key Informant Interviews (KII) were conducted for primary data and information and to get clear understanding of the project. Every KIIs provided relevant information from the government officials, Local service providers, market traders, value chain actors, DLS representative, project staffs and related representatives who have knowledge and experiences on specific issues related to the project.

Value chain analysis:

Five (5) Value chain analysis were conducted which will include interesting information on project learning's, market system and status and stories of relevant beneficiaries involved the project.

Third Step:

Data analysis and Report writing:

The **third step** was data entry template preparation, data entry, data consolidation and analysis. SPSS-26 and MS excel used to process the data and tabulation, graphs for analysis and to

prepare report. Description analysis (frequencies, percentiles, averages) and cross tabulation analysis to be applied for data interpretation.

Fourth Step:

Finalization of the Report:

Fourth step was draft reporting, this draft shared to receive feedback from SDC project team officials, and then the **final step** will be incorporation of comments, suggestions and feedback to finalize the report for submission.

2.6 Quality assurance

A written instruction on data collection supplied to the enumerators and to the consultants. Following steps were taken into consideration for the quality control and ethical practices for the study:

- A daylong orientation provided to understand data collection methods, quality parameters, and overall guideline for collecting field data.
- Experienced enumerators will be deployed
- Cross checking with secondary review, KII, FGDs, value chain analysis, observations, questionnaire time to time
- Survey team will sit every afternoon/evening for rechecking, learning and sharing the field information and making a conclusion, as well.
- During fieldwork, the supervisors will diligently check for completeness and for consistency of the information, which will be returned on a daily basis.



Figure 4: Orientation course of enumerators

3. Work Plan

The detailed work plan of the baseline study is shown in the Annexure 1.

4. Findings

Existing poultry resources of the project area were investigated through household survey and using the other tools of social researches like FGD, KII, individual contacts etc. The information/data were analyzed using descriptive statistics. It has been observed that the availability of poultry resources including poultry products in the project area are still poor and income of target households from poultry products are very minimum. The income of the targeted households from poultry resources is found only 1-2% of their total family income and for family expenditures they are mainly relied upon other than poultry incomes (98-99% of the family income). And it has been observed that there is enough scope to increase the family income through introducing proper extension services of poultry by reducing the disease incidences in their household deshi chicken including duck. The findings of the survey are described in the following sections.

4.1 Biography

The short biography (introduction of a person through age, education level, family size etc.) of the sampled households was collected during the household survey to understand their social position in the locality and representativeness of the interviewed samples for the study. The main features of their lifestyles of the sampled households are discussed below:

4.1.1 Age of respondent

The following table 4.1 presented the data on age variation of the sampled households by grouped them (household heads) into different age levels like: below 18 years years of age, within 18 to 35 years, and above 35 years. It has been observed that irrespective of locations (Upazilas) the maximum households (39%) took part in the survey were under the most active age group i.e. 18 to 35 years of age (youth age). Similarly averaged across locations 61% of the surveyed households were fall within the age group of above 35 years. Considering the locations/Upazilas, in Char Bhadrason 64% sampled households were selected from above 35 years of age and 36% from 18-35 years. In Sadarpur 73% belongs to above 35 years of age and 27% from 18-35 years. In Char Bhadrason and Vanga Upazilas, no sample households

were belong to below 18years of age. The results indicated that the sampled households are the most representative working group of the society, so it is assumed that the information generated under the study are appropriate and target oriented.

Table 4.1: Distribution of households by age

Age (year)	Responses of participant by Location/Upazila (%)					
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	All
Below 18	0	0	0	0	0	0
18-35	52	60	36	27	20	39
Above 35	48	40	64	73	80	61
All	100	100	100	100	100	100

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.1.2 Education level

Education level of a person considered as one of the most vital parameters for his position in the society. The study investigated the education level of the respondents and showed in the following table 4.2. To facilitate the discussion on education level of the target population, the school years attended by the respondents were grouped into a) no schooling b) school year up to class V c) Class VI to X d) SSC pass and e) HSC or



Fig 5: Group orientation meeting on baseline survey

above. The results indicated that the education level of the majority (41%) population across locations was up to class V followed by class VI to class X (36%). It is noted that up to 18% population was found with no schooling i.e. illiterate; among the locations maximum illiterate people (82%) were found in Charbhadrason Upazila. On the other hand no illiteracy found in Sadar and Vanga Upazila; only 3% no schooling respondents were found in Sadarpur and 4% in Boalmari. Considering the literacy issue of people, Boalmari found better with 7% HSC (Higher Secondary Certificate) respondents, 13% SSC (Secondary School Certificate) and 53% up to class X. In Sadar Upazila out of the total respondents 4% were SSC and 48% up to class X. As stated earlier maximum illiterate samples were found in Char bhadrason Upazila with

82% i.e. no schooling and 18% up to class V followed by Sadarpur with 40% sampled population had up to class X education and 60% had up to school year of class V. The results showed that people from Chars areas are mostly have lack of literacy and need more accessibility to schools/education.

Table 4.2: Distribution of respondents by education

Education level	Responses of participant by Location/Upazila (%)					
	Sadar	Boyalmari	Char Bhadrason	Sadarpur	Vanga	All
No education	0	4	82	3	0	18
Up to Class V	48	22	18	57	60	41
Class VI to X	48	53	0	40	40	36
SSC pass	4	13	0	0	0	3
HSC or above	0	7	0	0	0	1
Total	100	100	100	100	100	100

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.1.3 Family Size

The data on family size (number of person eating together) of the respondents have been summarized and presented in the table 4.3. It has been observed that regardless of locations/Upazilas, the number of members of majority surveyed families (39%) are 4. Wide range of variation in family members per family was found (from 1 to 7) in the surveyed areas. Out of the surveyed farm households only 3% have only 1 member/family, 4% consists 2 members/family, 17% households were with 3 members/family, 28% reported 5 members/family, 10% with 6 members/family and 3% have over 6 members/family. The results indicated large variation in family size between Upazilas in the Faridpur district. As observed in Vanga 74% respondents have family members ranged from 4-5, in Sadarpur 60% people have family size 4-5 member/family, in Char bhadrason 72% have their family size 4-5 members/family, in Boalmari 64% have 3-4 person/family and in Sadar 56% have their family size 4-5 members/family. The results indicated that the family size of the surveyed locations is more or less alike with the national average family size (4.3) of the country.

Table 4.3: Distribution of respondents by family size

Family size (#)	Responses of participant by Location/Upazila (%)					
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	All
1	0	4	9	0	0	3
2	4	2	0	3	7	4
3	20	18	9	23	13	17
4	36	33	36	37	47	39
5	20	31	36	23	27	28
6	16	9	9	10	0	10
> 6	4	2	0	3	7	3
Total	100	100	100	100	100	100

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.2 Land Resources

To facilitate the presentation of data, the sampled households (hh) were grouped as per their land holdings like a) respondents having up to 10 decimal land holdings b) 10 to 20 decimal land holdings c) 20 to 30 decimal land size d) 30 to 40 decimal land area e) 40 to 50 decimal land holdings and f) beyond 50 decimal land resources. The study collected information from the poultry groups of partner NGO of PKSf in different Upazilas of Faridpur district. In present study the surveyed population were mostly belong to PKSf supported NGO groups, who are comparatively poor households (hh) in respect of their landholdings. It has been observed that 39% surveyed households have their landholdings within 10 decimal per family and 35% of them have landholding within 20 decimal, so it can be assumed that 74% target hh have only homestead land without cultivating lands. Across locations on an average only 14% hh have more than 50 decimal landholdings, and by considering locations, 12% hh in Sadar Upazila belongs to this category (>50 decimal lands) against 44% in Boalmari and 13% in Sadarpur Upazila. No households in Char Bhadrason and Vanga have found with landholdings over 50 decimal (Table 4.4).

Table 4.4: Distribution of respondents by their land resources

Land size (decimal)	Location/Upazila (% Response)					
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	All
Up to 10	44	13	36	33	67	39
10 – 20	36	13	55	37	33	35
20 – 30	0	7	9	13	0	6
30 – 40	4	16	0	3	0	5
40 – 50	4	7	0	0	0	2
> 50	12	44	0	13	0	14
All	100	100	100	100	100	100

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.3 Family Income

Annual family income of the respondent households were collected and showed in the following table 4.5. The family income of the households in the project area varied widely by locations (Upazilas) and across Upazilas the average income of households per annum is Tk 251112/-, which indicated that the surveyed people are within the farm category of landless to marginal farmers. The study was commissioned on the poultry groups of a PKSf supported NGO, so the family income segregated into poultry income and other family income. It has been observed that the family income from poultry resources of the households in the project area is still very low, the share not yet exceeded 1% of total family income. The scenario is mostly similar in all the Upazilas except Boalmari where share of poultry income was 2%. Considering the locations, highest income group observed in Sadar Upazila with family income of Tk more than 3 lakhs (3.15 lakh) followed by Boalmari with Tk 2.54 lakh, Vanga Tk 2.42 lakh, Sadarpur Tk 2.36 lakh and Char Bhadrason Tk 2.07 lakh. It is noted that the family income of households in the project area followed the simple trends of higher income group lives in semi to urban areas because urbanization especially easy communication systems increase the financial activities and enhance income/family. As such it has been observed that households in Sadar Upazila have higher income and it gradually goes down to the Char Upazila where financial activities are yet to be increased.

Table 4.5: Annual family income of respondents in project area in 2022-23

Income source	Location/Upazila (Tk)					All
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	
Poultry	4064.89 (1)	4013.33 (2)	2258.18 (1)	2510.00 (1)	2660.00 (1)	3101 (1)
Others	311525 (99)	250264 (98)	204995 (99)	233151 (99)	240120 (99)	248011 (99)
All	315590 (100)	254278 (100)	207254 (100)	235661 (100)	242780 (100)	251112 (100)

*Figures in parenthesis are percentage

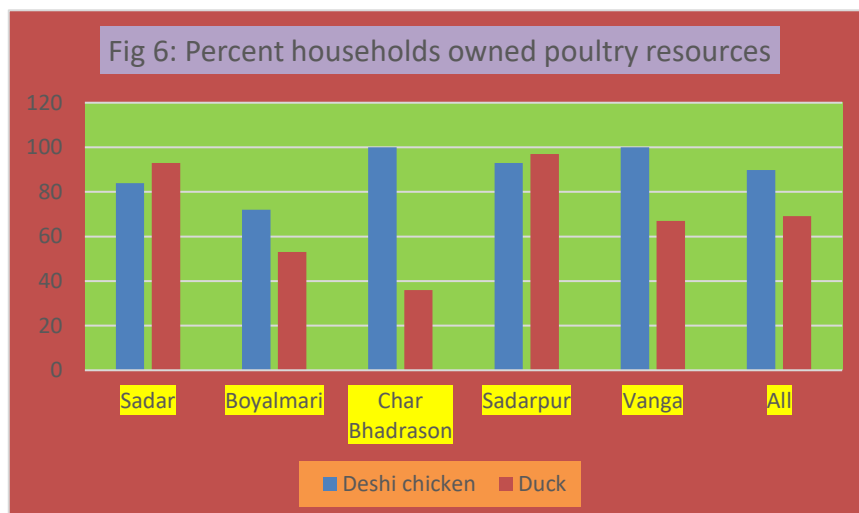
n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.4 Poultry Resources

The study investigated the status or availability of poultry resources/enterprises in the surveyed areas and focused to identify the households who are rearing poultry (intensity of poultry households) and also quantified the number of poultry birds being reared per family at present. Two types of count were made i.e. percentage of local farm families reared poultry birds and the numbers of poultry birds are reared by each of the surveyed families (volume of poultry birds/household).

4.4.1 Households having poultry birds

The following figure 6 reflected the data on the number of households reared poultry in the targeted project area. The farmers in the project area are mainly reared deshi chicken and duck. As reported by the respondent farmers, across Upazilas 90% families are rearing deshi poultry and 69% rearing deshi ducks. It has been observed that 100 percent families in Char Bhadrason and Vanga Upazilas have poultry resources (deshi chicken) against 93% families in Sadarpur, 84% families in Faridpur



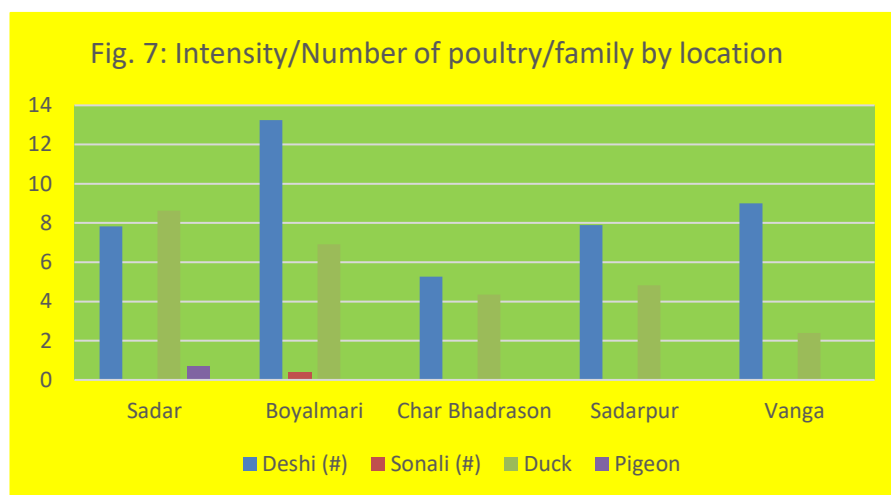
Sadar and 72% families in Boalmari. On the other hand, only 36% families have duck in Char Bhadrason Upazila followed by 53% families in Boalmari, 67% in Vanga, 93% in Faridpur Sadar and 97% Sadarpur. The results indicated that there is enough scope to increase the

number of poultry households in the project area through extensive extension activities of poultry enterprise. Detailed data are shown in the table 2.1 in the Annex 2.

4.4.2 Poultry birds per household

The following figure 7 reflected the data on the availability of numbers of poultry birds per household in the project area. Out of the poultry breeds the households in all Upazilas reared deshi and only two family in Sadar Upazila reared sonali (commercial farm) bird. On the other hand the deshi chicken reared families in all Upazilas also reared duck in addition of poultry and only one family in Faridpur Sadar Upazila reared pigeon. Regardless of locations/Upazilas the farm households the average numbers of deshi chicken/family is 8.65 and 5.43 numbers duck/family. It has

been observed that out of the Upazilas, highest number of poultry birds/family found in Boyalmari (13.24) followed by Vanga (9.00), Sadarpur (7.90), Sadar



(7.83) and Char Bhadrason (5.27). The number of duck per households was observed highest in Sadar Upazila (8.63) followed by Boyalmari (6.92), Sadarpur (4.83), Char Bhadrason (4.63) and Vanga 2.40. The results indicated that there is enough scope to improve the poultry resources in respect of number/household and breeds of the poultry in the project area. Detailed data are shown in the table 2.2 Annex 2.

4.5 Poultry Products

The baseline survey investigated the availability of household poultry products in the project area for cash earnings and the income of the respondents from their poultry products. The major marketable poultry products are a) whole live chicken, b) duck and c) eggs of poultry. The amount of poultry products of the households and the cash income by selling them in markets are discussed in the following sections.

4.5.1 Number of Marketable Poultry and Egg per household

The following table 4.6 presented the data on the production of number of salable poultry and poultry-eggs per household per annum. Regardless of locations the average number of salable poultry per household was 2.65 and the salable eggs per household per year 141.81. Wide variation was observed between locations/Upazila in context of number of poultry per household and the number of salable eggs per household per year (Table 4.6). Considering the locations, Char Bhadrason Upazila produced least numbers of salable poultry and eggs while Sadar Upazila produced highest numbers of salable poultry and eggs. Production of marketable poultry and eggs was poor in Char areas than the Upazilas with growth centers or townships. The production of eggs followed the similar trends of poultry production by locations/Upazilas. The study also investigated the size of poultry being marketed by the village people and it has been observed that regardless of locations the marketable size of poultry in the project area is 1.04 kg liveweight/piece. The households of Char Bhadrason and Vanga are selling comparatively smaller size of poultry (0.81 to 0.97 kg/piece) than Sadar (1.24 kg), Boyalmari (1.15 kg) and Sadarpur (1.04), though the variation is not very wide.

Table 4.6: Production of poultry products by the respondents in project area in 2022-23

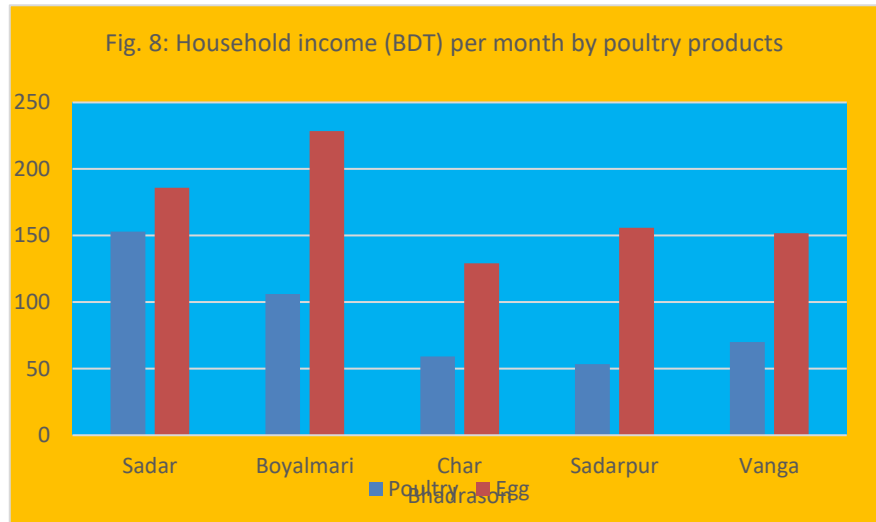
Poultry enterprise	Number of poultry products sell/hh/year by Location/Upazila (#)					All
	Sadar	Boylmari	Char Bhadrason	Sadarpur	Vanga	
Poultry	4.59	3.18	1.57	1.60	2.10	2.65
Egg	194.83	190.37	107.58	129.86	136.39	141.81
Marketable size/ poultry ((kg)	1.24	1.15	0.81	1.04	0.97	1.04
All	79.71	96.78	54.67	65.73	64.24	72.23

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.5.2 Income of poultry products per household

The contribution of poultry products (live chicken, live duck, egg etc.) to the monthly family income of the households in the project area was investigated and presented in the following figure 3. On an average the monthly income of the respondent families from egg was Tk 170/- per month, which is 66% of total poultry income and from poultry Tk 88/- per month, which represents 34% of total income from poultry products. The family income from poultry is

higher with the households living in the semi-urban to urban areas like in Sadar Upazila than the non-accessible char areas like Char Bhadrason Upazila. The second highest income from poultry products was



reported from Boalmari Upazila Tk 334/- per month followed by Vanga, Sadarpur and Char bhadrason. The cash incomes from eggs are found higher than the income from selling poultry itself in all locations of the study. Details data are shown in the table 2.3 Annex 2.

4.6 Marketing Structures

The study examined the development of marketing institutions for poultry and poultry products in the locality. How the market systems of poultry is functioning in the project area were investigated during the baseline survey of poultry resources/enterprises. The following section discussed the results based on the primary data generated from the field.

4.6.1 Marketing Method

The baseline survey gathered the information on the types of poultry and egg marketing systems are being operating in the locality. Almost all the poultry farmers sell their poultry to the local markets and from their houses to the neighbors and the villagers and very few ladies informed about through agencies or under contact farming systems. Actually the marketing is important to the farm owners not to the household poultry



Figure 9: Poultry medicine store at Upazila head quarter

producers. Only the farm owners follow the marketing channel (with agent or contact farming etc.) for marketing their poultry birds. On an average only 5% respondents practicing poultry marketing through local agent and under contact farming. In Sadar Upazila 8% respondents replied in favor of marketing through agencies and contact farming but no washing hub yet established in any of the Upazilas under the survey (Table 4.7). None of the respondents using mobile apps for their poultry marketing purposes. Very few households in Banga (13%), Sadarpur (3%) and Boalmari (2%) are doing marketing through local agents and users of contact farming as marketing channels are found 2% (poultry farmers) in Boalmari, 7% in Vanga. The study revealed that there is enough scope of improving marketing channels through proper interaction with the poultry farmers. Details are showed in the Table below 4.7.

Table 4.7: Present marketing systems of poultry in project area in 2022-23

Marketing system of poultry	Response by Location/Upazila (%)					All
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	
With agent	8.00	2.22	0.00	3.33	13.33	5.38
Contact farming	8.00	2.22	0.00	0.00	6.67	4.04
Use of apps	0.00	0.00	0.00	0.00	0.00	0.00
Washing hub for poultry products	0.00	0.00	0.00	0.00	0.00	0.00
Production cost for deshi chicken BDT per kg live weight/yr	250.00	247.00	255.00	250.00	248.00	250.00
Production cost for Sonali at farm level BDT per kg live weight/yr	220.00	230.00	210.00	215.00	225.00	220.00
For deshi, Benefit earned by poultry/family/month	338.80	340.48	185.45	209.33	222.67	249.03
All	8.00	1.48	0.00	1.11	6.67	3.36

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.6.2 Market Actors

The prevailing process of egg marketing is not very dissimilar to the poultry marketing systems discussed in earlier section, majority poultry farmers are selling their eggs to the neighbors, villagers and local markets with exceptions of very few farm owners who used the market channels of whole seller, and to the agents of branded company in the project area. It has been observed that around 9% poultry farmers sell their poultry eggs through whole seller followed by 7% who sell eggs in the local markets. Regarding availability of branded company like Paragon and Narish only 1-2 companies are presently involved in egg marketing. The respondents of Sadar and Boyalmari informed about availability of 2 branded companies while the respondents of other Upazilas mentioned the name of only one branded company (Paragon). None of the respondents accepted about the use of mobile apps for egg marketing. Variation observed between the Upazilas for using marketing channels of eggs; and unusually more numbers of char dwellers said they sell their eggs through whole seller (17%), and 12% respondents in Char Bhadrason Upazila informed that eggs are selling to the local markets. In Sadar Upazila 6% egg producers using improved marketing channel for marketing against 5% in Boyalmari, 12% in Char Bhadrason, 3% in Sadarpur and 7% in Vanga. Details are showed in the table 4.8.

Table 4.8: Development of marketing systems of egg in the project area

Marketing system of egg	Number of market actor by Location/Upazila (% response)					Mean
	Sadar	Boyalmari	Char Bhadrason	Sadarpur	Vanga	
Whole seller	8.83	4.30	16.53	3.33	11.11	8.82
Local market	4.00	8.00	12.00	4.00	8.00	7.20
Branded company	4.00	4.09	6.18	2.80	1.60	3.73
Others (Use of Apps)	0.00	0.00	0.00	0.00	0.00	0.00
All	5.61	5.46	11.57	3.38	6.90	6.58

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.6.3 Market Linkage

Investigation on the scenario of market linkage of the respondent poultry farmers were made during the household survey and observed that some forward (selling to the whole seller or directly to the agent of branded company) and backward (collection of one day chicks, collection and carrying of quality feed from the branded company etc.) linkage is yet to be established by the household poultry rearers. Only the small/medium poultry farm entrepreneurs available (very few only 3-4 farms in the locality) in the project area have established some kinds of connection with the backward and forward business people to ensure

quality feed and to achieve good price of their products. The data summarized in the Table below (Table 4.9) expressed that only 5% of the respondent sample farmers established backward and forward linkage to promote their business. And among the locations/Upazilas the poultry farmers in Sadar (8%) and Vanga Upazilas (13%) are ahead of other three Upazilas in respect of establishing backward and forward linkage in poultry entrepreneurship.

Table 4.9: Present market linkage of poultry marketing in the project area in 2022-23

Market linkage	Response by Location/Upazila (%)					All
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	
Forward linkage	8.00	2.22	0.00	3.33	13.33	5.38
Backward linkage	8.00	2.22	0.00	3.33	13.33	5.38
Others	0.00	0.00	0.00	0.00	0.00	0.00
All	8.00	2.22	0.00	3.33	13.33	5.38

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.6.4 Market Price

The study collected the existing market price of the poultry, duck and eggs and presented in the following table 4.10. The average price of poultry per kg sold by the respondents is Tk 354/- and duck Tk 394/- per kg. It is mentioned that the average marketable size of poultry being sold by the household is 1.04 Kg. According to the farmers the price of eggs received at present is Tk 14.40 per piece. Considering the market price in the cities, the prices mentioned by the respondents are quite satisfactory and, in some cases, higher than the urban price. Considering both chicken and ducks, higher prices are being received by the households in Sadar Upazila, but the price of poultry received by the farmers in Boalmari is found very poor compare to other Upazilas and reason is not clear. It is to be concluded that the poultry farmers are receiving very good price at present for their poultry products. Details are showed in the Table 4.10.

Table 3.10: Market price of poultry in project area in 2022-23

Market price (BDT)/kg	Location/Upazila (#)					All
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	
Deshi poultry	400.95	203.81	380.91	392.14	395.33	354.63
Duck	435.00	211.43	450.00	445.79	427.78	394.00
Egg	14.60	14.30	14.20	14.30	14.60	14.40
All	417.98	207.62	415.45	418.97	411.56	374.31

4.7 Poultry Health Services and Mortality

Disease contamination and incidence are the major concern of poultry farming either for rural or urban areas. Considering the fact, the study tried to identify the level of accessibility of poultry farmers to the poultry health services being rendered by different Government and non-Government organizations. The results presented in the Table 4.11 revealed that on average 30.39% respondents are out of the accessibility of poultry health services provided by any of the concerned organizations. Out of the total respondents 40% accepted that they are getting poultry health services from DLS against 53% receiving poultry services from NGOs, 44% received services from LSP while none them accepted any sorts of services being received from poultry clinic or poultry association. Irrespective of the organizations, across Upazilas maximum respondents (31.82%) accepted to receiving poultry services in Char Bhadrason followed by Boalmari (27.04%), Bhanga (25.56%), Sadar (22.67%) and Sadarpur (17.22%). The intensity of disease incidences in poultry is assumed very high based on the mortality percentage reported by the respondents of different Upazilas. As informed by the respondents the mortality of household poultry in Sadar Upazila estimated as almost 40% followed by 35.67% in Sadarpur, 35% in Bonga, 29.89% in Boalmari and 31.82% in Char Bhadrason. The results indicated that there is enough scope to reduce the disease incidences of poultry through introducing proper vaccine and extension services. Details are showed in the Table 4.11.

Table 4.11: Accessibility to poultry health services by hh in the project area in 2022-23

Poultry health service provider	Accessibility to poultry health service (% response by Upazila)					All (%)
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	
No access	24.00	14.44	20.87	46.67	30.00	30.39
DLS	34.00	34.44	90.00	26.67	16.67	40.35
NGO	48.00	73.33	18.18	43.33	80.00	52.57
LSP	36.00	42.22	72.73	23.33	46.67	44.19
Poultry clinic	0.00	0.00	0.00	0.00	0.00	0.00
Poultry association	0.00	0.00	0.00	0.00	0.00	0.00
Other	8.00	2.22	0.00	0.00	0.00	2.04
All	22.67	27.04	31.82	17.22	25.56	24.86
Mortality percentage for Sonali chicken at farm level	6.00	4.00	5.00	6.00	4.00	5.00
Mortality (%) for deshi chicken	39.80	29.89	31.82	35.67	35.00	34.43

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.8 Existence of poultry hatchery and Processing Plant

Investigation was made to know the availability of poultry hatchery and poultry processing plant in the project area by Upazilas. In the surveyed area almost 80% respondents said about the presence of poultry hatchery in their locality and 20% have no idea of poultry hatchery in their area. None of the respondents know regarding availability of poultry processing plants in the project area. The responses of the poultry farmers varied between Upazilas (Table 4.12). While none of the respondents know about the availability of vermi-compost in the locality. Details of the responses are showed in the table 4.12.

Table 4.12: Availability of poultry hatchery and processing plant in project area

Upazila/Location	Response by location/Upazila (%)				
	Poultry hatchery		Processing plant		Vermi-compost plant
	Yes	No	Yes		Yes
Sadar	72.00	28.00	0.00		0.00
Boalmari	75.56	24.44	0.00		0.00
Char Bhadrason	90.91	9.09	0.00		0.00
Sadarpur	66.67	33.33	0.00		0.00
Vanga	93.33	6.67	0.00		0.00
All	79.69	20.31	0.00		0.00

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.8.1 Number of Poultry Processing Plant and Hatchery

The study quantified the availability of poultry processing plants and poultry hatchery in the surveyed areas and presented the data in Table 4.13. It has been observed that irrespective of locations only 1.41 processing plants and 1.27 hatcheries are presently available in the project area. Among the Upazilas Char Bhadrason ranked highest for numbers of poultry processing plant and poultry hatchery and Sadarpur reported least numbers of processing plants and hatchery. The numbers of poultry hatcheries are found higher in Char Bhadrason 1.64 followed by Boalmari 1.56, Vanga 1.40, Sadar 1.36 and Sararpur 1.10. Similarly the numbers of processing plants are found higher in Char Bhadrason 1.64 followed Vanga 1.40, Sadarpur 1.17, Sadar 1.20 and Boalmari 0.93. None of the respondent families have established either small or large vermi-compost plants for household or commercial use. Details are showed in the Table 4.13.

Table 4.13: Development of poultry hatchery and processing plant in project area in 2022-23

Upazila/Location	Response by location/Upazila (#)			
	Poultry hatchery	Processing plant	Vermi-compost	All
Sadar	1.36	0.00	0.00	1.36
Boalmari	1.56	0.00	0.00	1.56
Char Bhadrason	1.64	0.00	0.00	1.64
Sadarpur	1.10	0.00	0.00	1.10
Vanga	1.40	0.00	0.00	1.40
All	1.41	0.00	0.00	1.41

4.9 Availability commercial poultry farm

The study identified the intensity of commercial poultry farm in the project area. The responses of the sampled households in respect of the number of poultry farms are summarized in the table 4.14. It has been observed that regardless of locations/Upazilas, on an average there are 1.45 small poultry farms (100 to 500 birds) in the surveyed area, 1.52 medium poultry farms (5001 to 1000 birds) and 0.59 large farms (1001 to 2000 birds) in the locality. Among the Upazilas, Vanga has more numbers of small poultry farms (1.73) followed by Sadar Upazila (1.72), Char Bhadrason 1.36, Boalmar 1.24 and Sadarpur 1.20. The intensity of medium poultry farm is found higher in Vanga 2.13 followed by Char Bhadrason 1.45, Sadar 1.44, Sadarpur 1.33 and Boalmar 1.22. Unusually the intensity of large poultry farms is found higher in Char Bhadrason (1.64) followed by Sadarpur 0.87, Boalmari 0.67, and 0.07 in Sadar and Vanga. Irrespective of farm sizes Char Bhadrason has 4.09 farms, Vanga 3.93, Sadarpur 3.40, Sadar 3.23 and Boalmari 4.14 farms available at present. Details are showed in the Table 4.14.

Table 4.14: Development of poultry farm and industry in project area in 2022-23

Poultry farm/industry (#)	Number of farm by Location/Upazila					All
	Sadar	Boalmari	Char bhadrason	Sadarpur	Vanga	
Small farm (100 to 500 bird)	1.72	1.24	1.36	1.20	1.73	1.45
Medium (501-1000 bird)	1.44	1.22	1.45	1.33	2.13	1.52
Large (more than 1001-2000 bird)	0.07	0.67	1.27	0.87	0.07	0.59
Total	3.23	3.13	4.09	3.40	3.93	3.56

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.10 Feeding systems of poultry

During the baseline survey investigation was made to explore the feeding systems being practiced by the household poultry rearers and in commercial farming. The responses of farmers expressed in percentage are summarized and presented in the following table 4.15. On an average 93% respondents mentioned that they are rearing their poultry under semi scavenging systems of feeding. Actually the respondents who have commercial poultry farm they are using ready feed, which they mentioned as safe feed too. The intensity of commercial poultry farms in the Upazilas ranged from 3-4, so except those farmers all other respondents are invariably rearing their poultry birds following semi-scavenging feeding systems. Averaged by Upazilas, only 7% respondents accepted to use ready and safe feed for poultry. Considering Upazilas, except Vanga in all other Upazilas more than 90% farmers are following semi scavenging systems of feeding their poultry resources. In Banga 87% farmers said they are practicing semi scavenging method and 13% said using ready and safe feed for feeding their poultry. Similarly in Sadar only 8% farmers using ready and safe feed, in Char Bhadrason 9% respondents using ready and safe feed for poultry rearing. Interestingly none of the farmers given positive response for using environment friendly feed and practice of good poultry husbandry. The results indicated that there enough scope for improving the feeding systems of poultry for the locality by introducing good poultry husbandry and use of environment friendly technology. Details are showed in the table 4.15.

Table 4.15: Feed management of poultry in the project area in 2022-23

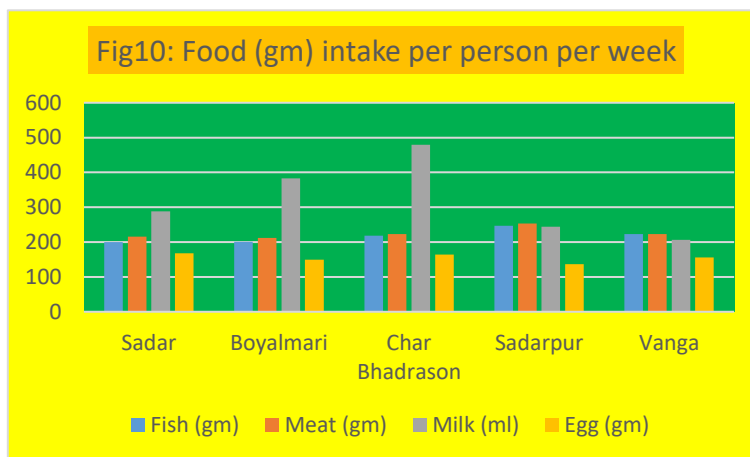
Existing feeding system	Response of farmer by Location/Upazila (%)					All
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	
Semi scavenging	92.00	97.78	90.91	96.67	86.67	92.80
Use of ready feed	8.00	2.22	9.09	3.33	13.33	7.20
Use of safe feed	8.00	2.22	9.09	3.33	13.33	7.20
Use of environment friendly technology	0.00	0.00	0.00	0.00	0.00	0.00
Good poultry husbandry	0.00	0.00	0.00	0.00	0.00	0.00
All	36.00	34.07	36.36	34.44	37.78	35.73

n = Faridpur Sadar 77, Boalmari 77, Sadarpur 75, Char Bhadrason 64 and Bhanga 77

4.11 Nutritional Status of Poultry Farmers

The nutritional status of the family members of the respondent families was measured through gathering information on the intake of fish, meat, milk and egg per week per person. The collected data are summarized and presented in the following figure 10. The estimation of food intake by the respondents was made by getting number of pieces and number of times taken the particular food item per week per person like fish, meat and eggs while for milk number of times taken per person per week were estimated. It has been observed that averaged across

Upazilas the sampled respondents have taken 217.86 gm fish per week per person; 225.52 gm meat consumed per person per week, 155 gm eggs and 2.80 numbers of eggs eaten per person per week. The figure 4 compared the food intake of the beneficiaries by different food



items like egg, milk, meat etc. On the other hand, 320.34 ml milk was taken per person per week. It is noted that the figures of food items intake by the respondent family members are estimated actually values based on the information provided by the farmers during baseline survey. Among the Upazilas highest amount of fish being taken by the respondents of Sadarpur Upazila (246.67 g/person/week) followed by Vanga (223.33 g/person/week), Char Bhadrason (218.18 g/person/week, Boalmari (201.11 g/person/week and Sadar (200 g/person/week). Mostly similar trends is found in case meat and milk intake. Little variation between Upazilas is found in case intake of numbers of egg/person/week. Details data are shown in the table 2.4 and annex 2.

5. Conclusion

After analyzing the information, it could be concluded that:

- The intensity of poor households in the surveyed area (74% have 10-20 decimal land resources/family) made scope for increasing commercial poultry farmers.
- The availability of poultry resources including poultry products in the project area are still poor and income of target households from poultry products are very minimum.
- The income of the targeted households from poultry resources is found only 1-2% of their total family income and for family expenditures they are mainly relied upon other than poultry incomes (98-99% of the family income).
- And it could be assumed that there is enough scope to increase the family income through introducing proper extension services of poultry by reducing the disease incidences in their household deshi chicken and duck.

6. Recommendation

- Majority of the households (90%) are rearing deshi chicken, so, existing chicken breeds are to be changed with suitable improved commercial poultry breed for enhancing the income of the families
- Majority of the households (69%) are rearing deshi duck, existing duck breeds are to be changed with suitable improved commercial duck breed for enhancing the income of the families
- Numbers of poultry per household (existing 2.65/family) are to be increased to 9-10, so that their poultry to be increased by 3-folds
- The project should have strategy to establish enough numbers of small-scale commercial poultry/duck farms finding suitable interested farmers
- Special thrusts/efforts are to be paid to increase the numbers of poultry entrepreneurs in the locality, so that poultry/duck rearers can ensure proper market price of their poultry products
- The poultry mortality rate is found around 30-40% at the farmers level of deshi chicken, it is recommended that the mortality may be reduced to 10% by proper vaccination program.

7. Logical framework indicators (Baseline data and Target)

As per logical framework indicators of the project, the table (3.20) showing that the baseline data in case of average income of project participants, nutritional food average intake per person per week, average poultry sell, benefit earned by poultry, safe feed used, good poultry husbandry practices were found BDT 251,112/year, Fish- 217.86 gm, meat 225.52 gm, milk- 320 ml and egg-2.58, 2.65 (Poultry#) and 141.81 (Egg#), 7.20% farmers, 0% farmers respectively. Similarly, the baseline data in case of average mortality of deshi chicken (34.43%) & farm level (5%), contact farming (4.4%), whole seller (8.82%), average poultry per family (7.08%) were also found. The details indicators along with baseline data are showing in the table (3.20).

Table 7.1: Result based Monitoring and Evaluation

Description	Performance indicators	Baseline Data	Target	Source
<p>Project goal Increasing income with enhancement of food and nutritional security for marginal farmers, small and large farmers</p>	<ol style="list-style-type: none"> At least 50% income increased for 60% project participants Added nutritional food to their daily food menu for 60% project participants 	<p>BDT 251,112.00 /year</p> <p>Average intake/person/week</p> <p>Fish- 217.86 gm Meat- 225.52 gm Milk- 320.34 ml Egg- 2.58 (#)</p>	<p>BDT 376,668.00/year</p> <p>Added nutritional food to their daily food menu for 60% project participants</p>	
<p>Objectives Sustainable value chain Development of Selected rural products under the project</p>	<ol style="list-style-type: none"> Increased sell at least 30% of poultry products (chicken and egg) for 80% project participants Increased at least 20% profit for 80% project participants from the baseline survey 	<p>Average poultry product sell/HHs/year</p> <p>Poultry – 2.65 (#) Egg- 141.81 (#)</p> <p>Benefit earned by poultry/family/month 249.03</p>	<p>Poultry – 3.44 (#) Egg – 183 (#)</p> <p>Benefit earned by poultry/family/month 298.83</p>	
<p>Adopted and strengthening the livestock related activities like effective production method, internationally recognized safety standards, traceability, marketing linkage etc.</p>	<ol style="list-style-type: none"> Operated the safe food production activities through quality inputs, improved technology and best practices by all project participants. 	<p>Safe feed used by 7.20% farmers was found during baseline survey</p> <p>Good poultry husbandry practices used by 0% farmers</p>	<p>Operated the safe food production activities through quality inputs, improved technology and best practices by all project participants.</p>	

Description	Performance indicators	Baseline Data	Target	Source
	<p>2. At least 13% producer group operated the business in collaboration with public, private or wholesaler on the basis of institutional or contractual.</p> <p>3. At least 58% project beneficiaries adopted the environment friendly SMART technology.</p>	<p>Contact farming (private) - 4.4% Whole seller- 8.82%</p> <p>Use of environment friendly Technology at farm level Response of farmer- 0%</p>	<p>1235 producer groups operated the business in collaboration with public, private or wholesaler on the basis of institutional or contractual.</p> <p>58% project participants Used of environment friendly Technology at farm level</p>	
<p>Created employment opportunity at local level through dynamic, extended and sustainable business for the male and female producer group to improve their livelihood in relation with livestock value chain.</p>	<p>1. Reduced mortality 10% by practicing improved technology and good animal husbandry practices.</p> <p>2. Increased body weight from the baseline survey</p> <p>3. Reduced 10% of production cost</p>	<p>Mortality for Deshi chicken -34.43%</p> <p>Mortality at farm level- 5%</p> <p>Marketable live body weight- 1.04 kg/piece</p> <p>For deshi , Production cost- 250 tk per kg live weight/yr</p>	<p>Mortality for Deshi chicken reduced from 34.43 to 24.43%</p> <p>Mortality at farm level- 0%</p> <p>Increased body weight from the baseline survey</p> <p>Production cost- 225 tk per kg live weight/yr</p>	

Description	Performance indicators	Baseline Data	Target	Source
	<p>4. Due to formal and informal market linkage of chicken and egg at least 25% production increased and selling price increased 10% of the products</p> <p>5. Established 10% broiler processing plant of the production and operated the processing activities</p> <p>6. Sold the frozen meat at national and local through sub-contracting system</p> <p>7. Increased entrepreneurs and farmers 10% due to access of backward and forwarding market system. In addition 15% employment created</p>	<p>For farm level production cost- 220 tk per kg live weight</p> <p>Avg. No. of poultry per family- 7.08 and Marketable live body weight- 1.04 kg/piece</p> <p>Avg. Selling price of deshi poultry- 354.63 Tk/kg</p> <p>Avg. Selling price of duck- 394.00 Tk/kg</p> <p>Sonali processing plant- 0.00 % was found</p> <p>Sold the frozen meat at national and local through sub-contracting system was found 0%</p> <p>Entrepreneurs and farmers -5.38%</p>	<p>For farm level production cost- 198 tk per kg live weight</p> <p>Poultry no. increased per family- 8.85 and Marketable live body weight- 1.30 kg/piece</p> <p>Avg. Selling price of deshi poultry- 390.09 Tk/kg</p> <p>Avg. Selling price of duck- 433.40 Tk/kg</p> <p>Established 10% broiler processing plant of the production and operated the processing activities</p> <p>Sold the frozen meat at national and local through sub-contracting system</p> <p>Increased entrepreneurs and farmers 5.918% due to access of backward and forwarding market system.</p>	

Baseline Study of Market System Development of Safe Poultry and Poultry Products, Aug 2023

Description	Performance indicators	Baseline Data	Target	Source
		Poultry Employment-5.38%	Employment created-6.187%	
Outputs Ensured access to livestock services	<ol style="list-style-type: none"> 1. Established one livestock vaccinator and veterinary clinic for each Union. 2. Provided support to poultry vaccine, deworming tablet, required medicines and other related services. 3. Around 80% farmers received services in the project area. 4. Developed Sub dealer for selling poultry feed (At least 10 ton) in each Union. <p>Availability of ready feed/balanced feed for the 80% farmers in the project area.</p> <ol style="list-style-type: none"> 5. Supplied around 10000 number day old chicks in each month by every hatchery 	<p>Livestock vaccinator-2 Veterinary clinic-0</p> <p>Providing support to poultry vaccine, deworming tablet, required medicines and other related services were not satisfactory.</p> <p>30% project participants in the project areas had no access to the primary health care services.</p> <p>5.38% sub-dealer were found in the baseline survey</p> <p>7.20% farmers used ready feed</p> <p>1.41% mini hatcheries were found in the project areas and production was 600 doc/year</p>	<p>Livestock vaccinator-3 Veterinary clinic- 1</p> <p>Provided support to poultry vaccine, deworming tablet, required medicines and other related services.</p> <p>24% project participants received the services with the consideration of those had no access</p> <p>Developed Sub dealer for selling poultry feed (At least 10 ton) in each Union.</p> <p>87% farmers used ready feed</p> <p>Supplied around 10000 number day old chicks in each month by every hatchery</p>	

Baseline Study of Market System Development of Safe Poultry and Poultry Products, Aug 2023

Description	Performance indicators	Baseline Data	Target	Source
	6. Transformed at least 10% farm from small to commercial.	Average number of small farms (100-500) were found 1.45% in the project areas	Transformed at least 11.45% farms from small to commercial.	
Ensured access to ICT, finance and market linkage (formal and non-formal).	<ol style="list-style-type: none"> 1. Produced egg and meat contractually under the project by 10% farmers 2. Developed meat processing plant (capacity 4 ton) in every month and at least 50 buyer purchased the frozen meat through sub contacting to the plant. 3. Contributed to develop egg and chick market by the DLS and poultry association 4. Established Egg Whole seller (Arotder) in each union. 5. Developed Small scale egg washing hub and at least one egg brand company in the project area. 	<p>4.4% project farmers produced egg and meat contractually.</p> <p>No meat processing plant was observed during baseline survey.</p> <p>No egg and chick markets were found in the project area during baseline survey</p> <p>Whole seller -02 in each union was found</p> <p>Small scale egg washing hub -0 Egg branding company was found -2</p>	<p>14.4% project farmers produced egg and meat contractually.</p> <p>Developed meat processing plant (capacity 4 ton) in every month and at least 50 buyer purchased the frozen meat through sub contacting to the plant.</p> <p>Contributed to develop egg and chick market by the DLS and poultry association</p> <p>Established Egg Whole seller (Arotder) in each union.</p> <p>Developed Small scale egg washing hub and at least one egg brand company in the project area.</p>	

Baseline Study of Market System Development of Safe Poultry and Poultry Products, Aug 2023

Description	Performance indicators	Baseline Data	Target	Source
	6. Established Hygienic and Halal poultry chain shop in each union.	No Hygienic and Halal poultry chain shop was found	Established Hygienic and Halal poultry chain shop in each union.	
	7. Sold at least 2 ton frozen and live meat from Halal poultry shop.	Frozen and live meat selling activities from Halal poultry shop were not found	Sold at least 2 ton frozen and live meat from Halal poultry shop.	
	8. Developed at least 5 agents for selling chick, egg and meat in each union of the project area.	One agent for selling chick, egg and meat in each union of the project area was found.	Developed at least 5 agents for selling chick, egg and meat in each union of the project area.	
	9. Used APPs at least 15% entrepreneurs for poultry business.	Used of APPs 0%	Used APPs at least 15% entrepreneurs for poultry business	
	10. Used online portal news for Updated poultry price	Used online portal news 0%	Used online portal news for Updated poultry price	
	11. Established vermi/tri compost factory (capacity 8 ton) by using poultry waste	Established vermi/tri compost factory 0%	Established vermi/tri compost factory (capacity 8 ton) by using poultry waste	

Annexure

Annex 1: Work plan

The Terms of Reference (TOR) of the study has set the deliverables that need to be generated from the baseline study. The consultant along with research associate to implement the study. Implementation of a study requires number of activities that are planned and carried out. The activities vary in respect of priority. A work plan is an important part of the baseline study. There are some activities which if delayed result would delay for the whole study. Delay in finalization of data collection instruments will delay the start of data collection work. Such activities are critical activities. The team will be careful to complete the critical activities in time so that the study can be completed in time.

The work plan provides a clear description of the major work items that need to be performed to carry out the baseline study. The following table shows the activities in each group. The critical activities are shown in the remarks column and will be carefully treated.

Tentative Timeline and activities of the Baseline Study

Activities	1 st Month	2 nd Month	3 rd Month
1. Planning meeting, review of documents, detailed work plan and instrument development			
2. Providing inception report			
3. Finalization of study design and Preparation of HHs questionnaire for quantitative data and FGD and KII checklist for qualitative data			
4. Finalization of research associate			
5. Filed trial			
6. Conducting field research			
7. Writing draft reports			
8. Sharing and revising draft reports			
9. Submission of final report			

Annex 2: Data on household poultry enterprises

Annex Table 2.1: Households with poultry enterprise in the project area in 2022-23

Location/Upazila	Households with poultry resources (%)					
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	All
Deshi chicken	84	72	100	93	100	89.8
Duck	93	53	36	97	67	69.2
All	88.5	62.5	68	95	83.5	79.5

Table 2.2 : Number of poultry reared by the respondents in project area in 2022-23

Poultry breed	Number of poultry/family by location/Upazila					Total	
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	Number	Mean
Deshi (#)	7.83	13.24	5.27	7.90	9.00	43.24	8.65
Sonali (#)	0.00	0.38	0.00	0.00	0.00	0.38	0.08
Duck	8.63	6.92	4.36	4.83	2.40	27.14	5.43
Pigeon	0.71	0.00	0.00	0.00	0.00	0.71	0.14
All	8.23	10.27	4.82	6.37	5.70	35.38	7.08

Table 2.3: Household income from poultry products in project area in 2022-23

Resource/enterprise	HH income from poultry/month by Location/Upazila (BDT)					All
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	
Poultry	152.94	106.00	59.09	53.33	70.00	88.27
Egg	185.80	228.44	129.09	155.83	151.67	170.17
Total	338.74	334.44	188.18	209.17	221.67	258.44

Table 2.4: Intake of nutritious food by the respondent in project area in 2022-23

Food item	Intake/person/week by Location/Upazila (gm)					All
	Sadar	Boalmari	Char Bhadrason	Sadarpur	Vanga	
Fish (gm)	200.00	201.11	218.18	246.67	223.33	217.86
Meat (gm)	216.00	212.22	222.73	253.33	223.33	225.52
Milk (ml)	288.00	383.33	479.55	244.17	206.67	320.34
Egg (gm)	168	149	164	136	156	155
Egg (#)	2.80	2.49	2.73	2.27	2.60	2.58

Annex 3.

Household Survey Questionnaire
Rural Microenterprise Transformation Project (RMTP)
Market System development of safe poultry and poultry products

Location: Name of Group _____ Village _____ Upazila
_____ District _____

1. Name of beneficiaries _____
2. Age _____
3. Family Size _____
4. Education _____
5. Total land area (dec) _____
6. Poultry resources no. a) Broiler _____ b) Layer _____ c) Deshi _____
d) Sonali _____ e) Duck _____ f) Pigeon _____
7. Family income (TK) from Poultry resources _____
8. Family income (TK) in total _____
9. Poultry marketing i) sell of poultry (TK/month) _____ ii) Sell of poultry
egg (TK/Month) _____ iii) Average selling weight in
KG _____
10. Marketing of Poultry to the agent/ sub-contractor Yes/no _____
11. Price of broiler/Sonali (liveweight in KG) BDT _____
12. Use of APAS for poultry management and marketing Yes/No _____
13. Benefit earned from poultry rearing (meat/egg/compost) per month in
BDT _____
14. Production of Safe food (egg, meat) through improved technology
Yes/No _____

15. Do you involve in contact farming with govt/private organization yes/no _____
16. Use of environment friendly technology Yes/No _____
17. Average poultry mortality in percentage (last year died) _____
18. How many broiler processing plant in Union _____
19. Poultry Health services received ; a) DLS _____ b) NGO _____ C) LSP _____ d) Others _____
20. How many egg whole seller/ market in union yes/no (if yes pls tell no. _____)
21. How many egg washing hub in Union Yes/No (if yes pls. tell no _____)
22. How many company of brand eggs in Union _____
23. No. of poultry farm in Upazila/union _____ and Size of farm a) Small (100-500 birds) _____ b) Medium (501-1000) _____ c) large (1001-2000) _____
24. No. of hatchery union/upazila _____
25. Do you involve with supply chain (Contract framing) yes/no _____
26. How many Labour used /farm _____
27. How many LSP working in Union _____ b) No. of livestock Clinic per Union _____
28. Use of Feed: Ready balanced feed _Y/N _____
29. Did you take services from DLS/Poultry Association in marketing of poultry /products Yes/No _____
30. Poultry backward and forward marketing linkage experience a) Yes _____ b) No _____
31. Access to good poultry husbandry practices Yes/No _____
32. How many Vermi compost/tri compost factory in Union _____
33. Did you get information about poultry meat and egg selling price from online Yes/no _____
34. Access to nutritious food in amount (gm/liter/pieces): a) fish intake / week _____ b) intake of meat/ week _____ c) milk /week _____ d) egg/week _____

Check List for KII
Rural Microenterprise Transformation Project (RMTP)
Market System development of safe poultry and poultry products

Name of interviewer:

Date:

Address:

Cell no.

DLS Officer/NGO Staff/DAE officers/ Poultry entrepreneur/ Poultry value chain actors/

1. Incidences of NGO Services in the locality

2. Is the area low lying or high land area (Y/N): a) Suitable for poultry rearing ___ b) Non-suitable ___
3. Population of poultry framing (Average No. per family) _____ a) Breed

4. How many LSP available in the village or Upazila _____ a) Male _____ b) Female _____
5. Did you implement training for livestock/poultry improvement _____

6. Types of training _____
7. Treatment facility: a) No. of poultry medicine store per village or Upazila _____
b) LSP _____
8. Is there any poultry farms or how many commercial poultry farmers in the village or Upazila _____
1. Farming: indigenous _____ b) Poultry shed _ i. Cage system ii. Floor, iii, Macha _____ c) Others _____
9. Feeding system practiced in locality _____
10. Feed availability/Types of feed _____
11. Feed price _____
12. Poultry Marketing system _____
13. Poultry processing plant _____
14. Price of poultry in the market __ a) Meat_(live per kg and Proceed /KG) _____
____ B) Egg /piece
15. How can we improve the Poultry value chain in the targeted location (s)

16. What are the major challenges in poultry farming _____
17. For sustainable poultry production what types of skill training is needed _____

Check List for FGD
Rural Microenterprise Transformation Project (RMTP)
Market System development of safe poultry and poultry products

Location: Village _____ Upazila _____ District _____
Name of Group _____ Date: _____

1. Type of poultry farm : a) Meat _____ b) Egg _____
2. Size of farm a) Small (100-500 birds) _____ b) Medium (501-1000) _____ c) large (1001-2000) _____
3. Types (breed) of Poultry you reared: a) _____ b) _____ c) _____
4. Source/Collection of breed: a) Owned _____ b) Relative _____ c) DLS _____
d) Agents _____
5. Housing: a) indigenous _____ b) Poultry shed _ i. Cage system ii. Floor, iii, Macha _____ c) Others _____
6. Feeding: a) Ready balanced feed _Y/N source _____ b) Home made _____ c) Others _____
7. Feeding quality: a) Low _____ b) Medium _____ c) High _____
8. Disease incidences: Y/N Name: a) _____ b) _____ c) _____
9. Treatment: a) No treatment _____ b) Local LSP _____ c) Upazila VS _____ d) Others _____
10. Poultry Mortality (#died in last one year) _____
11. Marketing of Poultry: a) Sell to the agent ____ b) Sell to the market ____ C) Sell to the middle man -----
12. Selling age of broiler (general):
a) 35 days _____ price _____ b) 40 days _____ Price _____ c) After 40 days _____
Price _____
13. Marketing System: a) From home _____ b) Local market _____ c) Upazila/District market _____
14. Meat Product: Types of product: _____
15. Use of cash a) buying new farm _____ b) Education _____ c) Treatment _____
Occasion (marriage of children) _____
16. DLS services: a) did you visited ULO/VS _____ b) Is any of the DLS officer visited your village _____
17. Use of Antibiotic (How frequency) a) Seven days _____ b) 15 Days _____
C) 30 days _____
18. Access to Finance a) NGO _____ b) Bank _____ C) Others _____
19. Access to Chicken processing plant a) sometimes _____ b) once in month
C) once in two months
20. Poultry backward and forward marketing linkage experience a) Yes _____ b) No _____

21. Whether Broiler/layer farming profitable Y/N – Small (100-500 bird) BDT_____ b) Medum (501-1000) _____ C) Large (1001-2000) BDT_____
22. Access to smart poultry technology a) Yes_____ b) Little_____ c) No-----
23. Deposal of Poultry litter _ a) _____ B) _____ C) _____
24. Source of Information on poultry fare price a) online_____ b) agent_____ C) Middleman d) Buyer

Rural Microenterprise Transformation Project (RMTP)
Market System development of safe poultry and poultry products

Interview guide for value chain analysis

Name of interviewer

Date:

Address:

Cell no.

1. What do you see as your needs/opportunities in accessing markets?
2. To whom do you sell your product or service (large farms, small farms, wholesale, exporters, retailers direct to consumers etc.) what percentage goes to each
3. Describes the relationships you have with these buyers
4. How do you promote and market your products/ services?
5. How strong is the market for your products/services right now? Next year ? what trends do you see?
6. Are some customer groups better than others in terms of sales and revenue growth? Which ones ?

7. Do you ever collaborate with other farms on promotion and or marketing?
8. Who are major competitors ?
9. Do you have a means of communicating information about your farms to others
10. What standards or certification requirements do your products need to confirm to ?
11. What have you done recently to improve your products or services ?
12. What are the major needs/ opportunity for your organization in the area of management?
13. What type of management skills need to strengthen to expand your business?
14. What are your major needs/opportunities in the areas of input cost, quality and availability
15. What are the most important suppliers ?
16. Do you have faced any problems in obtaining important inputs?
17. Where do you go when you need money for business?

18. Do you get credit from input suppliers ? what are the terms and condition?
19. What government policies /regulations benefit your business?
20. What government polices /regulations are obstacles to expand your business?
21. Are you a member of business organization ? if not why
22. What are the major incentives you have for investing in /promoting change in the value chain?
23. What risk or constraints do you face in marketing ?
24. What do you think are the strengths of you farm in locally and internationally ?
25. What are the weakness of your poultry farm?
26. What do you think is the greatest challenges facing your industry today?