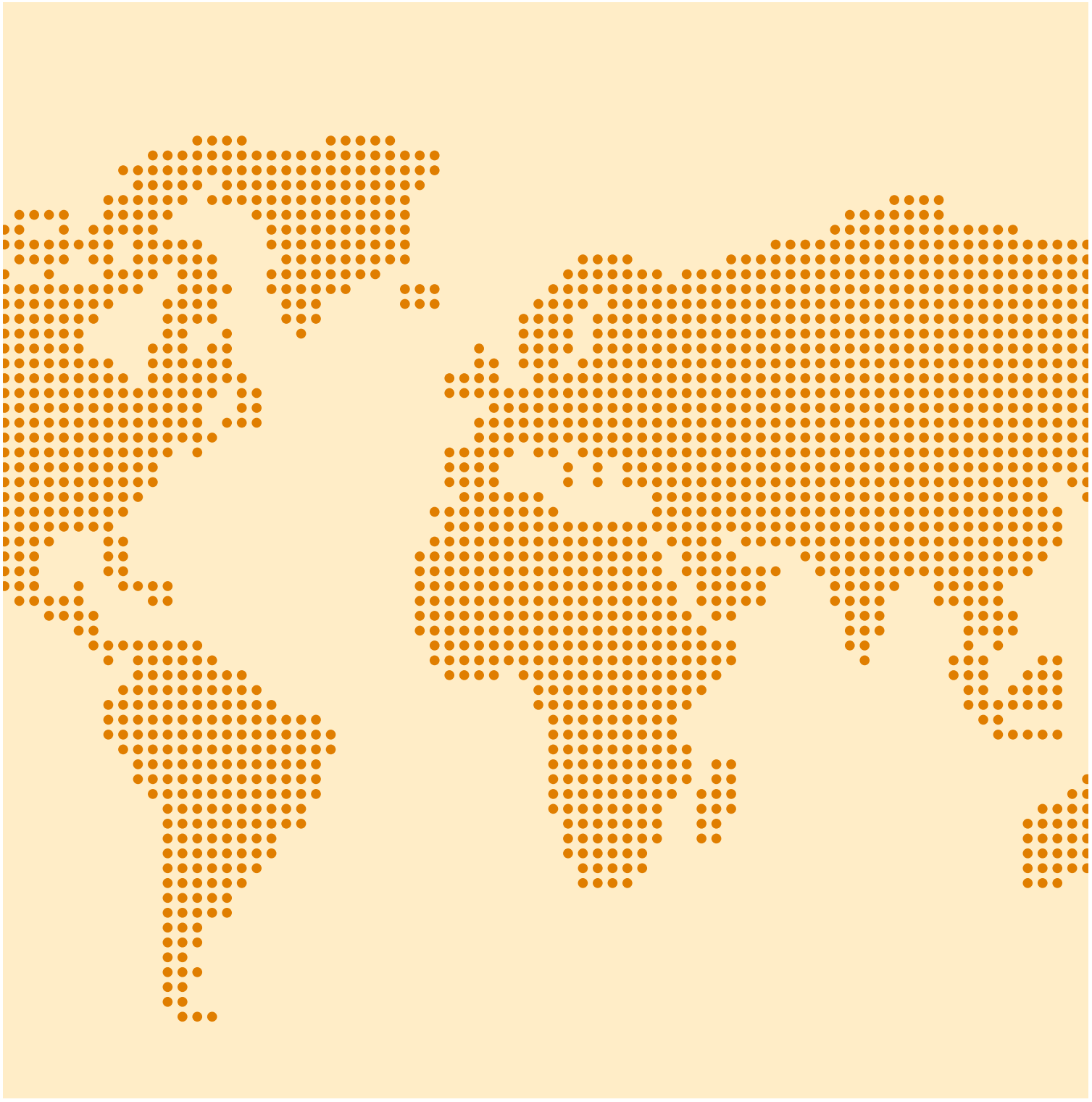

2018:24 Sida Decentralised Evaluation

Bo Tengnäs
Shibaji Roy

The Evaluation of the Dairy Hub and Dairy Academy Development Project in Bangladesh

Final Report

Sida

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Final Report
August 2018

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Sida Decentralised Evaluation 2018:24
Sida

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Sida Decentralised Evaluation 2018:24

Commissioned by Sida

Date of final report: 2018-08-31

Published by Nordic Morning 2018

Art. no. Sida62175en

urn:nbn:se:sida-62175en

This publication can be downloaded from: http://www.sida.se/publications

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Abbreviations and acronyms

B4D	Business for Development
CSO	Civil Society Organisation
CSR	Corporate Social Responsibility
DA	The Dairy Academy
DCED	Donor Committee for Enterprise Development
DLS	Department of Livestock Services
FAO	Food and Agriculture Organisation of the United Nations
FfD	The Tetra Laval Food for Development Office
FSMS	Food Safety Management System
HACCP	Hazard Analysis and Critical Control Point
HRBA	Human rights-based approach
IFC	International Finance Corporation
M&E	Monitoring and Evaluation
M4P	Making Markets Work for the Poor
MoFL	Ministry of Fisheries and Livestock
MSEK	Million Swedish Krona
NGO	Non-Governmental Organisation
PD	Project Document
PDA	PRAN Dairy Academy
PPDP	Public Private Development Partnership
PSC	Project Steering Committee
PSD	Private Sector Development
SEK	Swedish Krona
Sida	Swedish International Development Cooperation Agency
ToR	Terms of Reference
UNIDO	United Nations Industrial Development Organisation
USD	United States Dollars
VMCC	Village Milk Collection Centre

Preface

This report presents a final evaluation of the project "Dairy Hub & Dairy Academy Development in Bangladesh" implemented by a partnership consisting of PRAN Dairy Ltd, UNIDO and Tetra Laval AB with financial support from the Swedish International Development Cooperation Agency (Sida). The Government of Bangladesh through the Department of Livestock Services of the Ministry of Fisheries and Livestock has signed on to the programme and interacted in various ways during the implementation.

The Evaluation was conducted during May–August 2018 by a team of NIRAS evaluators: Bo Tengnäs (Team Leader) and Shibaji Roy (Private sector development specialist).

The findings and recommendations presented in this report are based mainly on document reviews and on personal interactions with a large number of stakeholders including staff of the agencies involved in the project and a large number of farmers, milk collectors and local milk processors operating in the project area.

The evaluation team wishes to express its sincere thanks to all respondents who willingly spared some of their valuable time for personal interactions or other forms of engagement with the evaluation team.

The views and interpretations expressed in this report are the authors' and do not necessarily reflect those of Embassy of Sweden in Bangladesh.

Executive summary

This report presents a final evaluation of the Dairy Hub and Dairy Academy Project in Bangladesh implemented jointly by UNIDO, PRAN Dairy Ltd and Tetra Laval AB with support from Sida through the Embassy of Sweden in Bangladesh. The project was approved for funding in 2013. After an inception period and somewhat slow start the project gradually gained momentum during 2016 and 2017. The project aimed at *lifting beneficiaries from poverty by increasing their income through improved know-how on efficient dairy production*, while one of the project purposes was *to establish a Dairy Academy and five dairy hubs with village milk collection centres.*

Over 60 new village milk collection centres were established in the project area in north-western Bangladesh. Each collection centre is equipped with cooling tanks and equipment for milk testing. Extension and technical services are offered to the about 13,000 farmers who have been registered for milk delivery to the collection centres. The 60 new collection centres with another 40 centres that already existed are operational at the end of the project period, although the new collection centres are still operating below their capacity.

PRAN Dairy Ltd. has operated a Dairy Academy since 2011. The Academy as continued its training during the project. Curricula were upgraded. Farmer training has been offered, usually in the vicinity of the village milk collection centres.

A key factor contributing to progress was that PRAN Dairy Ltd. had shown strength in implementation. Even though an overall finding of the evaluation was that a lot was done on the ground with a project budget that was modest compared to many other projects, some critical points were also highlighted:

- The reporting system used by the project was useful for regular monitoring but not for credible results reporting.
- The financial reporting did not clarify the allocation of Sida funds to PRAN and UNIDO respectively, and also, did not provide overview of the total project investment with partners own in-kind and financial inputs.
- Sida is not mandated to disburse project funds to private companies as a part of a project designed as a Public Private Development due to legislation. In this case, the largest share of Sida funds was disbursed to PRAN Dairy Ltd, although through UNIDO. External audits were not conducted on the level between UNIDO and PRAN Dairy Ltd. These arrangements did not yield the level of financial control that Sida requires for other types of projects.
- The project organisation was not clearly described from the start. A Project Steering Committee was appointed but met infrequently with somewhat erratic follow up on the decisions it made.
- A Human Rights Based Approach, which is of key importance for Sida, involves engaging with both rights holders and duty bearers to address not only poverty stemming from low access to money, but also the wider

causes of poverty such as difficulties for people living in poverty to make their voice heard. The project did avail chances for enhanced income but did not work proactively to support community organisation and awareness for enhanced collective action and collective voice.

- As no detailed target group analyses was carried out, the specific needs of women, men, girls, boys and farm workers were not identified and actions to address such identified needs were not designed. A gender strategy was discussed but not developed.
- The project was located to areas where other companies were also active with milk collection centres, and there were also opportunities for farmers to sell milk to local processors and in local markets. It was observed by the evaluation that the development value from a donor perspective would have been higher if the project had targeted areas where systems for milk sales were less developed.

Some of the above observations originate from the project design while others are linked to the implementation modalities. The evaluation team made several recommendations among which the following are highlighted here:

Selected recommendations on project design:

An external appraisal of a project proposal of this type should always be conducted, and if an inception period is opted for, a second appraisal after the inception should also be considered.
A justification assessment should always be made on the development value of an intervention in relation to the local context. An initiative targeting an area where milk collection is not already organised should justify a higher level of donor support than other areas. Areas where there is already a vibrant dairy value chain should not be considered for this type of project.
Examine why there is a guideline preventing allocation of Sida funds to a private actor and develop a user-friendly policy that clarifies in which circumstances the use of an intermediate agency will be in line with the general guideline, or revise the guideline.
A project of this nature should be based on a description of the context related to: • Level of community organisation and needs in that respect • Government policy and involvement modalities • Solid waste management with reference to milk packages • Food safety issues. Project design should address gaps identified.
Addressing the wider capabilities of the farmers to defend their interest should be part of all designs. Collective voice and collective action should be promoted, which can be through more informal common interest groups and through training.
Any project considered must include a target group analyses for identification of needs of disadvantaged groups, including women, and inclusion of actions to address such needs.

Selected recommendations on project implementation and results monitoring:

Having a position for an Monitoring and Evaluation (M&E) specialist is a must for future projects to ensure high-quality M&E.
For results reporting, it is important to collect information through a third party to avoid bias. Using services of a monitoring consultant may be helpful if engaging a third party for data collection is beyond reach.
More effort should be allocated to the production of good quality reports with reader-friendly analyses and credible results reporting.
Further socioeconomic studies and initiatives will be essential, not only for communities, but also for PRAN's staff policies, PRAN's understanding of limiting factors for milk production at household levels, and for PRAN's ability to expand the effective collection area from two to five kilometre radius.
Contents of chemicals used should always be verified to ensure they are not detrimental to the environment.
Develop advice on manure management for larger farms and adopt such advice in the extension service to avoid water pollution and waste of nutrients.
Develop more elaborate training material on farming as a business and include it in training at different levels.
There should be clear and agreed procedures from the beginning on how financial transparency will be ensured and visible to the stakeholders for joint responsibility, overall accountability, and for donor's needs to be satisfied.
A private actor with institutional and financial strength is a key factor for success. Company management of VMCCs equipped with cooling facilities is advantageous since efficient operation requires an umbrella organisation for back up service.
Tetra Laval AB should initiate a lifecycle analysis on its packaging material and have a clear stand on how to address recycling in a country like Bangladesh.
For learning it would be useful, and in this case possible, to conduct a post evaluation of the project after some three years.

1. Introduction

1.1 PROJECT HISTORY

Since 2011, PRAN Dairy Ltd has invested in Dairy Hubs and Village Milk Collection Centres (VMCCs) through which the company can get access to more and better milk for processing. PRAN has also been facilitating training of farmers and experts to improve the milk supply in terms of quantity, quality and seasonality.

Based on this and other experiences, PRAN and Tetra Laval AB entered into a dialogue with Sida to explore possibilities to jointly scale up the efforts. In this process, UNIDO was identified as a suitable implementing partner for an upcoming project. In November 2013 an agreement was signed between Sweden and UNIDO regarding support to Dairy Hub and Dairy Academy Development in Bangladesh. Under the Agreement Sweden would invest SEK 21 million SEK (700,000 SEK to the project's inception period 1.11.2013–15.2.2014; 20.2 MSEK to the subsequent implementation, subject to Sweden's approval of the inception report and 100,000 retained by Sida for evaluation and contingencies). Tetra Laval AB and PRAN agreed to provide in-kind and other support.

A revised proposal was presented upon completion of the inception period in October 2014 and the main implementation started, albeit with some initial delays. The implementation period ended 30.4.2018.

1.2 EVALUATION PURPOSE, FOCUS AND METHOD

1.2.1 Purpose and focus

The Terms of Reference (ToR; Appendix 7.1) states the following purpose and objective of the evaluation:

"The mission needs to identify lessons learned and present recommendations of general and specific nature to Sida, MoFL, UNIDO, PRAN, Tetra Laval AB and for any adjustment within Dairy Hubs Project and for the preparation of similar poverty alleviation/rural development/market development/Private Sector Development projects in the future. The findings of this evaluation will provide directions for future strategies and project interventions that will be integrated into the design of the next programme cycle of Sida in Bangladesh."

Furthermore, the ToR provides the following information:

"The evaluation will analyse the physical, financial and impact indicators as provided in the log-frame. The project evaluation will be based on assessments of project results, progress, constraints and impacts in accordance with logical framework prepared at project period. The indicators used to monitor and evaluate the project include farmer income, milk powder import reduction, milk yields, number of farmers trained, bacteria count of collected milk and number of loans provided to farmers (detail in Log frame). The Evaluation will also review the opportunities and challenges with regard to the current development context of the country."

1.2.2 Intended users of the Evaluation

The primary end-users of the evaluation are:

- The key actors in project implementation, i.e. UNIDO, PRAN, Tetra Laval AB and key staff at the dairy hub level; and
- The Embassy of Sweden in Bangladesh and Sida – including Management Teams, as well as staff members.

Other actors anticipated to take interest in or use the evaluation findings include:

- Government officials at National, District and Upazila levels;
- Other agencies providing similar services;
- Development partners; and
- Union leadership and farmers.

1.2.3 Method

The team used four major pathways in the attempt to accurately grasp relevant views and information:

- Interviews in with stakeholders in Sweden, Dhaka, and those met during field visits
- Review of project documentation
- Review of web sites and social media
- Observations in the field.

Possibilities for administration of surveys to target groups such as trainees, Hub and VMCC leaders or farmers were explored during the inception phase. The project management deemed gathering adequate data through surveys would not feasible. Reference is made to extracts of the inception report, Appendix 7.2, for further information on the evaluation methods applied.

1.2.4 Interviews

A tentative generic checklist for the interviews was developed (see Appendix 7.2). The list of informants is included Appendix 7.3.

1.2.5 Review of project documentation

A list of key documents consulted and other sources of written information reviewed is included in Appendix 7.4.

1.2.6 Websites and social media

The evaluation team also undertook internet searches for data. A post was made on Facebook by the Embassy of Sweden in January 2017. This post was also shared on Twitter, representing the only Twitter post about the project. UNIDO (https://www.unido.org) has some open access information on its site with basic data on the project. Tetra Pak (https://www.tetrapak.com) provides case studies and other information on its site. Other information is available on the following sites:

- http://hystra.com/smallholder (case study on PRAN Dairy)
- https://www.regeringen.se/rapporter/2017/06/sverige-och-Agenda-2030--rapport-till-fns-politiska-hognivaforum-2017-om-hallbar-utveckling/ (p.54. The project mentioned as an example)

Some information on the project was also posted on private Facebook accounts. Nevertheless, considering the number of stakeholders, the visibility is not up to expected level.

1.2.7 Observations in the field

Extensive field visits to VMCCs under all five hubs yielded opportunities for direct observations of progress achieved in the milk production and collection chain as well as in the Dairy Academy housed by PRAN. Reference is made to Appendix 7.3 for detailed information on places visited.

1.2.8 Triangulation

Triangulation was used to synthesise the general conclusions as per the OECD/DAC evaluation criteria (relevance, effectiveness, impact, efficiency and sustainability), using information obtained through the different data collection methods described above.

1.3 LIMITATIONS AND CHALLENGES

As in every evaluation there is potentially everlasting amount of fact finding and research that can be conducted and time is comparatively always short. It applies to this evaluation too.

Beyond that, in this case relatively weak reporting by UNIDO and in particular few attempts in reports to analyse outcomes and impacts in relation to the various elements of the goal hierarchy was a challenge for the evaluation. This refers in particular to the poverty reduction dimension and other expected social changes.

It was also hard for the team to come across any detailed and up-to-date financial reporting from UNIDO. External audits are lacking, which is, however, normal practice for Sida's cooperation with a UN agency.

There is some discrepancy between the narrative text of the Project Document (PD) and the theory of change (logframe). The logframe as it is designed yields a very limited analyses of project aim, overall goal, and overarching development objective. The team has discussed all levels of the goal hierarchy of the project.

Another obvious challenge is that results of improved livestock rearing takes time to emerge. Livestock genetic improvement, for example, is a relatively slow process.

Requests for informative and up-to-date financial reports and for a more comprehensive follow-up in relation to an appropriately expanded log frame were made in the inception report. These requests were not met.

The project has collected data for its internal monitoring purpose as well as for reporting to the donor. Such data has been presented in project reports, most recently in the project draft and so far incomplete completion report of June 2018. Projects reports have, however, not provided much information on how various data have been collected and analysed. Therefore, the team made efforts to explore how project data were collected and assessed the reliability of the various data sets. Domains for which data sets were found to be less reliable were given relatively more attention in the team's interviews with field-level stakeholders. To complement and verify data, a brief field

investigation was made, primarily observing the operations of the VMCCs and undertaking spot checks in the various registers at VMCC or hub levels.

Regarding financial data, in the absence of a response from UNIDO on certain key data, the team sought details from PRAN regarding payments made to them to establish at least a crude overview of how funds were allocated between PRAN and UNIDO.

2. The Project and its development context

2.1 ABOUT THE DAIRY HUB & DAIRY ACADEMY DEVELOPMENT PROJECT

2.1.1 Macro context

Bangladesh with a population currently at 166 million people in an area of less than 150,000 km^2, ranks number one in the world in terms of population density, if "city nations" with a very small area are excluded. Some 24 percent of the population or some 40 million people, many of them in rural areas, still live below the poverty line of USD 1.25 per person per day (https://www.indexmundi.com). The natural resources are heavily utilised and under severe threats stemming from heavy exploitation as well as climate change.

Livestock rearing is an integrated element of the land use systems in practically all parts of South Asia. The livestock component is important for nutrient recycling and sustained farm production, while poor livestock management may also contribute seriously to degradation and decline of yields.

In Bangladesh, about two-thirds of the labour force depend on agriculture. Agricultural production is mainly carried out by small-scale farmers. This also holds true for the dairy sector, in which more than 70 percent of farmers are smallholders, producing 70 to 80 percent of the milk produced in the country. Yet, dairy production in Bangladesh remains far below its potential, with generally low milk yields and insufficient service provided along the dairy value chain.

Improvement of livestock rearing has to address all constraints along the value chain. A continuous and lucrative market is a prerequisite for livestock keepers' interest and willingness to make necessary investment for better feed supplies, bridging of seasonal variations in milk production, hygiene, and animal health.

From that perspective, the "Dairy Hub & Dairy Academy Development in Bangladesh Project" is well placed to address some of the challenges facing rural people in the 17 Upazilas in four districts where it is operating.

There are, however, also challenges which may hamper dairy development. Government policy allows for importation of milk powder of low quality with effectively only a five percent import levy if, for example, milk powder is imported bulk and packaged in the country. The world market prices are significantly lower than the production costs in Bangladesh (Arla and others, personal communication). There is, therefore, an intricate interplay between cheap import of milk powder and collection of raw milk locally in several segments of the dairy industry.

The Department of Livestock Services (DLS) estimates that at national level in Bangladesh only some five to eight percent of the total amount of milk produced is sold to and processed by the larger companies. According to DLS, about 80 percent

is sold in local markets or to small local processors who make sweets or yoghurt. Twelve to fifteen percent is estimated to be used for home consumption (DLS personal communication). From that perspective there is a considerable potential for growth in the dairy sector to meet the milk demands primarily of the urban population. In 2016, about 35 percent of the population of Bangladesh lived in urban areas and the share is rising steadily (https://www.statista.com/statistics/455782/urbanization-in-bangladesh).

2.1.2 Project area context: Understanding "cow business"

The project operated in areas where there was already a pluralistic milk market with other processors present as well as significant local small-scale processing to make yoghurt, sweets or raw material for sweets. PRAN had also undertook some collection already, but through agents, which was not a system as developed as the hub model.

In Rangpur, it was reported that about 18 percent of all milk was currently processed by companies (DLS, personal communication), which is higher than the national average. When PRAN stepped up its presence, some farmers opted to deliver to PRAN. This was for a variety of reasons:

- PRAN collected milk at times when other companies could not buy all quantities available;
- PRAN offered a better price for milk with high fat content;
- PRAN paid promptly every week for the milk;
- PRAN was seen as a welcome additional outlet, beneficial at the local level;
- Farmers living near the new collection centre could save time, especially in relation to sales at the local market which is time consuming and associated with a risk of not even selling the milk.

The local market situation remains pluralistic. Local processors commonly buy milk at higher price and with less demand on milk quality. Milk rejected by PRAN can still be sold to local processors. Other processing companies appear still to operate as before.

Collectors, "middle men", still play a role. Some 20 percent of milk collected by PRAN is delivered through their services. Commonly they collect milk from beyond a convenient walking distance radius of about two kilometres, thus extending the collection area up to about five kilometres.

From a business perspective, there are commonly four major reasons for managing a dairy cow:

- Producing calves (most important);
- Producing milk;
- Producing manure to put on sticks for sale as fuel;
- A saving option to the bank, which can be realised when money is needed.

Milk production is, as per opinions voiced during the team's extensive interviews in the field, commonly second or third in importance. Most respondents note it as second in importance while some note it as third. Therefore, the milk price may not have an immediate and decisive impact on the household economy. Production of

good crossbreed calves has a higher value over time, which indicates that there is long-term interest in dairy among farmers. But realising the value of a good calf takes a while as compared to the rather short cycle of this project.

2.1.3 Project aim, goal, development objective and purpose

According to the Project Document (PD), the project aims to *lift beneficiaries from poverty by increasing their income through improved know-how on efficient dairy production according to international best practices.*

The overall goal of the project is *'to improve the livelihood of small-holder dairy farmers in Bangladesh through increased quality and yield of milk, allowing the replacement of imported powdered milk and meeting growing consumer demand'.*

The overarching development objective is *'to offer an opportunity for small holder farmers and their families to stay in rural areas with improved incomes and living conditions*'.

According to the Project Log frame the Project Purpose is *to establish a Dairy Academy (DA) and 5 dairy hubs in selected Upazilas of Bangladesh.*

2.1.4 Project stakeholders

The main stakeholders in the project are UNIDO, PRAN, Tetra Laval AB, the farmers, and Ministry of Fisheries and Livestock's Department of Livestock Services (DLS). UNIDO is Sida's contracting partner, while DLS involvement has been limited.

Smallholder dairy farmers supplying milk to PRAN through the dairy hubs are the main beneficiaries, receiving training, various kinds of services, and an additional access to market. They are offered to participate in training activities and to receive other services through PRAN, but are free to discontinue the arrangement at any time should they choose another business, employment or to deliver the milk to another company. They are also free to deliver only a part of the milk to PRAN while selling another share through other channels. The farmers are smallholder farmers with an average of two to seven cows. To supply milk to PRAN through the dairy hub they need to register and receive their own identification code. Farmers own their cows and farms.

Organisation in cooperatives or other forms of producer groups has not been promoted. The dairy hub structure and services provide the advantages that a large farm or a cooperative would in terms of economies of scale. As per the project philosophy, it is advantageous if a farmer only needs to invest in his/her own farm and does not need to take the risk of investing in infrastructure such as transportation, collection centres or processing facilities.

Farmers that are welcome to supply milk through the dairy hubs can be divided into three groups: (i) the traditional farmers practice methods who have been used for generations but result in very low yields (2–3 litres per cow per day); (ii) the progressive farmers who have started to make changes and are committed to improve practices according to modern dairy farming methods; and (iii) modern farmers who follow recommendations and have fully implemented modern methods.

The PD version amended after the project inception period includes a review of actors along the milk value chain from producer to consumer and the various channels that exist for the transactions.

2.1.5 Project components

The Project design included **four major components**, closely linked to each other:

I. Investment in and operation of three new dairy hubs and optimisation of the performance of the first two dairy hubs already in operation.
II. Development of the operation of and trainings provided by the Dairy Academy.
III. Training of farmers and experts in the Dairy Academy, at the facilities of the dairy hubs and in villages and at the various small dairy farms covered by the dairy hubs.
IV. Assessment of farmers' need for and access to financial services and improved access to finance for project beneficiaries for farm investments (cow sheds, cows, milking equipment, biogas plants etc.).

The fourth component was officially dropped as a result of reduction of the Sida funding in terms of US $ due to depreciation of the Swedish kronor in relation to major currencies. Nevertheless, PRAN has played a facilitative role by recommending registered farmers to credit institutions with reference to the income obtained from milk sales.

2.1.6 Institutional arrangements

The institutional arrangements described in the Project Document (PD) is highlighted in the abstracts of the evaluation Inception Report, Appendix 7.2. It is a complex set-up with somewhat unclear and overlapping mandates between PRAN and UNIDO. Reference is made to Section 4.3, page 50 of the amended PD (version 2014 unaltered from signed version 2013).

2.1.7 Governance

UNIDO, PRAN, Tetra Laval AB, and the Ministry of Fisheries and Livestock (MoFL) formed a Project Steering Committee (PSC) which was chaired by PRAN. The main functions and responsibilities of the PSC was to: (i) advise the project on strategic directions/decisions and support the project activities; (ii) ensure the effective cooperation between all key stakeholders; and (iii) advise on the effectiveness of the ongoing activities, including any adjustments that need to be made to annual work plans. It was decided initially that the PSC should meet twice annually, but it met only four times during the project period as documented in minutes: (i) 30.9.2014, (ii) 4.2.2015; 2.11.2016 and 12.4.2017. The team accessed a presentation prepared by UNIDO dated 9.4.2018 but there were no minutes confirming that it had been presented to the PSC. The Department of Livestock Services (DLS) of MoFL was represented only in the 2017 meeting.

2.1.8 Inputs from Sida and partners and contextualised project expenditure

As per Attachment 7 of the PD, the project actors would make specified contributions to the project. Table 1 shows their shares of the total budget as well as what the respective shares are intended to cover.

Table 1: Overview of project resources and contributions

All figures are derived from Attachment 7 of the PD in 000 US $ based on the by then applicable exchange rates between SEK and $

Contributor:	PRAN	Tetra Laval AB	Sida	%
Inception Phase			93	0.9
Dairy Hub Investments	1,401			13.9
Dairy Hub Running Cost (PRAN)	5,117			50.6
Dairy Hub Running Cost (Sida)			1,484	14.7
Dairy Academy Running Cost (incl. Training) Sida			189	1.8
Dairy Academy Running Cost (incl. Training) PRAN	113			1.1
Milk Production Expert			540	5,3
Tetra Laval AB Contribution		340		3.4
Local full time staff (public education and visibility)			150	1.5
Assessment of farmers' need for financial services			200	2.0
Other costs, PC meeting, visibility, etc			41	0.4
Project evaluation			60	0.6
Contingencies			17	0.2
UNIDO support costs			360	3.6
Total	6,631	340	3,133	*XXX*
%	65.6	3.4	31.0	100

More than half of the Sida support was designated to Running costs to the Hubs and the Dairy Academy. This was by and large paid as a salary subsidy by Sida through UNIDO to PRAN. Depreciation of the Swedish currency resulted in challenges as reported by UNIDO to Sida. According to UNIDO such depreciation resulted in the budget in US $ becoming only 82% of the amount budgeted in the PD. Requests for additional funding for compensation were not approved by Sida.

Some of the contributions by the different actors were in kind contributions, for example that of Tetra Laval AB. Tetra Laval AB did not receive any share of the Sida funds. The financial reporting made no attempt to report on the larger picture, which would have included the contributions by other actors than Sida. The reporting system does also not provide information on how budget shares were allocated to different project stakeholders.

Based on information obtained from PRAN and from the financial reports, the evaluation team prepared an approximate overview of the allocation of Sida funds per project partner which is included Table 2.

Table 2: Approximate allocations of the Sida funds in Euro and as shares of total (%).[1]

	Euro	%
PRAN: Salary subsidy	1,429,200	
Logistics invoiced to UNIDO (mainly car rent)	8,100	
Orientation workshops and other costs	2,300	
TOTAL PRAN	1,439,600	66.2
UNIDO operational costs[2]	477,300	
UNIDO overheads	250,400	
Funds held by UNIDO as per April 2018	8,800	
Total UNIDO	736,500	33.8
TOTAL PROJECT	2,176,100	100

2.1.9 Project monitoring and evaluation

The internal monitoring by the project has resulted in a significant databank of statistics and trends generated and reported. There are many parameters including, for example:

- Hub status and registered farmers
- Trainees of the Dairy Academy
- Farmers trained with module coverage
- Farmers adoption of improved and promoted technology
- Farmers net income
- Farmers progression in various respects
- Gender disaggregated numeric data
- Access to finance
- Milk collection
- Litres of milk/cow/day
- Milk collection cost
- Milk quality parameters

Data is kept at farm, VMCC, Hub, and national level of PRAN and UNIDO, depending on what is relevant.

2.1.10 Activities and outputs

Activities and outputs are well documented and reported in quantitative and to some extent also in qualitative terms. Most project targets have been achieved or exceeded in relation to Outputs 1 through 4.

[1] The calculation is based on an estimated average exchange rate of 90 BDT to the EURO and has not captured interest accrued by UNIDO.

[2] These are project costs paid by UNIDO

Less attention was awarded to Output 5 as a result of reduced funding value due to currency fluctuation. Yet, the PRAN has played some role in assisting farmers' access to finance by recommending registered farmers to finance institutions with reference to their regular income from milk sales.

Activities and outputs are to become documented in project reports and need not be repeated here. Key outputs include:

- Five hubs operational, out of which three new as a result of project;
- About 100 VMCCs running with over 13,000 registered farmers and manned by adequately trained staff who can manage operations;
- Significantly increased volumes of milk collected and tested, however some decline in volumes recently;
- Transport chain operational;
- Farmers paid timely;
- Services provided to farmers;
- Farm practices improved;
- Impressive number trained at Dairy Academy, many of whom were employed by PRAN or by others; and
- Curricula upgraded and training materials developed.

Training on farm finance became less prominent than planned (Component IV).

Reference is made to existing and forthcoming project reports for detailed numeric data on outputs.

3. Findings

3.1 ASSESSMENT OF PROJECT INTERNAL MONITORING

3.1.1 Assessment of reliability of data

The project has regularly reported data on progress at activity and output level. Such data has enabled the stakeholders to monitor progress. The evaluation team attempted to verify how such data was collected and processed at different levels and based on such information assess the level of reliability of the data generated and presented by the project. The team has opted to present its assessment here as it is important for the continued analyses and reporting.

Some of the data represents parameters that PRAN must monitor as part of its monitoring of business progress and for assurance of milk quality. Other data has mainly been collected and analysed as part of specific project monitoring. Such data has generally been collected by PRAN staff but analysed in the UNIDO project office.

The evaluation team has assessed the following data to be highly reliable:

- Collected volumes of milk
- Milk quality parameters
- Number of registered farmers, although the actual number delivering milk may be lower now
- Collection cost
- Numbers trained in the Dairy Academy
- Number of female/male farmers.

Among these, collected volumes of milk, collection costs, and milk quality parameters are key indicators monitored by PRAN. Trainees of the Dairy Academy are well documented.

The evaluation team assessment is that the following parameters are likely to be reliable, although the team was not able to review records in detail:

- **Farmer training:** recorded numbers and module coverage
- **Access to finance**, although **hard to attribute** access to project
- **Biogas**, although **all may not be in operation**.

The evaluation team assessment is that the following parameters may be less reliable:

- **Milk production per cow**: System for data collection may vary. Data collection may not fully capture that farmers sell not only to PRAN, even though attempts have been made to ensure that. Data obtained is not supposed to include data from middle men as this would be hard to collect. The information

the team obtained on how this data was collected was somewhat inconsistent. The production per cow may be higher than recorded since milk sold to others and milk used for home consumption may not always have been taken into account.

- **Adoption of good management practices**: Such data is collected from two permanently tracked farmers per VMCC, i.e. about 40 farmers per hub. The tracked farmers may get more attention and do better than the average farmers as their progress is specifically monitored. Generally, though, good management was observed, but the untied system (i.e. cows are not tied but free to move) with free access to water was not so widely adopted.
- **Farmers' net income**. This is a parameter for which reliable data is difficult to obtain. Data collected has been for "cash flow", i.e. buying a cow recorded as cost and selling as income, which may yield a skewed result. A recent trend in some areas has been the sale of cows due to constrained profitability, which would be reflected as contributing to high net income. Data collected was also limited to dairy related "income" and "expense" which may be accurate but it will not illustrate the overall situation as regards the cow business, let alone the whole family situation. Milk sales is only a portion of the "cow business" with more value usually generated over time from sale of calves. There is a limited link between project activity and reported net income. The recorded data was initially based on randomly selected farmers, but at some point the data collection system was altered so that data was instead collected from the same 40 track farmers that were followed regarding adoption of good management practices. The selection methods (i.e. random or tack farmers) were in this respect as described by PRAN staff somewhat inconsistent. The current system with tracked farmers followed over time, may result in data reflecting farmers who do better than average. The inflation factor could also play a major role for understanding this data. Inflation 2011-2017 was about 45 percent in relation to the US dollar. All in all, the information generated on net farm income is insufficient for understanding the poverty reduction dimension of the project, especially at the wider community level, even if individual farm visits by the team often generated an impression of family progress to which milk production may have contributed.

3.1.2 Comments on the project from the perspective of the DCED standard

While the private sector development (PSD) approach holds promise for better scale, sustainability, and efficiency; the Monitoring and Evaluation (M&E) related challenges become greater since the approach is indirect. In PSD, the products and services are delivered not directly but through the market actors. Hence, monitoring the progress and measuring of the results becomes extremely challenging. That was the reason why the donors following the PSD approach came up with the DCED (Donor Committee for Enterprise Development) standard, named after of the body that created it. Keeping in mind the nature of the challenge, the standard has made itself highly demanding and thorough. The standard has seven sections, 31 control points, and 69 compliance criteria. The standard tries to make sure that the organisations and projects follow a structured form and rigorous self-controlled system which ensures the quality and credibility of the reporting system. The standard is designed to ensure

unquestionable results, but it is resource-heavy and requires a certain level of skillset to implement it.

The Dairy hub and Dairy Academy development project in Bangladesh followed the PSD approach in its design and implementation but there was no effort to follow the DCED standard. To knowledge of the evaluation team, there was no such requirement from the start. Therefore, the evaluation team decided not to assess the project from the standard perspective, but still to attempt to show the level of alignment of the project M&E system with the standard. The elements which are specific to the standard and not common with the regular practices were not considered for this comparison for obvious reasons, but the approach of the standard and the followed practice to the common ones were reviewed.

The DCED standard always emphasises the integration of M&E activities and roles with the core management practices. But at the same time the standard requires a skilled M&E team to ensure good research practices for all the M&E activities. This project did not have any assigned M&E team or a person with that responsibility. The Project Coordinator hired by UNIDO on a part time basis from 2016 used to lead the data collection as a part of his job responsibilities. Data were collected by the PRAN teams and later analysed and reported by the UNIDO staff. While it is highly appreciated that the teams were directly engaged in M&E activities, the credibility of the results are weakened by the fact that the information is collected by the implementers themselves. No independent team was engaged to collect information for results measurement.

UNIDO periodic reports were, for some key parameters, based on the longitudinal data collected from 40 farmers selected from the different hubs. This approach is a good one for monitoring purposes, but not the best one for results measurement. The farmers were selected by PRAN staff, thus some possibility of bias cannot be excluded. These 40 farmers furthermore may not well represent the entire population. Unfortunately, the current evaluation also could not include any proper quantitative approach for impact data collection due to resource limitation, but the evaluators tried to validate the reported information. The level of reliability was found to vary among the parameters.

The DCED standard strongly emphasises following good research practices. Good research practices include a lot of issues. The project was quite robust on collecting regular monitoring data, but it had significant weaknesses in reporting results which is part of the results measurement process. The project did not separate the monitoring system from the results measurement process.

The project had one strong alignment with the DCED standard and that was on gender issues. The project always collected and reported gender information separately. The project conducted some gender assessments which were found to be not that informative. No detailed target group analyses were conducted.

Assessments of the wider changes in the market system were not prominent in the project reports. The evaluation team tried to collect data on wider market changes and talked to different stakeholders to gather some market insight. Nevertheless, it appears that PRAN is not currently in favour of increasing their raw milk collection as it decreased the price offer which will favour the competitiveness of local processors.

Costs for the project were tracked, but information on some key aspects like shares of expenditures between PRAN and UNIDO were not made available even among the related parties. The reporting system was designed not to avail that information.

Overall, the project was not committed to follow the DCED standard for Results Measurement and it did also not make any conscious attempt to do so. The strengths of the M&E system that was applied was its regular monitoring of activities and gender disaggregated reporting. The results reporting and the data collection process were not up to the requirements of the DCED standard.

3.2 ASSESSMENT OF PROJECT GOVERNANCE

As per its design the Project was to be governed by the PSC (reference to 2.1.6). Due to its less frequent meetings, very limited participation by the DLS and that all decisions made were not followed through by the project management, the PSC could not fill its intended role. Examples of shortcomings in the PSC governance include the following:

- Infrequent meetings
- Representation of DLS not as intended
- The PSC did not engage fully in the cancellation of the "financial component output" beyond discussing additional funding which did not materialise. The result was that this became a loose end with some progress reporting in spite of officially no project activity. It is doubtful if the designed activities would have made any difference, but redesign towards business training could have been useful.
- It was decided repeatedly that a gender strategy should have been prepared, which did not materialise.
- In the first meeting, there was an important discussion on who the project as to benefit. Tetra Laval FfD representative argued that the execution of the project would mostly benefit development of the rural community and not PRAN or any other stakeholders. Embassy of Sweden noted that according to the agreement, a review of the project execution in this regard shall be carried out annually. This aspect was not followed up by any deeper analyses to examine what support communities may require for strengthening their organisation or ability to make their voices heard.
- There was a revision of the logframe after the inception period but baseline data was not incorporated although the shortcoming had been pointed out by Sida. Subsequently, no reporting has used the logframe format for the detailed follow up.
- The PSC did not serve well to engage DLS until at a very late stage.

3.3 RELEVANCE

3.3.1 The Project in relation to the Swedish policy environment

In a Desk Study of Sida's Experience from Private Sector Collaboration (Söderbäck, M. Sida Decentralised Evaluation 2016:6), "PRAN-Tetra" was classified as a project falling under the category of a Public Private Development Partnership (PPDP). In a

Public Private Development Partnership, the public and private sectors make a joint investment in a project implemented by a third party. The objective is to create conditions for people living in poverty to improve their lives (Sida Website).

Sida updated its Guideline for PPDPs in October 2017. According to the Guideline, PPDPs are co-financed by Sida and the partners from the private sector and implemented through, and in collaboration with a non-profit partner. This implementing partner is responsible for the financial management of the project and often provides technical expertise and know-how to the project. Sida never transfers any funds to the private sector partner in a PPDP. Normally the implementing partner is an NGO or a UN agency.

The team attempted to find out if, according to the Guideline intentions, funds could be transferred to the private sector if this is administered through the non-profit partner as was the case in this project. Several Sida officials referred to the EU regulation on public sector support to private sector (http://ec.europa.eu/competition/state_aid/overview/index_en.html) which has also been adopted as Swedish legislation (https://www.regeringen.se/regeringens-politik/naringspolitik/statsstod/) and that Sida is obliged to follow regulations and legislation.

The EU rule and the applicable Swedish law aim at avoiding limitation of free market competition within EU. The team did not manage to find conclusive evidence that made the team convinced that: (i) the present project arrangement adheres to the intentions of the Sida Guideline (not transferring funds to a private company); and (ii) there was any positive achievement obtained with the arrangement of this project as compared with a scenario where the Sida funds were channelled directly to, in this case, PRAN.

In practice, Sida sacrificed a possibility to apply similar rather strict rules that are usually applied to CSOs receiving Sida support (e.g. systems audit, regular external audits, etc.). Such systems have not effectively been applied by UNIDO in this case concerning the share of funds it disbursed to PRAN.

The current “Results Strategy for Bangladesh 2014–2020”, which is a main Swedish policy document for the development cooperation with Bangladesh, does not explicitly indicate support to agriculture or livestock rearing as a priority in Swedish development cooperation. However, one of the result areas under the Strategy is Inclusive Economic Growth which has strong focus on private sector development. So any sector with significant potential to improve women’s participation in the labour market and contribute to reducing poverty is a priority for Sida Bangladesh. From this perspective, agriculture or livestock are of high relevance.

As per definition, many PPDP projects emerge out of initiatives stemming from private actors rather than from government to government negotiations and talks. Therefore, their emergence depends not only on bilateral priorities, but also on where private actors have identified scope for interventions.

3.3.2 The Project in relation to the policy environment of Bangladesh

The Government of Bangladesh finally drafted the National Milk Development Policy in 2016, although the policy is still a draft. It identifies the following issues as the main problems of the current milk sector of Bangladesh:

- Lack of improved breeds;

- Lack of fodder and forage and high price;
- Lack of quality fodder and forage;
- Lack of knowledge and skillset of the rural farmers;
- Disease outbreak;
- Shortage of vaccine;
- High price of medicines;
- Lack of skilled workforce;
- Shortage of low interest bank loans;
- Problem with marketing of the produced milk;
- Problem with justified price of milk;
- Absence of cow insurance;
- Lack of facilities for preservation of milk and milk products and quality control;
- Absence of regulatory organisation like National Milk Development Board; and
- Lack of grazing land for the cattle.

All the project targets are trying to address some of these issues and the project's strategy is thus fully in line with the draft policy. There is coherence between the project and many priorities of the draft policy.

3.3.3 Relevance of project design

Constraints observed in the PD related to the project design include the following:

- The PD includes an aim, an overarching development objective and project purpose and outcome which are all related to poverty reduction, while the log-frame introduces a project purpose with a much more narrow scope.
- Goal to replace powdered milk import is not achievable through the project activity, only through policy initiatives regarding levies and enforced quality standards.
- The organisation is not clear, roles of PRAN and UNIDO not well specified and institutional capacity of mainly UNIDO was not well examined.
- The description of the context of the project area was not elaborated upon, e.g. regarding PRAN's already ongoing milk collection and dairy farming in the business dimension.
- There is no examination of principles for VMCC location to ensure that not all commercial actors run below capacity resulting in inefficient value chain. Analyses of initiatives required to extend the collection area from two kilometres to five kilometres radius (transport, collective action, middle men).
- If a human rights-based approach (HRBA) would have been applied, additional elements would have been (i) a more thought-through approach for involvement of the government; and (ii) a deeper analyses of the needs of the producers beyond the technical level (different target groups and their needs, community strengthening for enhanced voice required when negotiating with buyers of produce, etc.).
- Consequently from above, an implementation partner that has a specific capacity and interest in community development, including gender and age-group-tailored initiatives, would have been desired.

3.3.4 Affordability of products and services

Products and services introduced by the project are generally affordable in the local context, given that PRAN with its economic muscle has taken the responsibility for the investments required for the VMCCs and the subsequent value chain. It would have been difficult for community groups or cooperatives to take that responsibility and not least, the subsequent management.

3.3.5 Project in relation to local context

The project interventions are generally well tailored to the local context since they build on an existing tradition of keeping cattle. The systems with VMCCs are also not alien, since other companies operate with somewhat similar structures. A better target group analysis could have yielded information on household relations, women's workload, etc. which could perhaps have been beneficial even for PRAN management. A stronger representation of women among VMCC staff was reported at one VMCC, which had a woman in charge, to be beneficial in several ways (hygiene, farmers obey a woman more, scope for interaction with all family members without risk of breaking social norms).

3.3.6 Project in relation to household nutrition and poverty alleviation

Commercialisation of farm- or fish-related enterprises may result in priority awarded to the commercial production at the expense of household consumption. Given this experience from elsewhere, the team proposed to include the question in the evaluation.

Since selling milk is not new for most farmers delivering milk to PRAN, no noticeable impact on household nutrition could be observed. Some milk is still reserved for household consumption.

Undoubtedly, the project is designed to reach many small-scale producers. Newly established VMCCs reduce the transport burden for those living nearby, and an additional buyer that competes with other market outlets is of course advantageous for the farmers. In this regard there is scope in the project design to address poverty.

However, farm labourers may be among the most vulnerable. Their needs have not received attention in the project design.

3.3.7 Alignment with principles of a human rights-based approach

Using HRBA nomenclature:

Rights-holders: farm families and labourers have not been assisted to have a strengthened organisation to better voice their concerns.

Duty-bearers: i.e. government and state agencies have not been much assisted to improve its regulatory functions, not least to enhance food safety and subsequently consumer trust.

3.3.8 Project justification

This type of project has significant potential in addressing poverty. The current project involves a large number of smallholders and generates employment. The justification for donor input would be enhanced if initiatives were located in areas where there is no milk collection and where risks and challenges are higher. Poverty could be better addressed in such areas as such project intervention there would avail new commercial opportunities.

3.4 EFFECTIVENESS

3.4.1 Level of achievement of project objectives

Generally, at the level of the project purpose (given in the log frame; to establish the DA and 5 Dairy Hubs) and output and activity level, the project has been highly effective. This is evidenced by, for example, farmers' appreciation, the acknowledgement of positive project contribution by government staff and that farmers and graduates from the DA are generally happy with the training. It is also possible to observe the high-quality activity going on in the project area.

As per reports, most numeric targets have been achieved or exceeded (farmers' net income, improved management practices, VMCCs established, litres of milk purchased, number of registered farmers, milk quality parameters, numbers trained, etc.), but the team's observations under Section 3.1 limits the value of some output data.

The attempts made to document and report on data related to the project aim, the overall goal, and overarching development objective (i.e. the poverty-alleviation dimension) have been significantly weaker than the activity and output reporting. The project M&E has not been designed to capture such data with accuracy. Securing such data would require a thorough analysis. Possibly, evidence could be found at the level of milk delivering households, but it would probably be hard to find solid evidence at community level, given that milk sales to dairy companies remains a rather small element of the general local economy as explained elsewhere in this report. It is not possible at this stage to verify any poverty reduction impact in the hub 3–5 areas.

3.4.2 Spin off effects

There are spin off effects at different levels. The team observed a case where a graduate from the DA, who was not employed by PRAN, was not only employed by another agency, but also started dairy production with her sisters in their home (Ref. to Appendix 7.5.3).

At the macro scale, this project has provided some input regarding the hub model to a major project which is now in its final formulation stages and expected to lead to a US$ 500 million worth investment in the dairy sector with 50 percent co-funding from the World Bank.

Some 60 DLS officials were offered a two-day orientation workshop and some 55 lecturers joined a national workshop for exposure on the Hub model.

Through Tetra Laval AB's international network, ideas and concepts stemming from this project are now being introduced into other countries.

Unplanned effects like the ones reflected above should also be recognised in an assessment of project effectiveness.

3.4.3 Level of target group analyses: Gender, age groups and farm workers

The team has noted that sex disaggregated statistics are generally available, and the project has attempted to mainstream the gender aspects in its activities. Female participation has, however, not reached the projections indicated in the logframe (e.g. trainees in the Dairy Academy, share of registered farmers). Reporting on the gender dimension may not always fully have captured the level to which women have been involved. This is to some extent due to the prevailing culture and traditions that give

men prominence in official matters, while women are often more engaged than men in some aspects of the daily work with dairy cows.

The team's finding is that there is a great deal of variation in gender roles in households in relation to livestock keeping. In some cases, with absentee husbands or women-headed households women takes care of everything while in the other end of the gradient there are households where men do most of the outside-home activity. Commonly feeding and cleaning cows are female's responsibilities, as is commonly also family economy, while usually men milk, collect feed from far and deliver milk to the VMCC if it is a bit far away. These are not very surprising findings. Care and Solidaridad had in some respects a more developed approach to human diversity than this project, including tailor-made activity for youth (Solidaridad) and in case of CARE the important observation that all women-targeted assistance must take into account that women already have a heavy work load. From that perspective it is perhaps doubtful if it is very essential that women are the ones taking milk to VMCCs and are registered there.

The most important finding by the evaluation team is that this project did not make substantial efforts on target group analyses. Such analyses are helpful to determine the specific needs and aspirations of women, men, boys, girls, farm labourers and others such that project initiatives can be tailored more precisely to address such needs. This is the opposite to just treating the population in an area as a collective with same needs and aspirations and without deeper understanding trying to mainstream gender issues in all activities. This latter approach often results in only counting numbers of women and men with no further gender-sensitive action.

The team found that a target group analyses was a missing but important element in the project. Consequently activities specific to gender disaggregated needs or to youth were not developed. This applied to the Dairy Academy too. The curriculum was reviewed by the team and found to include gender, but mostly with respect to work relations between women and men and mutual respect, but less contents on different approaches to community development work based on identified needs of different groups.

A missed opportunity for PRAN may be to have more female VMCCs in charge which was reported as advantageous in many ways. One reason is that a lady can talk to all members of a household without limitation of social norms and without risk for misunderstandings.

It was decided repeatedly in the PSC meetings that a gender strategy should be developed but decisions were not followed up. If a qualified person had been engaged for development of a gender strategy, possibly a lot more could have been achieved in this respect.

3.4.4 Choice of technology and international best practice

The general finding is that most of the technologies promoted on farm or introduced by PRAN are suitable. Solar-powered VMCCs were found to require too large panels at a too high cost. Small-scale biogas production may face competition from the lucrative business of manure sticks for household fuel. Only a few biogas units were visited. At least one was not in operation. Manure sticks are produced practically everywhere either for domestic use or for sale. Some practices that were promoted are not well adopted in some areas, e.g. the untied system and cows' free access to water.

Initially cows may fight and cause trouble, involving risks of injury, which, coupled with tradition and perhaps weak farm building structures may be among factors deterring farmers from adoption of the practice. The team was offered the opportunity to observe complications when cows for the sake of the team visit were untied, which they were apparently not used to.

3.4.5 The collection system

The collection system is well designed. Distinct merits include:

- Continuous purchase of milk by PRAN;
- Regular payment to farmers;
- Support services offered to farmers;
- Pricing of milk related to fat content, i.e. premium for quality;
- Proximity, with most farmers delivering milk coming from within a two kilometre radius.

3.4.6 Environmental aspects

Generally the milk collection operations are not very harmful to the environment. Water treatment from VMCCs is by the effluent passing through a small sedimentation chamber and from there waste water is released. Sediment has from time to time to be cleaned out of the sedimentation chamber to be deposited in small pits dug as required.

Some environmental concerns noted by the team are the following:

- PRAN gives no advice on manure management for larger farms.
- Chemicals used include small amounts of chrome which in some forms can be hazardous. The potential danger was not further examined by team.
- Cleaning chemical SU 120 imported from India: The chemical composition was not declared on containers or accessible on internet.
- Knowledge may not be up-to-date at VMCC level regarding the use of caustic soda when SU 120 is used. SU 120 is declared as pH neutral and its use will not necessitate compensation with caustic soda. Explanations given in VMCCs were inconsistent. SU 120 is not used in VMCCs with cooling tanks manufactured in China, and there caustic soda application is applicable.
- From a larger perspective: lifecycle analyses of packaging material will be required as well as action to address solid waste issues. The Tetra Pak package material can technically be recycled.

3.4.7 Market distortions

A discussion on market distortion must distinguish between macro level and micro level.

The study carried out during the inception phase concluded that several actors in the dairy sector operate in distorted market environment as they have either received donor funding or as in the case of Milk Vita, operate with a level of Government subsidy. Although this was an argument accepted by Sida, it may still not represent a perfect logic and the finding of the study was critically discussed in the first PSC meeting in September 2014.

The national market for raw milk may not be saturated, but a claim that there is 40 percent unmet demand may not be based on accurate data. Many farmers reported that one of the reasons delivering to PRAN was that other companies did not always buy the offered quantities. Some respondents argued that the processing capacity of the dairies may be a limiting factor, yet other referred to the competition from imported milk powder as a factor detrimental to the demand of fresh milk.

The intervention from Sida would have been more clearly "free" from an undue market distortion if it: (i) had been located to an area where other actors did not operate; and (ii) if it could have been designed as a "challenge fund" initiative where different companies had been invited to bid for the project implementation with clearly set objectives for what should be achieved.

A challenge fund (also referred to as enterprise challenge fund) is a competitive financing facility to disburse donor funding for international development projects, typically utilising public sector or private foundation funds for market-based or incentive driven solutions (Wikipedia).

A challenge fund is an instrument that Sida uses to finance entrepreneurs and innovators that want to contribute to economic, environmental, and social sustainability in the developing world. Sida finances various challenge funds with different regional and thematic priorities so that development can reach as many people as possible (Sida Guidelines).

During its interactions with competing agencies (Milk Vita and Aarong collection centres), no complaints were brought forward at local level. In none of the places visited had PRAN's arrival on the market resulted in closure of some other collection centre.

At micro level, general markets were diverse at the start and remained as diverse as before. No distortion was reported.

The team attempted also to examine if free service provision (but not free inputs) had negatively affected local paravets operating as entrepreneurs, which could be expected. No such negative impact could be substantiated. In fact, some such paravets are also operating as sales outlets for veterinary drugs, and their business may be enhanced if more prescriptions are made following PRAN's service provision. Further, it is noted that other market players offer similar services.

3.5 IMPACT

3.5.1 Increased income and pro-poor changes at Union/Community level

For several reasons, impacts such as increased income and improved living conditions cannot yet be reliably measured, even if many farmers report positively, especially around Rangpur.

In most households around hubs 3-5 there may not be a very decisive difference in net income yet. Also, enhanced income from the milk sales, when it occurs, will be difficult to single out and relate to improved living conditions as it is still only a share of the income from cattle rearing and even more a share of the total farm income.

During the last 12 months or so, several farmers in Hubs 3-5 areas reported declining net income due to reduced milk prices and increased feed costs.

It is, at this stage, not possible to measure pro-poor changes at community or Union level. However, this observation does not imply that farmers have not been assisted or that they will not benefit, but it takes time and it will depend also on external factors, including the milk price offered by PRAN and others.

3.5.2 Women's empowerment

The women empowerment aspect was less effective (reference to 3.4.3). Registered households may generally have benefitted from an additional sales channel for milk, but there were virtually no actions targeting more disadvantaged groups, including women, specifically. It may be argued that such dimension is being beyond the scope of PRAN being the key implementer. Yet inclusion of such approach is important if donor support is to be justified. The evaluation team notes that the project set up resulted in extensive competence on livestock rearing and dairy operation but limited competence on community development in a broad sense.

3.5.3 A foundation was laid

The expanded role of PRAN as a milk purchaser is likely to impact positively on the milk price in the long run. Further, training, support to farm record keeping, and enhanced quality and quantity of inputs – including semen to breed more productive cattle – is a good foundation for better living conditions.

3.6 EFFICIENCY

3.6.1 Constraints in project set up were addressed

As elaborated above in Section 3.3, there were some shortcomings in the PD and the project design generally. Some of these potential constraints were overcome as a result of actions taken in the early stages of the project. These include:

- Potential organisational constraints were overcome to some extent by UNIDO hiring a well-qualified local project coordinator to supplement the distant UNIDO management in Vienna;
- Initial delays in fund transfer due to government procedural constraints were overcome;
- Unclear roles were sorted out: PRAN implemented core activity with its internal M&E and UNIDO took on certain supplementary activities (film, training material production, and studies), additional M&E, and reporting to the donor.
- Tetra Laval AB played a very significant role with method development before the project (Hubs 1 and 2), as well as during the conceptualisation of the project. During the implementation period, the Tetra Laval Food for Development Office (FfD) has acted as an advisor and helped adapt its manual to Bangladesh conditions. All Tetra Laval AB support has been in kind, i.e. no financial support from the Sida grant. Consequently, Tetra Laval AB has not been affected much by project organisational matters.

3.6.2 Efficiency of input delivery

Some delays must be regarded as normal in a project of this nature. One aspect highlighted was that it took some time to get the cooling tanks, resulting in that staff that had already been deployed could not always engage quickly in milk collection. While waiting for equipment, they engaged with extension work and provided information to farmers.

Delays in initial transfer of funds depended on the MoFL and DLS delaying indefinitely the transfer of funds from UNIDO to PRAN's US dollar account. The problem was eventually overcome by PRAN using its local account instead.

The initial plan was to engage an internationally recruited expert, but for various reasons it did not materialise. One reason was that a highly skilled national expert was available and who could be engaged to assist with project implementation. His contributions were reported as having been crucial for UNIDO's contribution and even to the survival of the project.

3.6.3 Transparency and accountability

Sida has transferred funds to UNIDO in response to requests made. UNIDO has paid PRAN against invoices submitted by PRAN to UNIDO.

UNIDO has submitted financial reports in two formats (the standard of reporting according to UNIDO rules and regulations):

- The more frequently used format indicated how much UNIDO received and the total expenditure divided into project direct cost and UNIDO overheads. This format also included analyses of impact of currency fluctuations.
- Another format was used for annual financial reports. The latest of these reports submitted to Sida covered expenditure up to 31.12.2016. These reports contain disaggregation of costs per project component and per budget votes.

None of the two reporting modalities indicate the shares of the total budget used by PRAN and UNIDO respectively. Such information has rested with UNIDO headquarters only. The Sida programme officer reported difficulties in overseeing the projects resource use due to the reporting system, coupled with the delays.

According to the Agreement between Sweden and UNIDO, funds made available shall be subject to the internal and external auditing procedures as provided for in the financial regulations, rules and directives of UNIDO. So far no external audit has been conducted regarding the funds disbursed by UNIDO to PRAN. Such an audit could have been expected with reference to the formulation in the agreement.

The team regards the level of transparency as being less than optimal. This is especially so if the applied routines are compared with routines normally in place for Sida support to CSOs.

3.6.4 Efficiency/adequacy of training provided by PRAN

The team's opinion on the training is that the training offered has been adequate and efficient. A large share of the graduates from the Dairy Academy has been employed. About half of the graduates were employed by PRAN and an unknown number of the others were employed by other organisations. A system for detailed course evalua-

tions is in place and used. The ex-students that the team interacted with were very satisfied with the training. This included individuals who had not been employed by PRAN. The number reported to have been employed by others may not be reliable as there is no systematic follow up.

The following detailed observations can be made:

- The gender and wider community development aspects of the training is not so well developed.
- The finance component received less attention. More business management training would have been justified, given the need to reduce production cost at farm level.
- A follow up through a Facebook group or similar arrangement could yield added value both for PRAN and the students.
- A system with refresher training ought to be developed, at least for the graduates employed by PRAN.

Farmers are usually trained in the vicinity of the VMCCs. Observations:

- The modules are relevant.
- It is noted that only some 11% of the farmers trained have received training on all modules. It is, therefore, important that the training continues after the closure of the project.
- Refresher training will also be needed.
- A better target group analysis would have yielded better understanding of the specific training needs of women and men respectively, as well as youth and farm workers.
- The farm business/finance component received less attention than what would be justified, given the need to reduce production cost at farm level.

3.6.5 Evolution of PD and log frame

The initial document had some weaknesses as the narrative text included an overall goal, an aim and an overarching development objective which are all related to poverty reduction, while the logframe introduces a project purpose and is very elaborate with regard to the output and activity levels. The inception period would have been expected to address this inconsistency more efficiently than what actually happened. The revised PD included a long section summarising the findings of the three studies carried out, and the logframe was expanded with detailed parameters, but still mainly at output and activity level.

3.6.6 Efficiency achieved in the value chain

The team's investigation implies that very little milk is wasted. According to some spot checks made, less than one percent of the milk volume was rejected at VMCC level, and as per PRAN's in house data; less than one percent was also rejected on arrival to the main PRAN dairy outside of Dhaka. At both these levels, most rejected volumes are sold anyway to sweet makers.

There is significant scope for enhanced cost effectiveness in the PRAN collection and transport operation. A key factor is to reverse the recent trend towards lower capacity utilisation. The price factor is a key. Some stakeholders wonder if the dairy industry, including PRAN, either does not want to buy too much locally produced milk

as the imported milk powder is much cheaper, or has limits in their processing capacity.

3.6.7 Project "value for money"

Although the financial reports are insufficient as a tool for assessing costs per partner, the team's fact finding generated the approximate overall picture reflected in section 2.1.8. From that perspective, the evaluation's finding is that PRAN generally has showed good quality implementation. Without an external audit or more detailed accounts to shed light on salary costs (the major project expense), it is hard to establish if the same outputs could have been achieved with less inputs. An even bigger question is how the pure business interest translates into readiness of PRAN to invest. The project *per se* is likely to have been a very reasonable investment from PRAN's perspective as most of the hardware investment could be financed by a soft loan from International Finance Corporation (IFC), which is a sister organisation of the World Bank.

Although UNIDO managed to make significant contributions by hiring the national project coordinator and ensuring an enabling work environment for him, it still remains a rather expensive option to engage UNIDO as an implementer considering, for example, that over head costs were charged also on the bulk of the project budget that was passed on to PRAN through a simple invoicing procedure and so far not associated with any audit. An opinion voiced was that among reasons for engaging with UNIDO was the need to bridge the gap caused by Sida funds not being expected to be disbursed to a private actor. The division of project responsibility between headquarters (main responsibility) and the local office (day-to-day monitoring) appears to have reduced UNIDO efficiency to some extent.

UNIDO also had some technical experience to contribute. UNIDO had previous experience working with similar projects with the shrimp industry in the country. Furthermore, UNIDO may have been expected to facilitate linkages with the Government. Reducing market distortion has been another aspect mentioned. The team did not observe that UNIDO had a decisive impact in these respects. More important was the UNIDO coordination of the project M&E and the follow up of the locally recruited Project Coordinator.

More value could have been added if a partner had been engaged with a mandate to promote socioeconomic development in the communities (target group analyses and targeted actions designed for different gender and age groups, assessment of needs of farm labourers and how such needs could be met, looking into requirements for rational transport to expand the collection area towards the five kilometre radius, etc.).

The overall finding is still that a lot was done on the ground with a project budget that was modest compared to many other projects.

3.7 SUSTAINABILITY

3.7.1 Financial sustainability of the milk collection system

The viability of the PRAN milk collection system will at macro level depend mainly on:

- Whether or not there will be policies in place that are effectively implemented to protect the domestic production of raw milk from the competition of the relatively cheaper milk powder available on the international market. The milk powder is especially attractive for some industry segments if imports of the lowest grades that are rejected by many other countries continue to be allowed in Bangladesh. Competition from milk where the naturally occurring fat has been replaced with vegetable fat from palm oil constitutes another potentially very competitive product in terms of price.
- Whether or not consumer trust in dairy factory products will improve. This calls for quality assurance by industry, application of standards like Hazard Analysis and Critical Control Point (HACCP) and Food Safety Management System (FSMS) to the whole value chain, and effective government regulation.
- PRAN's business skills such that it can afford to pay prices at the collection centres which are competitive in relation to local producers and markets and competing dairy companies. Milk Vita was in this context reported as a "special" competitor not fully dependent on the business environment as it is 51 percent government owned and the government has at times covered the losses that the company has generated. In comparison, PRAN Dairy Ltd has also not generated net profit until the two most recent years, during which a marginal profit has been generated. The PRAN mother company covered the losses during the establishment phase of 2011 to 2016.

The viability of the PRAN milk collection system will at micro level depend mainly on:

- Capacity utilisation: A VMCC cannot be sustained if the collected volume is too small. Currently, the average VMCC operates below its capacity (now about 30% if collection once/day, 15% if twice/day). It was observed by the evaluation team that most VMCCs have an effective collection area within a two km radius. This radius can be extended to five kilometres if transport is rationalised, either by middlemen or by farmers jointly arranging transport. Collection from the two-to-five kilometre radius is now mostly ad hoc. The project could have worked more consciously to promote expansion of the collection area. Now the option still remains for PRAN. About a 12 percent (4.5 Taka/l) price cut by PRAN and others coupled, with increased feed costs currently challenge farmers. PRAN's price offer is now not so competitive. As per verbal information from PRAN, the volumes collected have now dropped from 150,000 to 130,000 litres/day.
- Continued offer of quality services, which helps PRAN to attract milk delivery.
- Sustenance of a critical mass of trained staff to provide services and continued efforts to sustain and enhance good governance at VMCC level. At least in Hubs 4 and 5, the main factor contributing to staff turnover was misconduct, with staff entering into undue collaboration with farmers for shared benefits.
- The competitiveness in relation to local markets and other existing systems for milk collection.

Only the future development will establish whether the initiative will be financially sustainable or not. A strong positive factor is that PRAN is an actor with significant capacity in all respects.

3.7.2 Financial sustainability at household level

Milk production has a long history and tradition in the project area. It is thus very likely to be sustained in some form at household level. However, the production cost at farm level is higher than the competing world market price for milk powder. The on farm production cost will have to be further reduced, if possible.

The situation differs depending on other farm activities. As long as the farmer is self-sufficient in roughage (straw, silage, green grass) and only needs to buy supplementary feed, the profitability is mostly reported as reasonable. But if and when production exceeds self-sufficiency on roughage, the profitability is commonly reported as unsatisfactory, resulting in sale of cows. This trend may not be visible in project statistics on net income as sale of cows increases net income as per the model applied.

Good quality crossbreed calves fetches a good price which implies that there is long-term faith in milk production among farmers. Possibly, this also implies that calves are sold to households within the proximity or farther away, which have access to straw and grass produced on farm. Alternatively, the faith is residual, based on past times with better profit. Should the price of crossbreed calves start to drop, then the milk production may drop even faster as the calf market currently is the most decisive element of the "cow business".

The function of regarding livestock as a saving is likely to erode as the bank system evolves further and becomes increasingly accessible and trusted locally.

3.7.3 Returns as compared to similar undertakings

A complicating factor for this assessment is that the other contemporary initiatives in Bangladesh that the team sought to study are designed differently. Solidaridad and CARE, for example, both work a lot more with community organisation and local ownership and provide less or no funding to the dairies. This implies that the outputs and impacts of the different initiatives may vary.

Some actors indeed argue that the PRAN Hub model is investment heavy. Although a VMCC may require investment in the magnitude of 5 million Taka (500,000 SEK; two cooling tanks at 1,000,000 Taka/each; generator; testing equipment 2,000,000 Taka; construction 600,000 Taka; 10% of a tanker truck x 3,500,000=350,000 for onward transport); it is hard to argue that any of this equipment should not be there. If capacity is fully utilised, each VMCC can handle about 700,000 litres per year (based on one tanker visit per day, double that if twice a day, which is technically possible). That amount of milk is worth about 25 million taka. From this perspective, the VMCC investment in hardware does not seem prohibitive.

Further, to ensure milk quality, rapid cooling is definitely advantageous as was concluded about 50 years ago in Sweden when on-farm cooling tanks were introduced. Also, ensuring adequate payment and transparency to the farmers with a system that provides incentive to quality production (price related to fat content) calls for milk testing equipment.

The evaluation team's assessment is that the investment level is justified if the ambition is to build a system that meets present and future requirements. A challenge is of course to enhance capacity utilisation for better cost effectiveness.

The evaluation team has not ventured into comparison between De Laval cooling tanks and other cooling tanks on the market. PRAN has different tanks in operation. One observation is that cheaper tanks are commonly a lot more problematic to clean properly.

3.7.4 Ability at local level to maintain technology in the future

The ability to maintain technology is related to the organisation designed to support the system. This project was based on the principle that the VMCCs were owned and operated by PRAN. With 100 VMCCs, many of which are similar in terms of hardware, it is financially viable and justified for PRAN to maintain a back-up service with a stock of the most commonly required spare parts, supplies of required chemicals, and technical know-how. PRAN also has the institutional capacity to source parts or know-how from abroad if needed.

The VMCCs are not exceptionally high-tech. In Europe, most dairy farmers operate a cooling tank, but not necessarily equipment for milk testing. But experiences already generated illustrate that the technology introduced can be maintained as long as the current organisation is sustained.

If VMCCs ownership rested with individual entrepreneurs or farmer groups, they would require some form of management support contract with a larger company in order to have rapid and sustained access to the needed services and inputs.

3.7.5 Project impact on service provision to farmers

The project provides services to farmers free of charge but required materials are bought by farmers, usually from regular local suppliers. Semen has been imported by PRAN and thus not supplied from local sources. Occasionally the DLS has had supplies of veterinary drugs beyond their capacity to administer, in which case supplies have been made available to PRAN service providers.

The PRAN service provision system does not differ much from the services offered by other dairy companies, but has rather added needed capacity.

The team was also informed that in many areas commercial paravets also operate as entrepreneurs. In some cases they have their own sales of inputs. It could be expected that the PRAN services had eroded the business prospects for such local entrepreneurs but the team could not verify that. Rather, the PRAN services may spur the business of suppliers of veterinary drugs.

3.7.6 Environmental sustainability

As noted under Section 3.4, the project generally does not have significant negative impacts on the environment. However, sooner or later the issue of solid waste management in Bangladesh must be addressed. The evaluation team sought a lifecycle analysis for the packaging material used by PRAN with reference to conditions in countries where recycling of packaging is not well developed, but it did not find such information.

Other concerns include use of cleaning chemicals (SU120) without information available on its contents, that the knowledge level at VMCC level may vary as regards the use or non-use of sulphuric acid for pH adjustment of waste water when SU120 is applied for tank cleaning and that the project did not develop recommendations on manure management applicable to larger dairy farms where all manure is not used for manure sticks for fuel.

3.7.7 Social sustainability

While the team did not come across any signs indicating that the milk collection system established would not be socially acceptable or sustainable, it is noted that more elaborate target group analyses to establish the roles and needs of girls, boys, women, men, and farm labourers respectively might have provided information on factors that could eventually limit expansion of the dairy farming. Other agencies pointed at the work load of women, which could become higher, and eventually a limiting factor, when more dairy cows are to be managed.

Similarly, such analysis could have helped identifying what can be, and should be, done in order to expand the collection area of the VMCCs for better capacity utilisation. These could be elements of PRAN's further development work.

3.8 VISIBILITY OF SIDA

The evaluation team's observation is that the different actors have been consciously given credit. Normally, the Swedish policy favours that the Swedish government is made visible rather than Sida *per se*. This issue has been discussed, and it was agreed to place the Swedish government logo on a separate line to indicate that Sweden was a donor and not one of the implementation partners. This applies to the design of the signboards at VMCCs. The evaluation team did not observe any unsatisfactory use of the various logotypes in relation to the restrictions given in the PD, nor did it note any complaints related to the visibility of any of the partners.

4. Conclusions

4.1 CONCLUSIONS ON DESIGN

4.1.1 Merits of a not too complex design

The project was in effect designed to deliver at activity and output levels.

Consequence: It delivered activities and outputs at an impressive pace.

4.1.2 Goal hierarchies

The PD includes an overall goal, an aim and an overarching development objective which are all related to poverty reduction, while the logframe introduces a project purpose and is very elaborate with regard to the output and activity levels. The overall goal also includes the reduction of imported milk powder, which is currently not attainable through this kind of project. The poverty dimension became less prominent in project reporting and the attempt to report on farmers' net income was found to be less reliable. The studies and recommendations of the inception periods were mainly treated as additions to the PD but were not well integrated in the PD.

Consequence: To some extent the shortcoming in reporting on the poverty reduction aspect originates from the design. A relatively great deal of attention was directed to the technical aspects, while rather little attention was given to the socioeconomic dimension – especially this should be monitored and reported on with credibility.

4.1.3 The project was not so well contextualised

The PD falls short of presenting sufficient details on the local situation, for example on the relative volumes of milk channelled through local producers in comparison to the industrial uptake, and on the "target group" with the disaggregation of roles and needs of women, men, youth, and farm labourers.

Consequence: The project was implemented with little attention to the diverse needs of various groups within the farm enterprises. Training could, for example, have been more specifically tailored to the roles and needs of various groups. Project reporting did not substantiate changes within the farm enterprises.

4.1.4 Organisation

The roles between UNIDO and PRAN were not well delineated in the PD. For a variety of reasons, hiring an international dairy expert did not materialise. UNIDO, PRAN, and Tetra Laval AB contributed somewhat similar expertise, resulting in the project being well equipped with knowledge on livestock rearing and the dairy industry, but less geared to analyse the socioeconomic dynamics at local and household levels. The project design indicated large responsibility for UNIDO, while UNIDO's

system for project management centralised to its headquarters did not initially hold promise for efficient operation.

Consequence: The insufficient clarity of the PD on the organisation and the limited capacity of UNIDO at national level constituted risks, but the implementers managed to mitigate the risk such that the project was successfully implemented. An essential risk mitigation move was to hire a local project coordinator.

4.1.5 Project justification

Although not well elaborated in the PD, the project was located to a region where dairy production is already rather prominent and several industrial actors already operate systems for local purchase of milk. PRAN was also already operating in parts of the project area, but through agents. These factors contributed to chances for success from a PRAN perspective. Risks for failure would mostly relate to the macro level environment including world market prices for milk powder and government policy. Donor funding to a project of this type would be much more justified if the milk collection system was to operate in an area without or with only rudimentary existing collection systems. It is, in this context, noted that projects of this type may emerge from initiatives driven by the private sector, and there may thus not be a menu of options for Sida or any other donor unless another project development modality is applied.

Consequence: In retrospect it is hard to substantiate the level of donor funding required for this particular project. Generally, projects in areas where the risk level is high will justify a high level of donor support, while areas where milk collection is already proven to work, would justify only low level of donor support, or no support.

4.1.6 Project in relation to Sida's Guidelines on Private Sector Development

The Sida Guideline indicates that Sida should not transfer funds to private sector. The team has concluded that the reality is not much different if Sida funds are passed on to the private sector through an intermediary such as UNIDO. From a transparency perspective, the latter arrangement can be inferior as compared to a direct disbursement from Sida to a commercial actor. The team did not manage to get a clear reason from Sida which risks the Sida Guideline is intended to mitigate. Reference was made to the EU rules on state support to enterprises, which may affect the free competition within EU. These rules have been adopted in Swedish legislation. It is not clear to the evaluation team how support to PRAN could influence the competition within EU member states. A possible factor could be that Tetra Laval AB is a project partner.

Challenge funds is another modality for private sector support, (see section 3.3.8). A combination of consultant input and a challenge fund design could potentially resolve some of the constraints related to Sida funds being allocated to the private sector, since all aspects of project formulation and implementation could be subjected to bidding procedures. No doubt, such approach would add to Sida's work load since the commercial actors would not have the same level of interest in project conceptualisation and development.

Consequence: Channelling funds through UNIDO in this case resulted in weaker financial transparency and control as compared to how a "direct" support could have been organised. A specific example is the lack of external audits.

4.1.7 Project scope

Even though a design and implementation focussed on specific activities and outputs paved the way for project delivery at activity and output levels, it can be argued that the project design may not well meet the common criteria of a human rights-based approach (HRBA): Duty-bearers, i.e. government officials were not provided with much capacity building support to fulfil their duties, among which are the important aspect of regulations and monitoring of food safety as well as the critical business-related aspect of import regulations and levies on milk powder. Also, enhanced regulations for solid waste management would fall in this domain with a project potentially contributing large volumes of wastage in the form of used but not recycled packaging material. Similarly, rights-holders, in this case primarily represented by the various groups involved in the milk value chain, were not assisted in terms of promotion of producers' groups of some sort, and to understand the wider market dynamics and how their voice can be articulated for collectively advancing their interests. Thus, the project design did not sufficiently address:

- Community organisation/development to build capacity among farm families and perhaps labourers, e.g. formation of common interest groups or associations, not necessarily cooperatives;
- Government policy/involvement to address the government's role in promotion and regulation of the dairy industry, i.e. levies on imports, restrictions on low-quality imports (rejects), effective quality control to build consumer trust.
- Waste management, possibly prepare the ground for the introduction of responsibility awarded to the commercial actors (as in Sweden); and
- Systematic work on food safety (Quality standards, the 7 HACCP principles applied to the whole chain, FSMS).

A wider approach would, however, call for another project set up with inclusion of a partner with strong community-development or farmers-organisation profile. A wider approach could jeopardise rapid field achievements. Also, the project does not operate in isolation, as there are many ongoing processes.

Consequence: The project has had a rather narrow scope, mostly related to meeting the industrial needs of PRAN.

4.1.8 Design to ensure benefits for all intended stakeholders

The project created additional benefits for the farmers until last year when PRAN decided to significantly reduce the price offer and at the same time the feed costs rose too high.

Consequence: There is now a risk that the intended beneficiaries will not benefit as expected and that results on the ground may not be sustained.

4.2 CONCLUSIONS ON IMPLEMENTATION

4.2.1 Impressive outputs

A lot was done in a short time:

- Impressive de facto outputs on the ground.
- The project created additional benefit for the farmers at least until last year.
- The Dairy Academy is instrumental to ensure supply of skilled staff for the dairy hub activities.

Undoubtedly, the institutional strength of PRAN has been decisive for the progress made.

4.2.2 Project M&E and reporting

The reporting system was not well developed for credible results reporting. Project reports, including the incomplete draft Project Completion Report, dated June 2018, mainly contained a standard set of statistics with few comments. Comments did not clarify how data was generated or provide much analysis. The project completion report did not highlight any wider market system changes either at macro or micro levels.

The evaluation team found that the reporting system used by the project had been useful for regular monitoring of key parameters of interest for PRAN, but it was not fully credible for results reporting. Less reliable output/outcome data include:

- Farmers' net income, unreliable and insufficient to measure the enhanced welfare of farm families, and highly insufficient to assess poverty reduction at community level.

Consequence: Some key data may not adequately reflect the real development over time, e.g. farmers net income, which was the prime parameter to illustrate how project addressed poverty.

4.2.3 Financial reporting

The level of transparency has been insufficient in financial reporting: Only UNIDO headquarters knows the shares between PRAN/UNIDO. No external audit was conducted at UNIDO/PRAN level. There are no informative comments in reports on project finance except on the exchange rate fluctuations. There was no attempt to report on the total project input, including the investment by PRAN and the in-kind contribution by Tetra Laval AB.

Consequence: Difficulty for all in understanding the full contributions made by partners and who did what, limited transparency for all except UNIDO HQ, and difficulty for all actors to assess efficiency as the resources allocated to the respective partners were not reported. Activities conducted by different partners were also not reported separately making in kind contributions invisible.

4.2.4 Project in relation to diverse target groups

The analysis of target groups and their needs was weak. However, the project successfully targeted small-scale producers.

Consequence: The most vulnerable groups were not identified and their needs may not have been addressed.

4.2.5 Sustainability

PRAN will have to address factors such as price offer, capacity utilisation, and advocacy at policy level to ensure financial sustainability. For enhanced capacity utilisation it will be crucial to identify methods for milk collection from within a five kilometre radius rather than from within two kilometres. This will require further knowledge on either how to work more with collectors, or how to encourage farmer to farmer cooperation for rationalised transport.

For environmental sustainability, a number of technical details should be revisited by PRAN and Tetra Laval AB. PRAN should, preferably in consort with other actors also, analyse the prospects for recycling of the packaging material.

In order to trim production costs at farm level, training on farming as a business should be stepped up.

4.3 CONCLUSIONS ON RESULTS

4.3.1 The milk collection system is up and running

The hub model is highly appreciated by the different stakeholders but has yet to bring any visible wider market system changes. Farmers were happy with PRAN due to their regularity in milk collection, payment, and fat-based individual payment. The project has given PRAN some advantage, at least temporarily, as compared to other actors.

4.3.2 The Dairy Academy

The Dairy Academy is instrumental to ensure supply of skilled staff for the dairy hub activities and has indirectly contributed to other developments in the dairy sector. Follow up of alumni through, for example, a Facebook group would yield added value.

4.3.3 Project in relation to poverty alleviation

The goals/aims related to poverty reduction has not been prominent in reports and are difficult to assess at this stage, given that farming system changes take time and that result reporting must be reliable.

4.3.4 Sustainability

Sustainability depends primarily on PRAN, government policy and production cost at farm level. There is scope for sustainable multiplier effects through the Wold Bank supported project envisaged to take off soon. Although it is a lot wider in scope it has been inspired technically by the Sida-supported activity.

5. Lessons learnt

The major lessons learnt from this project include the following:

Key observation	**Lessons learnt**
The project created additional benefit for the farmers until last year when PRAN decided to reduce the price offer significantly and at the same time, the feed cost rose to unprecedentedly high levels. The chance of further positive results highly depended on the pricing mechanism by PRAN.	Just assisting any private company in expanding their business might not always ensure the rights of the beneficiaries. Market systems might not always follow the simple rule of demand and supply. Different market dynamics need to be considered during the project formulation phase.
The hub model is well appreciated by different stakeholders but has yet to bring any visible wider market system changes.	Bringing wider market system changes take time as some aspects of dairy development are slow processes. Also, the bulk of milk is still not channelled through the larger dairies in Bangladesh.
The reporting system used by the project was useful for regular monitoring but not for credible results reporting.	Engaging skilled M&E persons is very important for good-quality results reporting. For results reporting, it is important to collect information through a third party and/or to engage a monitoring consultant to assist.
Clarity on financial issues was insufficient, even among the internal actors.	Financial systems should not only be transparent and accountable to the handful of top level authorities, but to all levels.
The design of a project of this type should include a PSC with representation and modality that make it realistic to hold meetings at least twice per year. There should be systematic follow up on decisions.	A PSC should be appointed as it was in this case but introduce more formalised checks to ensure that meetings are held as scheduled and that decisions are implemented. Engagement of a monitoring consultant can help Sida to effectively monitor.
PRAN was successful in promoting better farm management practices. The impact is much more visible than what is common in government-run extension services.	Promoting improved farm management practices can be good way to make farmers resilient to market shocks and can be efficient if implemented by the private sector.

The justification of the project is somewhat unclear.	Thorough analysis of local and national context is a prerequisite to ensure a well-justified project in terms of eligibility for donor support.
This project is not going to create any impact on milk powder import.	While setting the project targets, understanding the market system and context is very important.
Farmers were happy with PRAN due to their regularity in milk collection, and individual payment based on fat content of the milk.	The hub model is well developed and a good concept for further promotion by the private sector and, when justified, with donor support.

6. Recommendations

6.1 RECOMMENDATIONS RELATED TO DESIGN

Based on its findings, the evaluation team makes the following recommendations related to the project design:

1.	To Sida	An external appraisal of a project proposal of this type should always be conducted, and if an inception period is opted for, a second appraisal after the inception should also be considered.
2.	To Sida and actors seeking donor support	A justification assessment should always be made on the development value of an intervention in relation to the local context. An initiative targeting an area where milk collection is not already organised should justify a higher level of donor support than other areas. Areas where there is already a vibrant dairy value chain should not be considered for this type of project.
3.	To Sida	Examine why there is a guideline preventing allocation of Sida funds to a private actor and develop a user-friendly policy that clarifies in which circumstances the use of an intermediate agency will be in line with the general guideline, or, alternatively, revise the guideline.
4.	To Sida	Explore if projects of this nature could be designed as "challenge funds".
5.	To Sida and actors seeking donor support	A project of this nature should be based on a description of the context related to the four "missing elements" listed under 4.1.7: • Level of community organisation and needs in that respect • Government policy and involvement modalities • Solid waste management with reference to milk packages • Food safety issues. Project design should address gaps identified.
6.	To Sida and actors seeking donor support	Designing projects following the private sector development approach implies designing win-win business models. Addressing the wider capabilities of the farmers to defend their interest should be part of all designs. Collective voice and collective action should be promoted, which can be through more informal common interest groups, not necessarily cooperatives and through training.
7.	To Sida and actors seeking	Any project considered must include a target group analyses for identification of needs of disadvantaged groups, including

	donor support	women, and inclusion of actions to address such needs. A gender strategy or a broader socio-economic strategy should guide implementation. The project must also include suitable competence.

6.2 RECOMMENDATIONS RELATED TO IMPLEMENTATION

Based on its findings, the evaluation team makes the following recommendations related to the project implementation:

1.	To Sida and actors seeking donor support	Having a position for an M&E specialist is a must for future projects to ensure high-quality M&E.
2.	To Sida and actors seeking donor support	For results reporting, it is important to collect information through a third party to avoid bias. Using services of a monitoring consultant may be helpful if engaging a third party for data collection is beyond reach.
3.	To UNIDO	More effort should be allocated to the production of good quality reports with reader-friendly analyses and credible results reporting.
4.	To PRAN	Scaling up the Dairy Academy initiative would be a potentially successful and value adding intervention. More resources should be engaged to make it a significant practice and also to make such efforts an industry practice.
5.	To PRAN	Further socioeconomic studies and initiatives will be essential, not only for communities, but also for PRAN's staff policies, PRAN's understanding of limiting factors for milk production at household levels, and for PRAN's ability to expand the effective collection area from two to five kilometre radius.
6.	To PRAN	Contents of chemicals used should always be verified to ensure they are not detrimental to the environment (SU120). There is also need to review the use of chemicals at VMCCs to ensure that amounts and types of chemicals used are consistent with needs.
7.	To PRAN	Develop advice on manure management for larger farms and adopt such advice in the extension service to avoid water pollution and waste of nutrients.
8.	To PRAN	Develop more elaborate training material on farming as a business and include it in training at different levels. Production costs must be reduced at farm level for the dairy sector to be competitive in the current policy environment and international competition.
9.	To Sida and actors seeking donor support	There should be clear and agreed procedures from the beginning on how financial transparency will be ensured and visible to the stakeholders for joint responsibility, overall accountability, and for donor's needs to be satisfied.

10.	To Sida and actors seeking donor support	A private actor with institutional and financial strength is a key factor for success. Company management of VMCCs equipped with cooling facilities is advantageous since efficient operation requires an umbrella organisation for back up service.
11.	To Tetra Laval AB	Tetra Laval AB should initiate a lifecycle analysis on its packaging material and have a clear stand on how to address recycling in a country like Bangladesh.
12.	To PRAN	Arrange alumni follow-up through a Facebook group.

6.3 RECOMMENDATION RELATED TO RESULTS

1.	To Sida	For learning it would be useful, and in this case possible, to conduct a post evaluation of the project after some three years.

7. Appendices

7.1 TERMS OF REFERENCE

Terms of Reference (TOR)

SWEDEN

The Phase End Final Evaluation of
DAIRY HUB & DAIRY ACADEMY DEVELOPMENT IN BANGLADESH PROJECT

1. BACKGROUND

According to IFCN (Global knowledge based network for dairy) there are approximately 4.2 million dairy cows and approximately 1.4 million dairy farmers in Bangladesh. The average milk production is today 3.6 litres per day per cow, which can be considered fairly low. There is a mix of cows in Bangladesh between cross breeds and local breed. General estimation is that the local breed can produce up to seven to eight litres of milk per day, while the crossbreed can peak at 26 to 27 litres. In general, the milk quality in Bangladesh can be considered poor and on average the bacteria count per ml is between seven to nine million. This high bacteria count leads to a very short shelf life for both pasteurised and ultra-high temperature (UHT) packaged milk.

In response to some of the problems outlined above, PRAN Dairy Ltd has been investing in “dairy hubs”, through which the company can get access to more and better milk for processing. As part of the development of a nation-wide network of dairy hubs, PRAN has also been facilitating training of farmers and experts to improve the milk supply (in terms of quantity, quality and seasonality). Being one of the leading private sector companies, PRAN has the ambition to help increase Bangladesh’s milk production from the present 1.75 billion litres per year to exceed 3.5 billion litres by 2025. The idea is to double production by increasing cow yields and not the number of cows. By 2025, PRAN expects milk powder imports to be fully replaced by locally produced and collected milk. PRAN has estimated that 60 dairy hubs are needed to reach this goal, involving up to one million small scale dairy farmers. It is expected that it could become a combined goal between the dairy industry and the government in Bangladesh. By achieving this goal not only PRAN and their milk suppliers, but also other participants in the dairy sector will benefit from the envisaged interventions.

PRAN, Tetra Laval and UNIDO had jointly proposed and implemented a partnership since 2014 with Sida covering three new dairy hubs (hubs no 3,4 and 5) and a Dairy Academy where much needed training is provided for farmers and experts who are involved in developing local small holder milk production. The Dairy Academy has been working to enhance the knowledge of milk production and quality conservation of raw milk covering large parts of Bangladesh's milk production. The training and increased knowledge will lead to increased living standard of the rural community of Bangladesh. The project proposal also included an assessment of farmers' need for and access to financial services for on-farm investments, such as cow sheds, dairy cows, milking equipment and biogas production equipment.

This project, a private sector initiative, could also be seen as a first step in developing not only the whole dairy sector in the country, but also the livestock sector in Bangladesh. The dairy hub model could potentially work in any sector where small holders produce perishable food for the processing industry.

UNIDO had been already working with Ministry of Fisheries and Livestock's https://outlook.live.com/owa/?path=/mail/inbox/rp (MoFL) Department of Fisheries in the shrimps sector before this project was launched. The former Secretary of MOFL had requested continued support from UNIDO in developing also the dairy sector in a similar way. The projects could benefit each other. Important lessons can be learnt in this project that can later be applied in a countrywide approach. PRAN, Tetra Pak and UNIDO all hope to play a long term role in the development of Bangladesh's dairy sector. The Dairy Hub & Dairy Academy Development in Bangladesh Project has expected that, in combination with a survey of the livestock sector, will provide a good base for the development of a "Bangladesh Livestock Development Programme" (BLDP) and will be seen as a part of UNIDO's response to the above mentioned request made by the former Secretary of the MoFL. It was expected that the envisioned sector wide BLDP will address the whole value chain with skills development, technology transfer and improvements in rules and regulations as well as control of compliance of the sector with modern market requirements. The development in the sector was expected lead to poverty reduction, improved food security and public health.

The project currently works in 17 Upazilas under 4 districts namely Pabna, Natore, Sirajganj and Rangpur (only one VMCC has recently been opened in Gaibandha district covered by Rangpur Hub) reaching 60 Unions. As of now, all three new hubs (Hub 3, 4 and 5) are operational alongside upgradation of existing two hubs (Hub 1 and Hub 2). In addition, 11,322 farmers have been registered under five hubs (including 670 female farmers).

Through 558 batches of training, 20,576 farmers have been reached (number of farmers reached by training is more than registered farmers as the project's training activities are open to all interested and not only to those who are registered under hubs). A total of 1,023 (95 female) persons have graduated so far from the Dairy Academy under courses of different length out of which 511 have already joined the job market.

The objective of this ToR is to carry out the project end evaluation of the Dairy Hub & Dairy Academy Development in Bangladesh Project during March to July 2018.

During this period, all key activities of the project, particularly Dairy Training Academy, five Hubs and farmers training initiatives will fully functional. In order to assess the results, progress, challenges and future direction of the Dairy Hub and Dairy Academy Development in Bangladesh Project. Embassy of Sweden will for this assignment call-off services from Sida's Framework Agreement for Evaluation Services.

2. THE GOAL AND OBJECTIVES OF DAIRY HUB & DAIRY ACADEMY DEVELOPMENT IN BANGLADESH PROJECT:

The Dairy Hub & Dairy Academy Development in Bangladesh Project has aim to introduce international best practices and knowledge in efficient dairy farming to poor, small scale dairy farmers in Bangladesh as well as establishing a milk collection system allowing collection and preservation of growing volumes of high quality raw milk. This will lead to increased wellbeing of all people living in the villages covered by the 5 dairy hubs.

The Dairy Hub & Dairy Academy Development in Bangladesh Project includes four major components, closely linked to each other;

I. Investment in and operation of three new dairy hubs and optimisation of the performance of the first two dairy hubs already in operation.
II. Development of the operation of and trainings provided by the Dairy Academy
III. Training of farmers and experts in the Dairy Academy, at the facilities of the dairy hubs and in villages and at the various small dairy farms covered by the dairy hubs.
IV. Assessment of farmers' need for and access to financial services and improved access to finance for project beneficiaries for farm investments (cow sheds, cows, milking equipment, bio gas plants etc.).

<u>The Goal</u>

The overall goal of the project was to improve the livelihood of small holder dairy farmers in Bangladesh through increased quality and yield of milk, allowing the replacement of imported powdered milk and meeting growing consumer demand.

<u>Overarching Development Objective</u>

Offer an opportunity for small holder farmers and their families to stay in rural areas with improved incomes and living conditions.

<u>Expected Outputs</u>

- A Dairy Academy established and in operation having an improved curriculum and
- using up-to-date training material and techniques
- Dairy hubs established
- Knowledge level among project beneficiaries/farmers, especially in milk production
- improved
- Access to finance improved

Expected Project Outcomes

- Through the establishment and development of the Dairy Academy and three new dairy hubs in Bangladesh improve 8,000 - 10,000 small holder dairy farmers' milk production knowledge, dairy practices and income during the project period and onwards.
- Through knowledge transfer and introduction of proven production methods, lift farmers out of poverty
- Improved living conditions among project beneficiaries/farmers
- Increased knowledge level in general in the society due to that more farmers can afford to let their children attend higher educations
- Increased purchasing power in the region, and long term nationwide if the model is adopted on a nationwide scale
- Milk quality of the farmers improved
- Animal health of the farmers improved.

These remain the overall goal and basic objectives of the project with an aim to further improve the scope and impact of the efforts.

3. PURPOSE AND OBJECTIVES OF THE FINAL EVALUATION

It was planned and agreed by Sida, UNIDO and PRAN that an External Independent Project. Evaluation will be conducted at the end of the project. This evaluation will analyse the physical, financial and impact indicators as provided in the log-frame. The project evaluation will be based on assessments of project results, progress, constraints and impacts in accordance with logical framework prepared at project period. The indicators used to monitor and evaluate the project include farmer income, milk powder import reduction, milk yields, number of farmers trained, bacteria count of collected milk and number of loans provided to farmers (detail in Log frame). The Evaluation will also review the opportunities and challenges with regard to the current development context of the country.

The mission needs to identify lessons learnt and present recommendations of general and specific nature to Sida, MoFL, UNIDO, PRAN, Tetra and for any adjustment within Dairy
Hubs Project and for the preparation of similar poverty alleviation/rural development/market development/Private Sector Development projects in the future.
The findings of this evaluation will provide directions for future strategies and project interventions that will be integrated into the design of the next programme cycle of Sida in Bangladesh.

Finally, the evaluation will cover the guiding questions listed below. It is expected that the consultant will review these in their tender, and, if needed, refine them further in the tender, as well as in the Inception Report.

3.1 Relevance

The assessment of relevance will focus on the extent to which the design effectively / appropriately:

- analysed the project's coherence with the Sida Bangladesh Country Strategy and GoB's policies,

- identified key stakeholders and target groups, assessed institutional capacity issues and effectively promoted local ownership; identified problems and needs of the target population, how correctly addressed by the stated objectives and what the lessons learnt.

3.2 Efficiency
The assessment of efficiency will focus on:

- Role of the key stakeholders with responsibility for policy guidance and coordination
  between all institutions and groups involved in the project;
- Inputs (financial and technical) made available to implement activities from all parties involved (Sida, UNIDO, Tetra Laval, PRAN, MoFL, Farmers, Communities, NGOs etc.) including respect of deadlines;
- Management of resources in a transparent and accountable manner by all parties involved;
- How far the costs and value–for–money were justified by the benefits received, whether or not expressed in monetary terms in comparison with similar projects or known alternative approaches (of dairy hub business model) implemented by Arong, Milk Vita, Aftab etc., taking account of contextual differences in particular in the context of:
  - appropriateness of key programmatic interventions and capacity development initiatives and also annual work plans in relation to the project document
  - human development training (module including quality of training materials produced by TETRA/PRAN, acceptance by beneficiaries, outcome, i.e., changes in behaviour, attitude and knowledge etc.) provided by PRAN is adequate and cost-efficient;
  - UNIDO's performance in relation to the implementation and monitoring of the project, provisions of contribution agreement with Sida and also in terms of in facilitating linkages between beneficiaries and key stakeholders.

3.3 Effectiveness:
The assessment of effectiveness will focus on:

- whether the planned benefits have been delivered and received, as perceived by all key stakeholders;
- appropriateness of the balance of responsibilities, including accompanying measures which should have been taken, between various stakeholders/ partner authorities;
- any shortcomings due to a failure to take account of cross-cutting/over-arching issues such as gender equality, environment, poverty and market development.

3.4 Sustainability (the likelihood of a continuation in the stream of benefits produced by the project):
The assessment of sustainability will focus on:

- financial sustainability, e.g. whether the products or services provided were affordable for the intended beneficiaries and remained so after funding ended,

more specifically, at beneficiary level, to what extent the improved socio-economic status and quality milk production of farmers are sustained through long time employment, income generating activities, casual employment, training and savings programmes;

- economic sustainability, i.e. how well the benefits (returns) compared to those on similar undertakings (such as similar service providers like Arong, Milk Vita, Aftab etc.) once market distortions are eliminated;
- Social/technical (technology) issues, e.g. whether (i) the technology, knowledge, process or service provided fits in with existing needs, culture, traditions, skills or knowledge; (ii) alternative technologies were considered, (iii) the intended beneficiaries can maintain the technology acquired without further assistance.

3.5 Impact (Short Term):
The assessment of impact needs to examine:

- goal achievements, and their attribution due to the project;
- non tangible benefits such as women's empowerment (social status, decision making ability, mobility, access to knowledge, gender equity, human rights, free from harassment/violence etc.) or pro-poor changes at union level, given that thousands of disadvantaged men/women were involved over a considerable period of time;

3.6 Visibility of Sida:
The analysis examines:
• projects (both PRAN, UNIDO, Tetra Laval, MoFL) contribution to uphold Sida visibility

4. REQUESTED SERVICES INCLUDING SUGGESTED METHODOLOGIES:
The evaluation will follow the Sida Project Cycle Management/Contribution Management participatory approach on evaluation that shall involve key project stakeholders (Sida, PRAN, UNIDO, Tetra Laval, MoFL) as well as other stakeholders from communities, including targeted beneficiaries. It is envisaged that the methodology used during this evaluation will include at least the following:

- In depth literature review such as Bangladesh Country Strategy Framework of Sida,
  National Strategies and Policies of Bangladesh Government, Project's assessment reports (market, gender and environment), Previous baseline surveys of PRAN and
  UNIDO on Dairy sectors, Annual reports etc. (All required project documents shall be shared with the evaluation team in order to facilitate their understanding and comprehension)
- In depth discussions and meetings with discussion with key project staff engaged both in the national and field levels, other important stakeholders from PRAN, UNIDO, Tetra Laval, MoFL, Communities and finally targeted beneficiaries;

- Field visits to all programme districts to observe key programme interventions and meeting with selected targeted beneficiaries
- Review and analysis of primary data collected through formal assessments and surveys conducted by UNIDO and PRAN to prepare structured and unstructured questionnaires to be used during interviews, FGDs, meetings, community discussions and workshops with key stakeholders.
- The mission will operate under the overall guidance and responsibility of the International Expert (who will act as Coordinator) in close consultation with national expert. A proposed methodology and detail programme agenda of the evaluation will be submitted with the offer for services and agreed by Sida/Embassy of Sweden. Embassy of Sweden Dhaka Bangladesh will review and approve the consultants proposed as the evaluation team members.
- The mission will start in Dhaka with an initial briefing meeting at the Embassy of Sweden Dhaka office to be followed by a meeting at the PRAN UNIDO Project office where representatives of relevant stakeholders such as MoFL, Tetra Laval, PRAN and UNIDO will be invited to participate.
- The evaluation team members will present the evaluation methodology and also the evaluation plan of activities to solicit last minute inputs, if any.
- Upon completion of the literature review, field visit and key discussions, the mission member will give an initial debriefing for the Embassy of Sweden Dhaka Office officials to share critical findings, if any on project approach and management. Later in
  the PRAN HQ office where representatives of relevant stakeholders such as MoFL, Tetra Laval, PRAN and UNIDO will be invited to participate and a concise Aide Memoire summarising the major findings will be presented by the evaluation mission.
- The mission will remain in close consultation with the Embassy Programme Officer and provide weekly updates on the progress of the evaluation, including their field visit schedule (where Embassy's relevant Programme Officer might accompany) and other matters of interest.

5. SCOPE OF WORK & TIME LINE

5.1 Time Frame

The total evaluation period will be between March to July 2018 (including finalisation of report) and the Budget ceiling for the evaluation is SEK 450,000. The Consultant shall submit a tentative work plan in the tender that considering the scope of work which will be updated and agreed upon in the beginning of the assignment.

5.2 Scope of Work

The evaluation team will take into consideration the objectives of the on-going project document, the progress reports, and the audit reports (including the management notes) of the ongoing phase, the previous review recommendations and the future project phase outline. A final report of maximum 25 pages (excluding Annexes) will be provided at the end of the reporting period. A two/three page executive summary will be provided with the final report.

Activities

Phase 1: Prior International Expert Arrival at Dhaka (March/May 2018)	
1.	Review existing literature (Policy Documents of Sida and Bangladesh government including Prodo, Inception report, Progress reports, Annual reports, Annual Market Impact, Environment and gender assessments, M & E database review, audits etc.)
2.	Submit Inception Report which will include: a) summary findings from the literature review, b) a final list of well-formulated and agreed evaluation questions, and c) a revised and agreed work plan for the evaluation.
Phase 2: In Country Main Evaluation (April to July 2018)	
3.	Arrival of international consultant/s and on board of national consultant/s
4.	Preliminary planning meeting of the mission team members
5.	Briefing meeting with Sida: Introduction to the assignment and finalisation of methodologies
6.	Preliminary Meeting with UNIDO and PRAN (Sida to join): UNIDO, Tetra Laval and PRAN to make a multimedia presentation to introduce itself as an organisation and its programs
7.	Discussions/meetings with: Representatives from all key stakeholders including farmers and community members
8.	Meetings with relevant representatives from Government, DPs (World Bank, Denmark, FAO, GIZ, Netherlands Embassy) and other similar service providers (Milk Vita, Arong, Aftab etc.)
9.	Meetings with Tetra Laval, UNIDO and PRAN Staffs
10.	Field visits to Dairy Hubs and Skills Developments units, preferably from various regions. This would include visits to: • Dairy hubs visit • Dairy Academy • Meeting with Local Project Staffs • Meeting/FGDs with Targeted farmers • FGDs/meeting with communities • Meeting with District/Upzilla Livestock Officers • Meeting with UP's Service facilities
11.	Air Memoir and Draft Report Writing and sharing with Sida for initial inputs
12.	Integrate Sida's feedback on draft evaluation report
13.	Debriefing meeting/ Workshop to share the findings of the evaluation and received inputs
14.	International consultants leave Dhaka.
Phase 3: Report Finalisation (April to July 2018)	
15.	Collect final feedbacks from Sida, MoFL, Tetra Laval, PRAN and UNIDO
16.	Finalise report & submit to Sida

6. TIME SCHEDULE AND REPORTING/ DELIVERABLES

In close consultation with the Programme Officer, Private Sector Development at the Embassy in Dhaka, the Evaluation Mission will be responsible for reporting on progress on a regular basis, keeping the Embassy informed of any hurdles; and debrief the Embassy/key stakeholders on the findings of the evaluation, interests of similar

private sector, government and DPs for future partnership. All reports should clearly distinguish between findings, analysis and recommendations.

The evaluation team will submits following reports in five stages:

1. Submit Inception Report which will include: a) summary findings from the literature review,
   b) a final list of well-formulated and agreed evaluation questions, and c) a revised and agreed workplan for the evaluation
2. A initial report containing key findings from the consultations takes place during meetings, FGDs, workshops and field visits By April to June 2018
3. Workshop with Stakeholders to share key findings and discuss tentative recommendations by end May/June 2018
4. Submission of a Draft Report after the presentation meeting. Sida, PRAN, UNIDO & MoFL will provide feedback. Draft report should be provided by February 2018 both in electronic and hard copy. Comments from Sida, PRAN, UNIDO & MoFL should be provided in no more than two weeks of the draft report. The evaluation team should be able to do one more additional week of research/presentation/meetings based on the comments of the draft report. The consultants will have to complete all activities within April-July 2018.
5. Submission of the Final Report should incorporate all the comments made by Sida, PRAN, UNIDO & MoFL. This report, like the Draft Report, should be prepared in MS Word and an electronic copy of the Final Report should also be made available end July 2018.

7. TEAM COMPOSITION

In order to meet the requirements of the ToR, it is expected that the tenderer will put together a team with at least two members to conduct the evaluation. Considering the nature of the assignment, the mission requires that at least one of the team members is a national consultant. The team members should have had no prior direct involvement in Dairy Hub & Dairy Academy Development in Bangladesh Project.

The consultants will collaborate as a team and detail out specific tasks as per the ToR, taking into consideration the objectives and scope of the assignment.

The following qualifications, expertise and competencies are required.

Overall competencies:

- Strong analytical, leadership and team-work skills
- Knowledge of the private sector and development work, especially those working in the area of skills, income generation and human development
- Relevant experience in macro policies on private sector development including labour force participation, market development, income generation
- Experience of working in Bangladesh will be considered as added advantage.

General experience and expertise requirements for all positions:

- Fluency in English (oral, written and comprehension);
- Excellent drafting skills;
- Experience with evaluating similar projects/programmes;

- Experience with working in a multi-disciplinary team.

Consultant's Expertise:
Team Leader:

- Master's degree in rural development, Economics, social sciences, engineering, Business or related field
- At least 10 years professional experience in development cooperation in management, evaluation and monitoring of rural/community development, private sector, and/or poverty alleviation programmes;
- In-depth knowledge of, and experience with, participatory evaluation of large scale private sector, food security, gender rural development, poverty alleviation projects and capacity strengthening of government institutions including central and local levels;
- Sound knowledge and expertise on Market Systems approach (in other words M4P or Making Markets Work for the Poor) and DCED standards will be considered as advantage
- Fully familiar and proven working experience with the Sida approach;
- Working experience in South or South-East Asia;
- Relevant experience in Bangladesh is an advantage.

Other Team Member/s:

- Master's degree in rural development, Economics, social sciences, engineering, Business or related field
- At least 10 years professional experience in development cooperation in management, evaluation and monitoring of rural/community development, private sector, and/or poverty alleviation programmes;
- In-depth knowledge of, and experience with, participatory evaluation of large scale private sector, food security, gender, rural development, poverty alleviation projects and capacity strengthening of government institutions including central and local levels;
- Sound knowledge and expertise on Market Systems approach (in other words M4P or Making Markets Work for the Poor) and DCED standards will be considered as advantage
- Familiar with Sida procedures and rules and regulations is an advantage
- Working experience in South or South-East Asia;
- Relevant field experience in rural Bangladesh.

8. ADMINISTRATION AND COORDINATION

UNIDO and PRAN will assist the evaluation team in:

- Briefing, planning and debriefing discussions and developing plans for field trips and review of activities
- Providing relevant written materials/documents/reports
- Assist in providing necessary logistic support to the consultant in arranging transport, food, accommodation, when requested
- Assist in making necessary contacts with stakeholders
- Assist in arranging necessary meetings.

9. ADDITIONAL INFORMATION:

1. Embassy of Sweden Dhaka Bangladesh will review and approve the consultants proposed as the evaluation team members.
2. A gender balanced evaluation team is preferred.
3. Sida funds will not be available to pay tax and VAT as per provision of the Sida Bangladesh Framework Agreement.
4. The quality of the methodology for evaluation will be taken into account during the evaluation of the offer.
5. The provision for person-days required for final report writing is to fall within the agreed budget.
6. The Embassy of Sweden Dhaka will issue its final acceptance on the basis of the Mission's Final Report, but it reserves the right to have this report redrafted as many times as may be necessary.
7. The Mission members are responsible for arranging all visa, hotel bookings, logistics, interpreter, secretarial support etc. needs without the assistance of the Embassy of Dhaka. An introduction letter from the Embassy may be issued to different key stakeholders on request. In this regard, project stakeholders

At the beginning of the report, a disclaimer has to be inserted stating that the views expressed in the report are those of the Consultants and do not necessarily reflect those of the Embassy of Sweden.

7.2 EXTRACTS OF THE EVALUATION INCEPTION REPORT

End Phase Final Evaluation of the DAIRY HUB & DAIRY ACADEMY DEVELOPMENT IN BANGLADESH PROJECT: INCEPTION REPORT

Bo Tengnäs and Shibaji Roy

28 May, 2018

This appendix includes selected sections of the Inception Report. Reference is made to the complete document for additional details.

PROJECT GOAL HIERARCHY AND OTHER DATA

According to the ToR, the Dairy Hubs & Dairy Academy Development in Bangladesh Project is **aimed at** '***the introduction of best practices and knowledge in efficient dairy farming to poor, small-scale dairy farmers in Bangladesh as well as the establishment of a milk collection system allowing collection and preservation of growing volumes of high quality raw milk'***.

This is expected to lead to increased wellbeing of all people living in the villages that are covered by the five dairy hubs.

According to the **Project Document (PD)**, the project aims to ***lift beneficiaries from poverty by increasing their income through improved know-how on efficient dairy production according to international best practices***.

The **overall goal** of the project is '***to improve the livelihood of small-holder dairy farmers in Bangladesh through increased quality and yield of milk, allowing the replacement of imported powdered milk and meeting growing consumer demand'***.

The **overarching development objective** is ***'to offer an opportunity for small holder farmers and their families to stay in rural areas with improved incomes and living conditions***'.

According to the **Project Log frame the Project Purpose** is ***to establish a Dairy Academy (DA) and 5 dairy hubs in selected Upazilas of Bangladesh***.

Expected Outputs

- A Dairy Academy established and in operation having an improved curriculum and
  using up-to-date training material and techniques
- Dairy hubs established
- Knowledge level among project beneficiaries/farmers improved, especially in milk production,
- Access to finance improved.

The Log frame treats the Inception phase and M&E also as outputs, yielding a total of six outputs.

Expected Project Outcomes or Impacts

- Through the establishment and development of the Dairy Academy and three new dairy hubs in Bangladesh improve 8,000 - 10,000 small holder dairy farmers' milk production knowledge, dairy practices and income during the project period and onwards (outcome according to ToR and PD).
- Through knowledge transfer and introduction of proven production methods, lift farmers out of poverty (outcome according to ToR and PD).
- Improved living conditions among project beneficiaries/farmers (outcome according to ToR and impact according to the PD).
- Increased knowledge level in general in the society due to that more farmers can afford to let their children attend higher educations (outcome according to ToR and impact according to the PD).

- Increased purchasing power in the region, and long term nationwide if the model is adopted on a nationwide scale (outcome according to ToR and impact according to the PD).
- Milk quality of the farmers improved (outcome according to ToR but neither outcome, nor impact of the PD)
- Animal health of the farmers improved (outcome according to ToR but neither outcome, nor impact of the PD).

The project is supported by a grant from Sida amounting to 21.45 MSEK for the time period November 2013 to June 2018. It is being implemented in mainly four Districts and 17 Upazilas (sub-districts), reaching some 60 unions. Training has been conducted in 558 batches reaching 20,576 farmers. The project areas are located some 200–300 km north of Dhaka.

PROJECT ORGANISATION AND IN-KIND FLOWS

The PD presents the organisation of the project, illustrated in Figure 1 below. It is a complex set up which also includes the envisaged in-kind flows provided by different actors.

The role of each project partner as defined in the PD (somewhat abbreviated here. It is noted that this is derived from the original PD forming the application and it remained unaltered in the subsequent refined and enriched PD presented after the inception period):

- **UNIDO**
  - UNIDO will be Sida's contracting partner in this project. UNIDO's involvement will focus on the establishment of dairy hubs with milk collection centres and the production of high quality raw milk at the farms.
  - In cooperation with the Tetra Laval Food for Development Office, UNIDO will act as the technical advisor to the establishment, implementation, development and management of the Dairy Academy and three new dairy hubs.
  - UNIDO in collaboration with Tetra Laval Food for Development Office and Tetra Pak's local Bangladeshi partner PRAN will establish a management team for the Dairy Academy. The team will include the centre manager, senior training instructors and support staff. This team will be responsible for the day-to-day management of the centre's training activities. UNIDO will be responsible to ensure the smooth operation of the Dairy Academy and the three new dairy hubs by providing all necessary inputs through Sida funding, including part of operational costs, procurement of equipment for the training facilities, rehabilitation works as required, regular project reporting, etc.

- As part of the project, UNIDO will lead the assessment of the farmers' needs for financial services.
- UNIDO will build up a project organisation in Dhaka, including project management and administrative support. UNIDO will also establish a mechanism with PRAN through which operational costs for the dairy hubs and the Dairy Academy can be shared according to the budget.

- **PRAN**
  - PRAN will be the main implementing partner for this project, responsible for dairy hub and Dairy Academy investments, recruitments and employments for the establishment of both the Dairy Academy and the dairy hubs.
  - PRAN will be responsible for the management of the dairy hubs.
  - PRAN will play an important role in the long-term sustainability of the project as they are committed for an open access to the Dairy Academy also for those not directly involved in PRAN's own supply chain, such as potential farm managers, other milk production specialists and extension service providers of the DLS-MoFL and other training and research institutions. PRAN's involvement in the Dairy Academy team will serve as a platform for the sustainability of the project as PRAN will be able to integrate and continue operations of the Dairy Academy upon completion of the project.
  - PRAN and Tetra Laval have jointly engaged an international dairy expert to start up and manage training activities and dairy hub development.

- **TETRA LAVAL AB**
  - The Tetra Laval Food for Development Office (FfD) represents both Tetra Pak and DeLaval in this project.
  - In addition to UNIDO, FfD will act as technical advisor to the establishment, implementation, development and management of the Dairy Academy and the three new dairy hubs in this project. FfD will provide technical inputs for the development of curriculum, training of trainers, quality control and training facility design. FfD will be able to transfer knowledge on dairy best-practice to ensure the delivery of courses meets the requirements for adequate skills development. The FfD team will play a critical role to ensure the quality of the training courses and to ensure graduates have achieved a level of competence suitable to gain employment in the sector.
  - Tetra Laval AB and PRAN have jointly engaged an international dairy expert to start up and manage training activities and dairy hub development.

- **The Ministry of Fisheries and Livestock**
  - MoFL, through its Department of Livestock Services (DLS), will encourage the participation of its extension service providers in the training of trainers' activities to allow the spread of gained knowledge beyond the project area and to strengthen the institutional capacity in the field of dairy farming. The DLS extension services at present consist of some limited veterinarian and AI services to the sector. Each Upazila has a few veterinarians/officials.
  - DLS extension service staff at central and Upazila level will participate in up-grading their skills to ensure full competence to carry on the service activities upon completion of the project. DLS's officials will also be offered to work closely with the Dairy Academy team to improve their managerial and administrative skills on the day-to-day operations.

- **The Project Steering Committee**
  The project stakeholders as listed above will form the Project Steering Committee (PSC) which is chaired by PRAN. The main functions and responsibilities of the PSC will be to: (i) advice the project on strategic directions / decisions and support the project activities; (ii) ensure the effective cooperation between all key stakeholders; and (iii) advice on the effectiveness of the ongoing activities, including any adjustments that need to be made to the annual work plan.

FINANCIAL AND IN-KIND FLOWS

As per Attachment 7 of the PD the Project actors would financially make specified contributions to the Project. The following Table shows their shares of the total budget as well as what the respective shares are intended to cover (where specified). The Table is based on PD Attachment 7.

All figures are % of total envisaged contributions as per Attachment 7 of the PD				
Contributor:	PRAN	Tetra Laval AB	Sida	%
Inception Phase			X	0.9
Dairy Hub Investments	X			13.9
Dairy Hub Running Cost (PRAN)	X			50.6
Dairy Hub Running Cost (Sida)			X	14.7
Dairy Academy Running Cost (incl. Training) Sida			X	1.8
Dairy Academy Running Cost (incl. Training) PRAN	X			1.1
Milk Production Expert			X	5,3
Tetra Laval AB Contribution		X		3.4

Local full time staff (public education and visibility)			X	1.5
Assessment of farmers' need for financial services			X	2.0
Other costs, PC meeting, visibility, etc			X	0.4
Project evaluation			X	0.6
Contingencies			X	0.2
UNIDO support costs			X	3.6
%	65.6	3.4	31.0	100

PROJECT DOCUMENT

The Project Document which formed the basis for Sida's decision to support the project is dated November 24, 2013. A revision after the inception period generated a version dated November 2014. The latter version is not signed between the parties as the earlier one, but it is expanded on the descriptive part and the Log frame has been expanded.

The PD includes the standard contents for PDs. The Sida budget is presented in two formats. One, in Attachment 7, presents the Sida contribution in the overall budget context, with the contribution of other parties included and with yearly break down. The other, Attachment 11, is a "Budget in UNIDO format" has a break down on Project outputs but not on years and the budget lines are rather crude.

As highlighted above (Section 3.2), the purpose, impacts and outcomes vary to some extent and are not in full coherence with what is indicated in the ToR. The log frame uses the overall goal with two indicators and a purpose which is simply "to establish a Dairy Academy (DA) and 5 dairy hubs in selected Upazilas of Bangladesh" linked to the indicator that the DA and hubs are operative. Other features like outcomes, impacts, aims and the overarching development objective are not featuring in the log frame and thus also not easily linked to indicators.

The project stakeholders as identified in the PD were highlighted in section 3.3 above. The main beneficiary group, the farmers, have been divided in three subgroups depending on their level of livestock activity, but did at this initial stage not disaggregate the main intended beneficiary groups any further. Separate gender assessments are commented on below.

The project organisation has been highlighted above, section 3.4. The roles and responsibilities between UNIDO and PRAN are not so well clarified. Mandates appear as overlapping in several respects.

REPORTS ON THE PROJECT INCEPTION PERIOD

Environmental Assessment

An environmental assessment report was prepared in July 2014 to identify the progress and concerns regarding the environmental aspects of the project during the in-

ception phase. The report identified the probable impacts of the climate change effects in the project areas. This description is followed by the probable impacts of the project on natural environment at the beginning, construction and full implementation phase of the project. The report also suggested some ways that the environmental concerns could be addressed.

Market Impact Assessment

A market assessment report was prepared during the inception phase for the project to identify the potential market impact of the project. The report starts with an overall dairy market scenario description. The market size was estimated based on a demand supply gap and price analysis.

The dairy value chain is then depicted mentioning information on different stakeholders at different levels of the value chain. A comparative analysis is then presented taking examples from four different sorts of farmer profiles. The value addition at different stages is then explored and different relevant services are described. The report also mentions names of other similar projects and a brief description on those. The market assessment report is pretty detailed and covers necessary issues related to the relevant market dynamics. The systemic constraints are discussed in detail and different existing competitive models are described. At the end, a displacement analysis is also presented.

Gender Assessment

A 2nd draft of the gender assessment report for the project inception phase was availed to the team. It was prepared in August 2014. Unfortunately, the report doesn't contain much further information on the gender aspects of the business and the project. Specific challenges faced by the targeted women are also missing.

ANNUAL REPORTS

Annual Reports for 2015 and 2016 were available during the evaluation inception period. They are both structured in similar ways including a brief description of the project, narrative reporting on progress with implementation and important observations on encountered challenges. Annex 1 in both Annual Reports is a tabular compilation of progress made in relation to the respective Annual Work Plans. The main text includes a follow up on implementation of the recommendations of the inception report. There is no tabular compilation in the Annual Reports on progress in relation to the Log frame in the PD and only scanty financial reporting. Further, as noted above, the log frame of the PD lacks both the Overarching Development Objective and the Outcome level. A log frame where the essential missing elements were added is attached, Annex 3.

It could possibly be argued that a log frame with focus on outputs and activities is deemed relevant for the initial project phase, since outcomes and impacts take time to mature.

ANNUAL ASSESSMENTS

Environmental Assessments

One environmental activities progress report was produced in October 2015. An analysis on the progress of the physical infrastructure was conducted. Update on the suggested steps from the inception phase environmental report was also presented. Another environmental assessment report was prepared in October 2016. A similar update was also reported in this version. Additionally, comparative summaries were also presented on the performance of environmental activities by the different hubs established by the project.

Market Impact Assessments

A market impact review was conducted in December 2015. This report was focused on the performance of different hubs. Specific market issues were addressed, and recommendations were made to deal with the challenges. Another market impact review was conducted in October 2016. Hub-wise market update is presented in the report. Some common issues across the hubs are also discussed.

Gender Assessments

A follow up gender report was prepared in October 2015. Like the earlier version, this one also focused more on general issues, but a clear plan of activities was suggested at the end of the report. Another gender impact analysis was conducted in November 2016. The major focus of this report was the hub-wise performance regarding training. This report also possesses the earlier mentioned weakness of this specific series.

PROGRESS REPORTS

A total of nine progress reports were made available for the evaluation team´s review. The first one is for the month of February 2017 and the last one provided is from February 2018. The progress reports provide hub-wise implementation updates. Hub-wise milk quality status is also updated. Status of other specific activities like dairy academy, training, access to finance, biogas plant, solar powered hub operation, fodder cultivation, farmer performance category is also updated. Some general updates like any infrastructure related updates are also presented. In May 2017 there was one report on conducted field missions and PSC meeting.

FIELD VISIT REPORTS

The National Project Coordinator conducted frequent visits to the project implementation area. The evaluation team was provided with 23 field visit reports documenting his field visits with observations, findings and in some cases recommendations. The first report is about the visit conducted in March 2016 and the latest one available is on a visit conducted in March 2018.

The visits were conducted to both the project areas and also to control areas to understand the real progress. The field visit reports cover issues beyond the set template of progress reports. Useful field findings were reported through these visits.
Some field visits were focused on specific tasks, such as the 13-14 June 2017 visit that was targeted to cover a video production. Another report in April 2016 was focused on a field mission. Many of the field reports contain specific recommendations. Some are for covering specific events, like workshops, and some field reports also contain case stories.

INTERNAL M&E DATA

Monitoring data from the field was collected every month from April 2016. The latest available data is for March 2018. The monitoring data is covering different sorts of information like hub-wise gross expense and income, knowledge level changes etc. The monitoring system also captures farmers' longitudinal data for the mentioned time period against specific indicators. Hub-wise milk collection and quality status is also recorded for every month. This data is also evident for the fact that the milk production per cow is increasing significantly over time. Associated graphs are also provided for the ease of understanding.

FINANCIAL AND AUDIT REPORTS

The Annual Reports provide mainly information on disbursements, analysis of exchange rate losses due to the depreciation of the Swedish currency in relation to the US $. In US $ terms, by the end of 2016, a projection indicated that the envisaged Sida support would end up being 626,236 US $ less than planned in the PD, corresponding to about 20 % reduction. By December 31, 2016 the total expenditure was reported at 1,805,643 US $ as compared to a total projected value of the committed 21,000,000 SEK by then being 2,507,152 US $.
According to the PD the envisaged project period was to end by December 31, 2016, subsequently December 21, 2017. Under spending as compared to the initial plan resulted partly from delays and partly from cost-cutting measures introduced to mitigate the reduction of funding due to exchange losses. By the end of year 2016, members of the Project Steering Committee unanimously decided not to skip any of the planned outputs but to request a cost extension of the project by 3,000,000 SEK or around 350,000 US $. According to the Embassy, the PSC members in December 2017 recommended and requested to Sida a cost extension due to loss in exchange rate, but considering this exchange loss was part of the global scenario, Sida Dhaka office was unable to approve such extension.
The evaluation team finds it desirable for its work to get an overview of the cumulative expenditure linked to, respectively, (i) the funds that were made available and (ii) the original budget for the Sida support (attachment 7 in the PD). A proposed format for this overview is attached, Annex 4.
Audit reports were not available during the evaluation inception period. It was clarified that UN Agencies are generally not audited by Sida.

RELEVANCE IN RELATION TO BANGLADESH'S GOVERNMENT POLICY ENVIRONMENT

The Government of Bangladesh finally drafted the National Milk Development Policy in 2016 but the policy is still at its draft stage and not finalised. The draft policy identifies the following issues as the main problems of the current milk sector of Bangladesh:

- Lack of improved breed,
- Lack of fodder and forage and high price,
- Lack of quality fodder and forage,
- Lack of knowledge and skillset of the rural farmers,
- Disease outbreak,
- Shortage of vaccine,
- High price of medicines,
- Lack of skilled workforce,
- Shortage of low interest bank loans,
- Problem with marketing of the produced milk,
- Problem with justified price of milk,
- Absence of cow insurance,
- Lack of facilities for preservation of milk and milk products and quality control,
- Absence of regulatory organisation like National Milk Development Board and
- Lack of grazing land for the cattle.

All the project targets are trying to address some of these issues and the project's strategy is thus fully in line with the draft policy. There is coherence between the project and the following priorities of the draft policy:

- 5.1.1 e) Ensuring justified price for milk,
- 5.1.1 f) Increasing the number of commercial milk farmers,
- 5.1.1 g) Promoting hybrid varieties,
- 5.1.1 l) Promoting proper farm management,
- 5.1.1 n) Discourage import of liquid and powder milk,
- 5.1.2 b & c) Promoting proper practices for milk preservation and increasing shelf life,
- 5.1.2 f) Producing healthy milk products,
- 5.1.4 Promoting AI,
- 5.1.5 a) Promoting cultivation of better quality grass,
- 5.1.5 c & e) Promotion of alternative fodder and forage practices,
- 6.2 Ensuring justified price for milk,
- 6.3 Marketing of produced milk,
- 6.4 Establishing milk collection and chilling centres in rural areas,

- 7.2, 8.6 & 8.7 Establishing organisation for promoting better farm management,
- 7.6 Ensuring veterinary and extension services,
- 9.1 Alleviating poverty through milk production,
- 9.4 Promoting bio gas plants,
- 9.5 & 9.6 Creating access to finance for milk production especially for women,
- 11.1 a, b, c) Promoting collection and transportation of milk in a healthy manner and ensuring cold chain,
- 11.1 e) Teaching identification of milk contamination,
- 12.1 Ensuring availability of vaccines and medicines,
- 12.3 Ensuring cattle health care,
- 12.4 Promoting disease preventions,
- 12.6 Creating skilled manpower for vaccination, and
- all the sub points of 13 and 15.1 for ensuring healthy and proper environment and accommodation management of cattle.

The Government has given its approval to the project and has through that endorsed the project set-up and the use of resources from the bilateral allocation agreed between the Governments of Sweden and Bangladesh for the Project.

RELEVANCE IN RELATION TO THE SWEDISH POLICY ENVIRONMENT

Collaboration with the private sector has been present in one form or another in Swedish development cooperation since its start in the 1960s. It has undergone substantial changes over time. In the later part of the first decade of the 2000's, the view on the role of the private sector in development cooperation gradually changed internationally, as well as in Sweden and Sida. Such developments triggered the launching of a new Sida Business for Development Programme (B4D) in 2010. Further evolution has since then occurred.

In a Desk Study of Sida´s Experience from Private Sector Collaboration (Söderbäck, M. Sida Decentralised Evaluation 2016:6), PRAN-Tetra was classified as a project falling under the category of a Public Private Development Partnership (PPDP) type of project. In a Public Private Development Partnership, the public and private sectors make a joint investment in a project implemented by a third party. The objective is to create conditions for people living in poverty to improve their lives (Sida Website).

The current "Results Strategy for Bangladesh 2014–2020", which is a main Swedish policy document for the development cooperation with Bangladesh, does not explicitly indicate support to agriculture or livestock rearing as a priority in Swedish development cooperation. However, one of the result areas under the Strategy is *Inclusive Economic Growth* which has strong focus on private sector development. So any sector with huge potential improving women's participation in the labour market and

contribute to reducing poverty is a priority for Sida Bangladesh. In that sense, agriculture or livestock are of high relevance.
As per definition, many B4D projects emerge out of initiatives stemming from private actors rather than from Government to Government negotiations and talks. Therefore, their emergence depends not only on Government to Government priorities but also on where private actors have identified scope for interventions.
The Swedish Government/Sida, has through allocation of funds for public–private partnerships, indicated a general willingness to support public–private solutions to market-related development challenges.

THE EVALUATION MATRIX

An Evaluation matrix has been developed (see Annex 5). The guiding questions listed in the ToR were elaborated and refined and appear in the left column "Evaluation Questions/Parameters".
As the log frame does not include any outcomes or impacts it provides little guidance for an evaluation. An evaluation, as much as a project, is expected to look beyond outputs. In addition to that, the log frame format has not been used in project reporting, so there is no quick reference in the reports to progress in relation to log frame indicators. This is not to say that data is missing. On the contrary, data has been collected and also been made available in the form of statistics derived from data sets.
The team expects that up-to-date reporting as per a, preferably expanded, log frame will be made available latest at the start of the evaluation data collection phase (Annex 3 provides an idea which can be modified).
Some of the evaluation questions linked to efficiency, where indicators have not been given, are potentially problematic to objectively verify. Examples include:

- Transparency and accountability (especially if audit reports will remain unavailable)
- Efficiency/adequacy of the training provided by PRAN (especially as it appears that lists of email contacts with trainees are not maintained, making it difficult to administer surveys or to follow up trainees more generally)
- Efficiency in further processing of the first PD in light of the inception period, development of annual work plans, development of log frame and use of log frame as a format for reporting, especially beyond output reporting (added by the team as a parameter that can be reviewed even though responsibility for the task remains to be established, PRAN or UNIDO)
- UNIDO's efficiency in execution of its tasks.

Especially the last one is complex due to a degree of overlap in responsibility between PRAN and UNIDO, reference to section 3.4.
The evaluation team will attempt to overcome a risk of being subjective by seeking evidence and views among many stakeholders and try to build findings on actual performance or under performance.

The evaluation matrix (Annex 5) includes a column called “Comments” with the team’s observations on what it can do or cannot do. The time available sets obvious limits. For example, verify changes at household levels beyond interviews (no surveys) and regarding comparative cost efficiency of other actors in the milk value chain. The team will, in such case, seek information through key informants as there will be no time for the evaluation team’s own actual assessments.

CHALLENGES EMERGING FROM THE DOCUMENT REVIEW

Exchange rate changes reduced the project budget

The projection made by the end of 2016, that the Sida budget in US $ terms would reduce by 20% due to exchange rate fluctuations caused cost saving measures. Two important cost cutting measures were that (i) the engagement of an international expert was reduced, and (ii) PRAN stepped in during 2016 and solely supported activity under Output 5: Access to finance.

Progress but also delays

The various project reports and data bases demonstrate that the project has made significant progress in spite of the exchange rate fluctuations. Funding constraints led to a decision to exclude the project component Financial Services Assessment and Development from receipt of Project funds. The initial budget had indicated 200,000 US $ from Sida for this component.

It appears, however, also that delays caused by other factors than financial constraints occurred. By end 2016, some activity remained to be implemented and some budget also remained. There was thus reason to discuss a project extension. Difficulties in transfer of funds at various levels were mentioned in the Annual Reports, but by end of 2016 it was reported that the flow of funds from UNIDO to PRAN was functioning.

Coherence of objectives, outcomes, purpose, aim and impact and reporting

The log frame uses a very “practical” project purpose. More complex features mentioned in the narrative description is not referred to in the log frame. The omission did perhaps not matter in this case, since the reporting did not refer to the log frame anyway. Yet, a more comprehensive log frame and its use as a format for reporting would have been helpful for planning and easy stock-taking of progress, primarily for the project stakeholders including Sida, but also for the work of the evaluation team.

Project organisation, communication and timely reporting

The PD presents a complex organisational set up (see Figure 1 above). A structure with many levels, like in this case Farmer–VMCC–Hub–Central, is in itself complex. Adding on that there are several actors at central level with possibly somewhat overlapping mandates and aspirations yields more complexity. The Annual Reports mentions that reporting was initially slow due to long reporting lines from VMCCs

through the Hubs and PRAN management all in all involving a big number of people. Internal communication is one of the areas where there seems to be room for improvement. This is mentioned in both the Annual Report for 2015 and 2016.

Dairy hubs replacing needs for cooperatives among farmers

As per project's definition, a Dairy Hub is managed and owned by a dairy processor, which is in this case PRAN. In the view expressed in the PD, farmers need not to be organised in cooperatives and need not enter into such organisational structures to improve their farming as the dairy hub structure and the services provided give the advantages that a large farm or cooperative would have in terms of economies of scale and bargaining power.

Although this may partly be true, a dairy hub structure owned by the strong commercial buyer may not completely replace the more democratic structure of a cooperative, especially in terms of power relations.

Impact on household nutrition and on gender relations of enhanced commercialisation of milk

There are numerous examples in the world showing that commercialisation of a local commodity may, as much as it brings income to households, also change the local consumption pattern as more priority may be given to cash income than to consumption within households. This may impact on nutrition and not least on child nutrition. In terms of gender relations, commodities may sometimes shift from female control to male control when cash income increases. The evaluation team did not come across much information in this regard in the documentation. The team will attempt to explore if any such changes can be observed among the producer families.

Application of a broader HRBA lens

The team's fact finding will consciously attempt to target both rights holders and duty bearers. A gender perspective will be integrated in the evaluation and in the design of interview guides and checklists. The evaluation team will strive for facilitating gender-balanced discussions.

Mainstreaming of cross-cutting issues is noble, but sometimes insufficient unless there is a conscious analysis of the specific needs of girls, boys, women, and men as well as vulnerable groups at strategic points. Overall, the team intends to tackle gender and other issues related to human diversity and vulnerable groups from two angles, through mainstreaming and through specific analyses/ targeted action.

Duty bearers, in this context, could refer to both officials of MoFL, PRAN, UNIDO and Tetra Laval AB. It is apparent from the available reports that there have been difficulties in getting MoFL on board the project to the desired extent. Reasons include irregular representation in the PC meetings and frequent staff transfers at various levels. PRAN could be seen as a duty bearer due to its Corporate Social Responsibility (CSR) commitment.

Rights holders, as mentioned above, include various gender and age groups as well as particularly vulnerable groups. There is need to secure a sound understanding of the aspirations, and needs also vary between such groups and of how they may be affected by the project. The same applies to the training offered by the project where it will be essential to assess to what extent training programmes were based on training needs assessments for various stakeholder groups. These factors are embedded in the evaluation parameters/questions under relevance.

DATA COLLECTION AND EVALUATION METHODS

Four major path ways for data collection

Possibilities for administration of surveys to target groups such as trainees, Hub and VMCC leaders or farmers were explored during the inception phase. The judgement by the project management was that surveys are not feasible due to limited use of email and internet, low computer literacy and even low level of literacy altogether. The team will thus use four major pathways in the attempt to accurately grasp relevant views and information:

- Interviews in Dhaka and during field visits
- Review of project documentation
- Review of web sites and social media
- Observations in the field.

Interviews

A tentative generic checklist for the interviews has been developed, see Annex 6. Interviews will be semi-structured to ensure coverage of common ground in all interviews, while not excluding expansion or deviation into interesting topics.

Review of project documentation

Some documentation was already reviewed (see above).

Web sites and social media

Overall, the project is not that visible on social media. In September 2015, the Embassy of Sweden in Dhaka posted about the project on their Facebook page providing a link to one of the articles in Tetra Pak website which could not be found now. Another post was made in January 2017 from the same page. This post was also shared from their Sweden in Bangladesh account on Twitter. That is the only post found on Twitter about the project.

Some posts from individual accounts were also posted regarding the project in Facebook. But the project is to some extent visible on internet and Tetra Pak has some information on their site. Some other documents are also available. But considering the number of stakeholders for this project, the visibility is not up to usual or expected standard. The evaluation will not be able to capitalise significantly on data from websites or social media.

Observations in the field

As stipulated in the ToR the team intends to visit all districts where the project operates. These visits will yield opportunities for direct observations of progress. The same applies for the Dairy Academy now housed by PRAN.

Triangulation

Triangulation will be used to synthesise the general conclusions as per the OECD/DAC evaluation criteria, using information obtained through the different data collection methods described above. By this is meant that information obtained from one source with one method is tested against what has been obtained from another source with the same or another method. This implies that a dialectical approach oscillating between sources and methods has been applied to verify the data and to generate conclusions.

OUTPUTS AND OUTCOMES WITH THEIR RESPECTIVE INDICATORS

It would be reasonable to expect a consolidated report from the project covering the operations at least up to end of 2017 and compiled in an improved log frame format which includes (i) the project overarching development objective and (ii) the outcomes/impacts presented to Sida and to the evaluation team before the evaluation data-collection phase starts. The team needs such a basis for a quick overview of progress in terms of outputs and outcomes, in order to be able to avail time for field verification and for fact finding on the numerous evaluation questions which are not, or only remotely, connected to the log frame. Reference is here made to Section 7.1 and Annex 3.

THE TIME FACTOR

Any project takes time to mature to such stage that outcomes and impacts can be fully assessed. The team will pay attention to volume and quality of activities and outputs but is also obliged to seek evidence on outcomes and impacts.

NARRATIVE STORIES OF CHANGE

As much as projects are designed to produce planned outputs, outcomes and impacts, there are usually also results which were not planned and thus not captured in any log frame or with pre-determined indicators. The team intends to keep their eyes and ears open to capture interesting evidence on both planned and unplanned results.
Some individuals may have interesting experiences to share and ability to explain individual benefits which illustrate processes of change that can be attributed to the project or to which the project may have contributed. The team will attempt to gather such in-depth qualitative information and include selected interesting evidence in the evaluation report. The team will also capture if the project internal M&E has documented such evidence.

FINANCIAL INFORMATION

Both the Annual Report for 2015 and 2016 provides limited financial information. The impact of the depreciation of the Swedish currency in relation to the US $ is highlighted. The evaluation team would benefit if PRAN/UNIDO would avail an overview of budget and expenditure, including agreed budget revisions. A possible format for this has been prepared as part of the work during the inception period and is attached as Annex 4. Reference is made to Section 7.1 and Annex 4.

ANNEX: EVALUATION MATRIX

Evaluation Questions/Parameters	Indicators to be used in Evaluation	Methods, sources of information	Comments
Relevance			
Coherence with the Sweden/Bangladesh Country/Results Strategy	Level of coherence between country strategy and project	Results Strategy for Bangladesh 2014–2020 Samarbetsstrategi för utvecklingssamarbetet med Bangladesh januari 2008–december 2012	Accomplished
Coherence with Government of Bangladesh's policies	Level of coherence between GoB policy and project	To be identified Level of engagement by MoFL	
Relevance of project design with reference to needs, institutional capacity issues, local ownership, accuracy of goal and objective hierarchy and mechanisms for internal learning and improvement	Smoothness of operation Timeliness in administration Delivery rates	Reports Interviews	This assessment will examine to what extent the project has identified needs not just collectively but also differentiated based on needs assessments of various gender, age and other groups.
Affordability of products and services for the beneficiaries	Observed or reported adoption rates and qualitative assessment	Reports Interviews Observations in the field	This assessment will examine to what extent the project has identified needs not just collectively but also differentiated based on needs assessments of various gender, age and other groups.
To what extent project's provision of technology, knowledge, process/service fit with existing needs, culture, traditions, skills or knowledge	Observed or reported adoption rates and qualitative assessment	Reports Interviews Observations in the field	This assessment will examine to what extent the project has identified needs not just collectively but also differentiated based on needs assessments of various gender, age and other groups.
Nature of impact among target population as a result of increased commercialisation with focus on (i) household nutrition, (ii) changes in gender relations, and (iii) changes in spending as a result of increased income (for what?)	Increased /decreased domestic milk consumption Male/female roles with possible changes Changes in spending or investment	Household interviews	
Efficiency			
Key stakeholders' efficiency in policy guidance and coordination	Smoothness of operation Timeliness in administration Delivery rates	Reports Interviews	

		Observations in the field	
Efficiency in delivery of financial and technical inputs, including timeliness from Sida, Tetra Laval AB, PRAN, MoFL, Farmers, Communities, NGOs, etc)	Smoothness of operation Timeliness in administration Delivery rates	Reports Interviews Observations in the field	
Transparency and accountability	Administrative routines and procedures in place Level of awareness among staff and others of financial flows, contract values, etc. Documented procedures for procurement of goods and services Quality of financial reports Audit reports Documentation of PSC meetings	Interviews Fact finding in offices at various levels	
Value for money in relation to alternative approaches such as Arong, Milk Vita, Aftab, etc.	Qualitative assessment	Interviews of key informants from e.g. MoFL, Tetra Laval AB, PRAN and UNIDO	It will not be possible to carry out extensive research on the alternative approaches
Efficiency/adequacy of the training provided by PRAN	Qualitative assessment Curricula Training materials, training needs assessments Level of gender consideration Course evaluations and feedback/follow up of trainees Accounts regarding training costs in relation to numbers, duration and nature of training Adequacy of facilities	Documentation Interviews with trainees Financial reports Observations during visits	
Efficiency in further processing of the first PD in light of inception period, development of annual work plans, development of log frame and use of log frame as a format for reporting, especially beyond output reporting	Existence and quality of various documents including coherence between them and links between goals, objectives, outputs, outcomes in Project plans and reports	Project documentation.	Partly accomplished
UNIDO's efficiency in execution of its tasks	UNIDOS defined tasks UNIDO's accomplishments in relation to tasks UNIDO costs in relation to its contribution UNIDOs efficiency in ensuring evolution of Project Documentation and timeliness/quality of reports	Documentation Interviews Financial reports	
Effectiveness			
Project goal achievement; attribution; project contribution	Income of participating dairy farmers increased by at least 50% at project end compared to 2011	Documentation on income Interviews	Unlikely that the project activity at this point in time can be expected to have im-

	Imported milk powder share in the domestic consumption market reduced by 10% from current level"		pacted on the national import of milk powder.
Extent of delivery and receipt of planned benefits as perceived by stakeholders	Timeliness and quality of participating institutions contributions (ref. PD p. 21-22 and PD Attachment 7 Timeliness and quality of support at hub and VMCC levels as perceived by stakeholders Timeliness and support to MoFL (mainly training) as per their perception	Documentation Interviews Financial reports Observations during visits Financial information incl. on reduction of Sida budget due to exchange rates	
Appropriateness of balance of responsibilities, including level of corrective measures	Defined roles and responsibilities, ref PD pp. 12-14 Corrective measures	Interviews Reports	The descriptions of responsibilities in the PD is not fully clear and with some overlapping mandates, thus difficulties may be expected
Shortcomings in relation to gender equality, environment, poverty and market development	Quality of target group analysis, incl. needs of women and men Quality and extent of analysis of interventions' impact on gender relations at farm family level Level of mainstreaming gender aspects in operations Targeted actions to meet specific needs Gender aspects in training Observed environmental issues and actions in response to those Identified risks for market distortion and actions in response to those	Initial assessment and annual assessment (gender, environment and markets) Curricula Interviews, including at farm level	
Effectiveness of technology; consideration of alternatives	Output level indicators of PD log frame	Documentation Interviews	
Level of introduction of international best practice and knowledge in efficient dairy farming to poor, small-scale dairy farmers	Output level indicators of PD log frame International comparisons	Documentation Interviews	The team can provide international comparisons to a certain degree but would also have to rely on key informants' views, e.g. MoFL
The establishment of a milk collection system allowing collection and preservation of growing volumes of high quality raw milk.	Output level indicators of PD log frame	Documentation Statistics Interviews	
Sustainability			
Financial sustainability, including at beneficiary level through employment and income generation, trainings and savings	Qualitative assessment For PRAN: Financial analysis with bench marks (if available)	Qualitative information from households ("opinions") Observations PRAN financial analysis (for Hubs and VMCCS, if available)	The team will not have time to carry out household surveys, so will rely on views of key informants

Economic sustainability, returns as compared to similar undertakings	Qualitative assessment	PRAN data on hub financial viability	The team will not have time to review other undertakings for comparison, so will rely on views of key informants
Ability at local level to maintain technology acquired without further assistance	Qualitative assessment	Interviews Observations	Applies to Hub, VMCC and household levels
Impact (short term)			
Level of enhanced opportunity for small holder farmers in the project areas and their families to stay in the rural areas with improved incomes and living conditions	Qualitative assessment	Interviews	
Non tangible benefits, e.g. women's empowerment, propoor changes at union level	Qualitative assessment Women share of employment Women/Men share in leadership functions other than employment (if any) Changed gender roles following from enhanced commercialisation of milk (last point under relevance above)	Interviews	
Visibility of Sida			
How well has PRAN, UNIDO, Tetra Laval AB and MoFL contributed to Sida's visibility	Occurrence of Sida's logo on materials where it could be expected to appear	EoS with regard to its aspirations clarified Various documents, news items, etc.	The team will seek clarification on the relevance of this question. Where is a requirement to uphold Sida's visibility stated and is it the visibility of Sida or of the Government of Sweden that should be made visible?

Note: The questions listed above represent an abbreviation or evolution of the guiding questions listed in the ToR. They were to some extent rephrased and reshuffled in an attempt to be placed under the Evaluation criteria given in the ToR. Considering the amount of time available for the team and the travel requirements, the level of depth of assessments will vary due to time constraints.

ANNEX: DRAFT INTERVIEW CHECKLIST

The checklist below is not designed to be used in a "question and answer" manner but as a menu from which the aspiration is to cover as much as possible, without necessarily covering all aspects with each and every interviewee. A flexible approach will be applied to ensure that there is time for in-depth discussion on interesting points which may be within or outside of the checklist. The use of the checklist will be adapted to suit how well the interviewee knows the project.

About the interviewee		
Position, nature of work? Male/female? How well known is the project to the interviewee?		
Relevance	Aspects to be covered/Questions	Suitable respondent category
Coherence with Swedish strategies for development cooperation		EOS
Coherence with Government of Bangladesh policies		EOS MoFL
Relevance of project in relation to partners' institutional capacity		EOS PRAN Tetra Laval AB UNIDO MoFL Hubs VMCCs
Local ownership and power relations. Hubs and VMCCs as substitutes for producers cooperatives		Hubs VMCCs Farm families
Bottlenecks in project implementation that can be derived to project design & ability to address those		EOS PRAN Tetra Laval AB UNIDO MoFL Hubs VMCCs
Understanding of the roles of UNIDO, PRAN and Tetra Laval AB Overlaps		EOS PRAN Tetra Laval AB UNIDO
Affordability of products and services, how well tailored to local realities Technology and processes in relation to needs, culture, traditions, skills, knowledge Impact on PRAN as a supplier of inputs on the commercial suppliers. Should PRAN engage or disengage there		Hubs VMCCs Farm families
Impact of milk commercialisation on household nutrition, gender relations, spending or investment		Hubs VMCCs Farm families

Examples of specific benefits for women, men, girls and boys?		Hubs VMCCs Farm families
Has the project identified specific needs of women, men, girls and boys and targeted actions to meet such needs		Hubs VMCCs Farm families
Efficiency	Aspects to be covered/Questions Aspects to be covered/Questions	Suitable respondent category
Who is the main coordinator and driver of project		EOS PRAN Tetra Laval AB UNIDO
Who was expected to be the main coordinator and driver of project		EOS PRAN Tetra Laval AB UNIDO
Perception of weaknesses in operations and efficiency (development and refinement of PD, annual work plans, reports, flows of funds & information & services)		EOS PRAN Tetra Laval AB UNIDO
Timeliness of financial inputs and returns incl. payment to producers and salaries to employees		EOS PRAN Tetra Laval AB UNIDO VMCCs Farmers
Timeliness of other inputs		EOS PRAN Tetra Laval AB UNIDO VMCCS Farmers
Level of transparency and accountability Accounts manuals Audit routines Management procedures; who decides what, documentation of decisions Procedures for procurement of goods and services, advertisements, competitive bidding, etc. Financial reports Governance structure: PSC meetings and PSC function Information flows		PRAN Tetra Laval AB UNIDO VMCCS Farmers
Value for money in comparison with other similar undertakings		PRAN Tetra Laval AB UNIDO

	VMCCS Farmers
Training incl. gender aspects, environmental aspects, market aspects, relevance in relation to training needs assessment, quality	PRAN Tetra Laval AB UNIDO VMCCS Farmers
Usefulness and quality of Log Frame in relation to internal M&E and reporting	EOS PRAN Tetra Laval AB UNIDO
Information flows, especially one way or two ways flow of statistical evidence of progress, i.e. is statistics analysed, processed and fed back to hubs, VMCCs and farmers	PRAN Tetra Laval AB UNIDO Hubs VMCCS Farmers
UNIDO's expected role and actual role	EOS PRAN Tetra Laval AB UNIDO
Need for changes for enhanced efficiency and transparency Need for clarification of roles and reduction of overlapping mandates	EOS PRAN Tetra Laval AB UNIDO
Effectiveness	Aspects to be covered/Questions
Evidence of goal achievement; improved livelihoods at farm level in project areas or at Bangladesh level, increased income, better health, more scope for education, etc	Hubs VMCCS Farmers
Evidence of goal achievement; reduction of import of milk powder	PRAN Tetra Laval AB
Evidence of enhanced opportunity for participants to remain in rural areas with improved incomes and living conditions Stories of change for the better or worse	PRAN Tetra Laval AB UNIDO Hubs VMCCS Farmers
Impact of reduced Sida support as a result of exchange rates Cost reduction measures, including the decision to drop the Project Component Financial Services Assessment and Development	EOS PRAN Tetra Laval AB UNIDO
Unexpected results Stories of change	Hubs VMCCS Farmers
Expected results that did not materialise	Hubs

Stories of change	VMCCS Farmers
Alternative technology	PRAN Tetra Laval AB UNIDO Hubs VMCCS Farmers
Transport issues, distances	PRAN Tetra Laval AB UNIDO Hubs VMCCS Farmers
Milk hygiene, livestock health, control at VMCCs, water addition, other fraud, challenges	PRAN Tetra Laval AB UNIDO Hubs VMCCS Farmers
Evidence of market distortions Milk supply on local markets when more goes to dairy Impact on local processing of milk to curd (dahi etc) Impact on marketed input supplies	Hubs VMCCS Farmers
Seasonality challenges Transport challenges	PRAN Tetra Laval AB UNIDO Hubs VMCCS Farmers
Sustainability Aspects to be covered/Questions	
Financial sustainability of hubs & transport	PRAN Tetra Laval AB UNIDO Hubs
Financial sustainability of VMCCs	PRAN Tetra Laval AB UNIDO Hubs
Scope for more decentralised systems	PRAN Tetra Laval AB UNIDO Hubs
Ability to maintain technology and systems without external assistance	PRAN Tetra Laval

		UNIDO
Food safety, application of HACCP principles		PRAN Tetra Laval AB UNIDO
Impact (short term)	Aspects to be covered/Questions	
Improved living conditions in production areas Improved living conditions among producers Changes in behaviour; i.e. higher education of children, investments Improved nutrition		
Changes in gender relations regarding livestock rearing, milking and sales		
Impact on the poorest families and vulnerable groups, e.g. on milk consumption patterns		
Visibility of Sida	Aspects to be covered/Questions	
Relevance of issue		EOS
Adherence to agreed principles, ref PD pp. 30-31		EOS UNIDO PRAN Tetra Laval AB

7.3 PEOPLE AND ORGANISATIONS CONSULTED

20 June	
Anne Kullman, Private Sector Collaboration Specialist, Sida Hq	Telephone contact
21 June	
Katarina M. Eriksson, Policy and Partnership Development Director, Tetra Laval Food for Development Office Rafael Fábrega, Director, Tetra Laval Food for Development Office	Stockholm
28 June	
Morgan Tinnberg, Project Development Manager, Tetra Laval Food for Development Office	Alingsås
14–15 July Bo T travel to Dhaka	
15 July Internal Team meeting	
16 July Introductory meeting at Embassy of Sweden	
Anders Öhrström, Counsellor/Deputy Head of Mission, Head of Development Cooperation, Embassy of Sweden, Dhaka Majeda Haq, Economist and Private Sector Development Specialist, Embassy of Sweden, Dhaka Reazul Islam, Controller Development Cooperation, Embassy of Sweden, Dhaka	Dhaka
16 July Introductory meeting with Project main partners	
Rakibur Rahman, Chief Dairy Operation, PRAN Dairy Ltd Harun-Or-Rashid, Assistant General Manager-Operation, Dairy Operation Milk, PRAN Dairy Ltd Zaki Uz Zaman, UNIDO Country Representative in Bangladesh Mahfuzur Rahman, Accounts officer, PRAN	PRAN Office, Dhaka
Shekhar Sethu, Director, Tetra Pak India Pvt Ltd	Skype meeting
17 July Travel to Sirajganj and introductory meeting	
Travel to Sirajganj from Dhaka	
Initial discussion with PDC manager, all Hub Managers and Supervisors	PRAN Dairy Complex, Sirajganj
Ramkharua VMCC visit in Shahjadpur, Sirajganj. Talked to VMCC staff, dairy farmers and suppliers	Sirajganj
18 July	
Jamirta VMCC visit in Shahjadpur, Sirajganj. Talked to VMCC staff, dairy farmers and suppliers	Sirajganj
Abdus Samad, Upazila Livestock Officer, Shahjadpur, Sirajganj	Sirajganj

19 July	
Kalibazar VMCC visit in Bera, Pabna. Talked to VMCC staff, dairy farmers and suppliers A F M Idris, AGM, BDP, Milk Vita, Sirajganj Amio Kumar Mondol, Manager, Cooperatives, Milkvita, Sirajganj	Pabna, Sirajganj
Checking financial issues with PRAN staff	Sirajganj PDC
Khamarshanila VMCC visit in Shahjadpur, Sirajganj. Talked to VMCC staff, dairy farmers	
20 July	
Gunaigacha VMCC visit in Chatmohor, Pabna. Talked to VMCC staff, dairy farmers and suppliers Uttarmenda VMCC visit in Vangura, Pabna. Talked to VMCC staff, dairy farmers and suppliers	Pabna
Gurudaspur VMCC visit in Natore. Talked to VMCC staff, dairy farmers and suppliers	Natore
21 July	
Dairy Academy visit in Natore. Talked to one ex-student	Natore
Ms. Lucky Akter, Ex-student of Dairy Academy	Natore
22 July	
Travel to Rangpur from Rajshahi	Rangpur
Nabdigani VMCC visit in Pirgacha to talk to one lady VMCC in charge (ex-student of dairy academy) and also male VMCC staff who are also ex-student of dairy academy One Aarong collection centre visit in Pirgacha, Rangpur	Rangpur
23 July	
Nabdiganj VMCC visit in Pirgacha, Rangpur. Talked to VMCC staff, dairy farmers and suppliers	Rangpur
Mahabubul Alam, District Livestock Officer, Rangpur Sarwar Hossain, Upazila Livestock Officer, Rangpur Sadar	Rangpur
One Rangpur Dairy milk collection centre visit in Rangpur Haragach VMCC visit in Kaunia, Rangpur. Talked to VMCC staff, dairy farmers and suppliers	Rangpur
24 July	
Travel to Dhaka	
Selim Reza Hasan, Country Manager, Solidaridad Bangladesh	Dhaka
25 July	
Gola Rabbani, Deputy Project Director, Livestock Development-based Dairy Revolution and Meat Production Project (DRMP), Department of Livestock Services	Dhaka

Nasim Ali Mandal, National Dairy Expert, DRMP, Ex. GM Milk Vita (Rtd)	
Manievel (Emmanuel) Sene, Senior Rural Agricultural Specialist, The World Bank Samina Yasmin, Agriculture Economist, The World Bank	Dhaka
Peter Hallberg, Managing Director, Arla Bangladesh Ahmed Kabir, Deputy General Manager, Arla Bangladesh	Dhaka
26 July	
Selim Reza Hasan, Country Director, Solidaridad	Dhaka
Anwarul Haq, Director, Care Bangladesh Akram Ali, Manager, Marketing and Communications, Care, Bangladesh Ahmad Sadequl Amin, Coordinator, Agriculture and Value Chain, Care, Bangladesh	Dhaka
Preparation of Aide Memoire	Dhaka
27 July	
Karl Schebesta, Project Manager, UNIDO HQ	Dhaka, via Skype
Preparation of Aide Memoire	Dhaka
28 July	
Khairul Islam, Chairman and CEO, Edge Consulting, Ex UNIDO National Project Coordinator	Dhaka
Preparation and discussion on Aide Memoire	Dhaka
29 July	
Administrative settlements, consultations, analyses	Dhaka
30 July	
Analyses, Reporting	Dhaka
31 July	
Analyses, Reporting	Dhaka
1 August Debriefing meeting/stakeholder workshop at the Embassy of Sweden	
Anders Öhrström, Councellor/Deputy Head of Mission, Head of Development Cooperation, Embassy of Sweden, Dhaka Majeda Haq, Economist and Private Sector Development Specialist, Embassy of Sweden, Dhaka Reazul Islam, Controller Development Cooperation, Embassy of Sweden, Dhaka Mohammad Zahirul Islam, Advisor, Sida, Bangladesh Rakibur Rahman, Chief Dairy Operation, PRAN Dairy Ltd Zaki Uz Zaman, UNIDO Country Representative in Bangladesh	Embassy of Sweden, Dhaka

Md. Muniruzzaman, Executive Director, PRAN Mahfuzur Rahman, Accounts officer, PRAN Shekhar Sethu, Director, Tetra Pak India Pvt Ltd Sabir Mridha, Key Account Manager, Tetra Pak India Pvt Ltd Khairul Islam, Chairman and CEO, Edge Consulting, Ex UNIDO National Project Coordinator	
2 August Travel to Sweden Bo T	

7.4 DOCUMENTS AND OTHER SOURCES OF INFORMATION

The Project Document

UNIDO, Tetra Pak, PRAN and Ministry of Fisheries and Livestock/Department of Livestock Services (MOFL/DLS) in partnership with Government of Sweden. November 24, 2013. **Dairy Hub and Dairy Academy Development in Bangladesh**; A UNIDO, DLS, Tetra Laval, PRAN partnership project to support sustainable small holder farmer milk production in Bangladesh (Version signed by the parties)

As above, but with updates after the inception period. **November 2014.**

Sida/Sweden related documents

Results Strategy for Sweden's international development cooperation in Bangladesh 2014–2020. Annex to Government decision 2014-08-14 (UF2014/51155/UD/ASO)

Söderbäck, Mikael. 2016. **Desk Study of Sida's Experience from Private Sector Collaboration**. Sida Decentralised Evaluation 2016:6

Sida. 2007. **Glossary of Key Terms in Evaluation and Results Based Management**.

Sida. Stefan Molund and Göran Schill. 2007. **Looking Back, Moving Forward**. 2nd revised edition. Sida Evaluation Manual

http://ec.europa.eu/competition/state_aid/overview/index_en.html

https://www.regeringen.se/regeringens-politik/naringspolitik/statsstod/

Overall project reports

Dairy Hub and Dairy Academy Development in Bangladesh; A UNIDO–Tetra Laval/PRAN partnership project to support sustainable small holder farmer milk production in Bangladesh (SAP ID 120170). **Annual Report. December 2015.**

Dairy Hub and Dairy Academy Development in Bangladesh; A UNIDO–Tetra Laval/PRAN partnership project to support sustainable small holder farmer milk production in Bangladesh (SAP ID 120170). **Annual Report. December 2016.**

Karl Schebesta 09 April 2018. Dairy Hub and Dairy Academy Development in Bangladesh; A PRAN–Sida–Tetra Pak–UNIDO partnership project to support sustainable small holder farmer through milk production in Bangladesh. Powerpoint presentation.

Dairy Hub and Dairy Academy Development in Bangladesh; A UNIDO–Tetra Laval/PRAN partnership project to support sustainable small holder farmer milk production in Bangladesh (SAP ID 120170). **Project Completion Report. June 2018 (Draft and incomplete)**

Assessments during the Inception Period

Mohammad Nuruzzaman August 2014. **Gender Assessment Report Related to the Dairy Sector in the Project Target Area.** Dairy Hub and Dairy Academy Development in Bangladesh, 2nd Draft; A UNIDO–Tetra Laval/PRAN partnership project to support sustainable small holder farmer milk production in Bangladesh (SAP ID 120170).

Khairul Islam. August 2014. **The dairy sector in Bangladesh and The potential impact of UNIDO - Tetra Laval/PRAN partnership project to support sustainable small holder farmer milk production in Bangladesh.** Submitted to UNIDO.

UNIDO. July 2014. **An analysis of Environmental impacts of a Proposed 'Dairy Hub' Located in the North-western Region of Bangladesh.** Draft Final Report.

Annual Assessments

Environment

Ahsan Uddin Ahmed. October 2015. **Assessment of progress on environmental activities related to management of dairy hub. Report Submitted to UNIDO**
Ahsan Uddin Ahmed. October 2016. **An Assessment of progress on environmental activities related to management of dairy hub. Report Submitted to UNIDO**

Markets

Khairul Islam. December 2015. **Market Impact Review. UNIDO - Tetra Laval/PRAN partnership project to support sustainable small holder farmer milk production in Bangladesh.**
Dr. Md. Anisur Rahman. October 2016. Market **Impact Review. UNIDO - Tetra Laval/PRAN partnership project to support sustainable small holder farmer milk production in Bangladesh.**

Gender

Mohammad Nuruzzaman. October 2015. **Gender Reassessment for Dairy Hub and Dairy Academy Project, PRAN/UNIDO.**

Mohammad Nuruzzaman. 20 Nov 2016. **Draft Findings on the Gender Impact Analysis**. Dairy Hub and Diary Academy Project, PRAN

Progress Reports

Nine Progress reports:

February 2017
March 2017
April 2017
May 2017
June 2017

August 2017
September 2017
November 2017
February 2018

Field Trip Reports:
For 2016: Seven different
For 2017: Fourteen different
For 2018: Two different

Statistics
Five sets of data:
1. Change at Hub level, hubs 1-5 in terms of

- Total milk collected
- Litre/cow/day
- Collection cost
- Bacteria no
- Somatic cells no

2. Farm income and behaviour, hubs 3-5

3. Change at central level, per hubs 1-5, in terms of:

- Number of farmers
- Milk per farmer
- Milk price
- Monthly income/farmer

4. Change at Central level, aggregated for all hubs

- Number of farmers
- Milk per farmer
- Milk price
- Monthly income/farmer

5. Hubs and VCCS; when started and amount of average daily milk collected per VCC.

Project records at Dairy Academy, Hubs and VMCCS

OECD/DAC
http://www.oecd.org/dac/peer-reviews/private-sector-engagement-for-sustainable-development-lessons-from-the-dac.htm

About recycling of Tetra Pak packaging material:
http://tetrapak.com/sustainability/recycling
http://tetrapak.com/recycling-activities/

Statistics related to Bangladesh
https://www.indexmundi.com

https://www.statista.com/statistics/455782/urbanization-in-bangladesh

Web-based information about the project
https://www.unido.org

https://www.tetrapak.com

http://hystra.com/smallholder

https://www.regeringen.se/rapporter/2017/06/sverige-och-Agenda-2030--rapport-till-fns-politiska-hognivaforum-2017-om-hallbar-utveckling/

Various documentation related to administration

Agreement between Sida and UNIDO with subsequent amendments

Project Steering Committee meeting notes: (i) 30.9.2014, (ii) 4.2.2015; 2.11.2016 and 12.4.2017

Documentation on Sida disbursements

Information on other similar projects

Solidaridad and others: Sustainable Agriculture, Food Security and Linkages (Sa-FaL); **Fact sheet: Dairy**

CARE Bangladesh: Strengthening the Dairy Value Chain (Duration 2007–2016). **SDVC Stories of Impact**

7.5 SELECTED STORIES OF CHANGE

7.5.1 Award winning dairy farmer now thinking of leaving the business

SH was awarded Best Dairy Farmer from Karmasangsthan Bank in 2015. He joined the dairy business in 2010 with 2 cows. Within just 3 years, his farm size expanded to 14 cows. With his dedication and skill, he made himself eligible for the award. Everything was going fine until last year.

In the last one year, PRAN reduced its price offer by around 4.5 Taka per litre. And PRAN was not the only one to do so. All the other milk collection companies also reduced their price offer although not as severely as PRAN. BRAC and Milk Vita are now offering a higher price than PRAN. At the same time, the feed cost increased drastically. This made the whole story go in a reverse order. Dairy business no longer remained profitable for the farmers who buy all or most of the feed. Some farmers are now selling off cows to be able to afford to feed the rest. SH sold 7 of his cows during the last year. Now he has only 7 cows. SH does not know where he is leading to and what would be his profession in the near future.

7.5.2 Farmer wonders how long he can remain loyal to PRAN

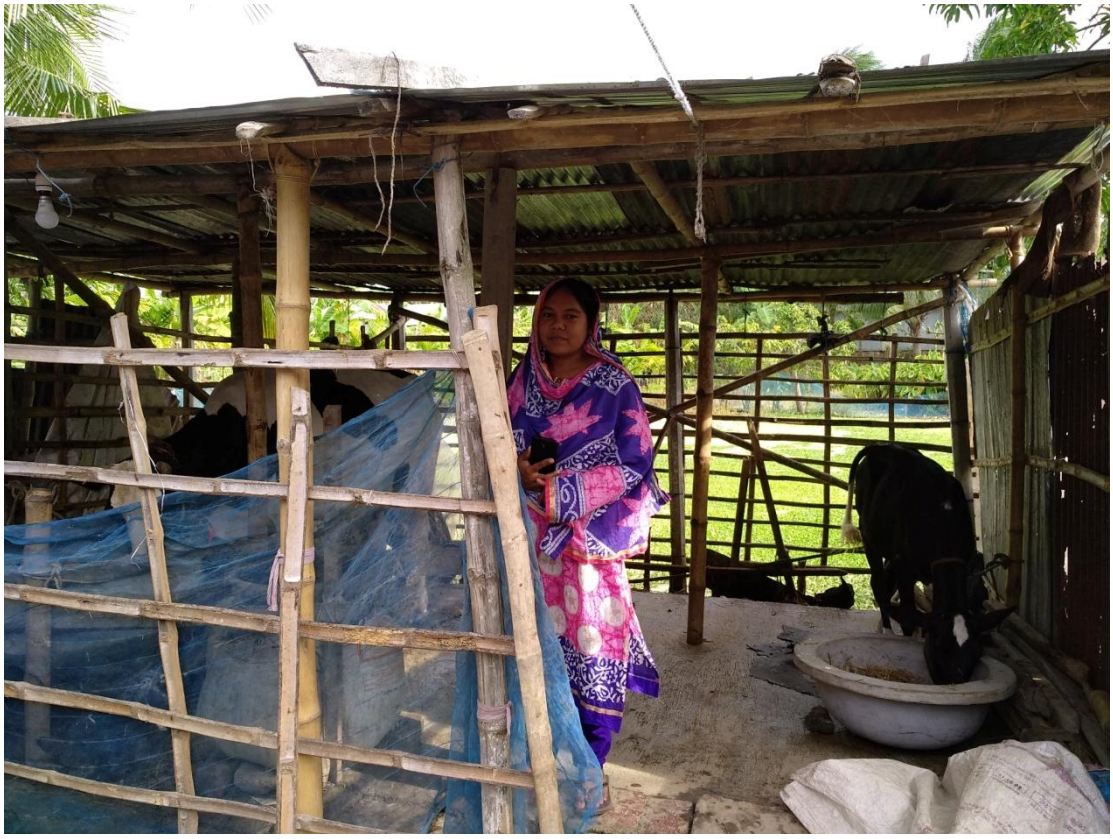
KH is among the very few suppliers (milk collectors; middle men) who supply their milk only to PRAN. Usually all the suppliers maintain a portfolio of different buyers of the milk. They sell to open markets as well. This practice is common among the farmers also. They do it to keep all the options open and also to maintain relationship with different actors. But KH supplies his milk only to PRAN. In 2010, KH started his profession as a formal supplier. PRAN started their dairy operation with hub 1 from 2010 and KH started his supplier career with supplying to PRAN. So PRAN's dairy business and KH's career grew together. PRAN's terms were better than the others. So, KH never thought of diversifying his client base. Moreover, he feels an emotional bond with PRAN due to their long-term relationship. But for the last one year, it is becoming increasingly difficult for him to remain that loyal to PRAN. All the milk-collecting companies have decreased their price offer per litre of milk significantly during the last year. PRAN reduced it with some 4.5 taka/litre. And at the same time, feed cost for the cows went up drastically. Profitability from the milk business is now at stake.

KH himself is a dairy farmer. He has 20 cows of his own. In addition to his own milk production, he collects milk from 65 other farmers. This number was 85 just a year ago. In the last one year, 20 of his farmers stopped their dairy operation. They sold off their cows and are no more in this dairy business. So, his number of clients came down from 85 to 65. The remaining 65 farmers have also started shrinking their operation. One year ago, his daily supply to PRAN was 900 litres per day. Now, that has been reduced to only 400 litres per day. BRAC is offering around 1.5 Taka more per litre than PRAN and Milk Vita is offering around 4.5 Taka more per litre. But the nearest Milk Vita collection centre is quite far from his place. BRAC has a collection centre in the same market where the PRAN VMCC is located. So, he is thinking of alternatives now. But PRAN officials are requesting him not to move to other options and saying that they

are expecting PRAN to increase their offer very soon. The problem is, however, that the officials have said so it for several months. KH is really confused but he needs to make a decision soon.

7.5.3 LU was lucky to take the dairy academy course

LU now works for a local NGO named Shapla Sangstha as a field facilitator where her role is to train the marginal community people as a part of the government VGD programme to make them capable of earning their own living and not to be depended on others. She trains them on different agricultural topics including dairy. LU also possesses her own dairy firm. Although the dairy firm is quite small in size but that is something LU always dreamt to have. The Dairy Academy helped her that making the dream a reality.



LU completed her graduation back in 2013. While completing her graduation, LU received dairy training from Department of Youth Development. That training instigated her interest in dairy. Youth Development department also offered her loan for dairy farming. Then one of his known PRAN staff motivated her about the dairy academy course knowing her interest in dairy. She enrolled to the course in 2013. Then she completed her Masters in Sociology. Finally, her mother could manage some money for her in 2016 and she started her farm with one cow. Her mother took 100,000 BDT loan from Grameen Bank and with some savings they bought a cow with 1,53,000 BDT. That was a huge investment for them. Although the cow belongs to the improved variety but the time they bought it, the cow was not in an attractive shape. LU applied her knowledge which she got from the course and the cow started

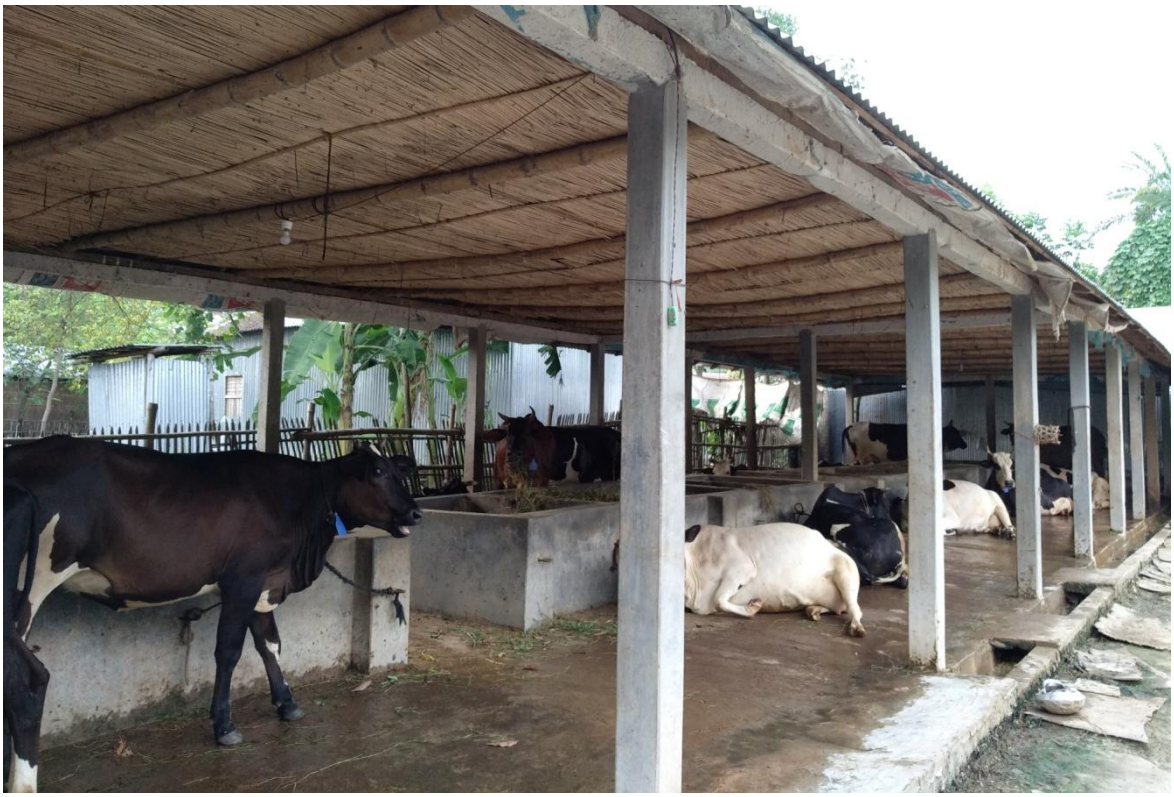
to recover her health. The cow initially gave only 3 or 4 litres of milk a day but with the improved practices that first increased to 7 or 8 litres and then even up to 11 litres per day. Now she sells milk to PRAN.

LU's father lives in Narsingdi for work. Their only brother also lives there with their father. LU lives here in the village named Moukhara in Baraigram Upazila of Natore district with her four sisters and her mother. They all look after the farm. Beside this dairy farm, they also culture fishes in their 33 decimal pond. From the pond, they make a yearly profit of around 65,000 tk. From the cow, they are making a profit of around 4000-4500 tk per month. They are planning to sell the calf now and buy more cows. She is grateful to PRAN for offering such a useful course.

7.5.4 From 2 cows to 31- The fairy tale of RE

RE used to be a farmer mainly of other agricultural crops. He had only 2 cows like any other rural households of Bangladesh until PRAN opened their hub in his area Gurudaspur, Natore. As per his statement, the PRAN staff from the very beginning started encouraging him to grow his dairy operation. They used to visit his farm quite frequently and teach them the good practices. Gradually he also started practicing the good farm management practices and he did not had to wait long to receive the benefits. PRAN staff also linked him with the financial service providers and he took some loan to buy new cows. Now, within just the last 6-7 years he has 31 cows and that is also excluding the 17 bulls that he sold for 17 lacs tk recently.

Although RE was never really a 'poor' farmer but this dairy farming has made him really a rich one, at least considering the rural context of Bangladesh. They have sent their children to the capital for better education for which they want to thank their dairy farming and obviously PRAN. RE and his wife look after the farm together although they also have employed 4 persons to take care of their cows. His wife loves to feed the cows by herself and she does not want to rely on others for that out of love.

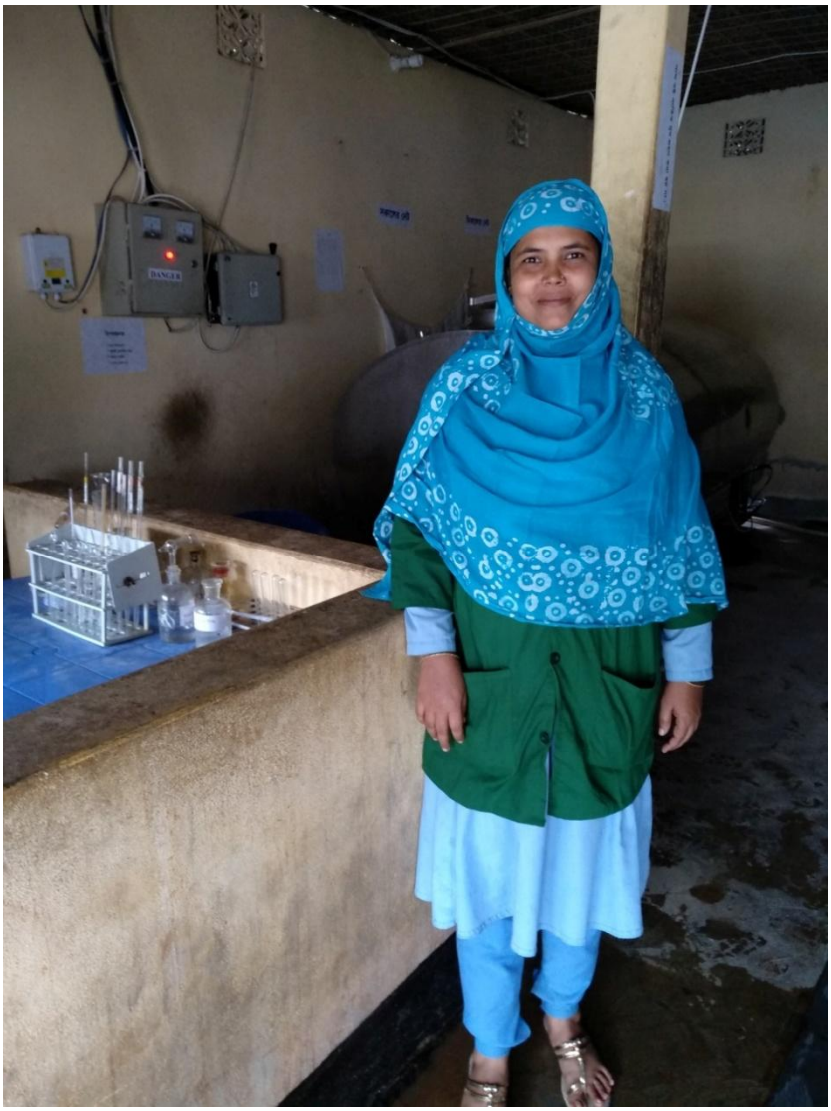


They are also motivating other people in their community and sharing knowledge on good farming practices with them. They love to admit that PRAN changed their life forever.

7.5.5 Being a woman is an added advantage for SE!

After passing her higher secondary exam, SE got married and that was the end of her formal education. She became a mother of two daughters and…no, the rest of the story is not like any other usual rural girl of Bangladesh. She joined an MFI in 2011. In April 2016, she enrolled for the course. Her husband got to know about the course from PRAN hub staff. After graduating from the academy, SE left the MFI job and joined PRAN. Now she is the In-charge for Nobdiganj VMCC under PRAN Hub 3.

She is the only female VMCC in-charge in PRAN. SE claims that she never had to face any sort of problem due to her gender. In fact, she thinks that she receives some additional respect from the farmers just because of her gender. Farmers respect her more than any male staff and listens to her directions. Her colleagues also confirmed the fact. They think that more women should join this job.



The Evaluation of the Dairy Hub and Dairy Academy Development Project in Bangladesh

This report presents a final evaluation of the Dairy Hub and Dairy Academy Project in Bangladesh implemented jointly by UNIDO, PRAN Dairy Ltd and Tetra Laval AB with support from Sida through the Embassy of Sweden in Bangladesh. The project was approved for funding in 2013. After an inception period and somewhat slow start the project gradually gained momentum during 2016 and 2017. The project aimed at *lifting beneficiaries from poverty by increasing their income through improved know-how on efficient dairy production, while a project purpose was to establish a Dairy Academy and five dairy hubs with village milk collection centres.*

Over 60 new village milk collection centres were established and extension and technical services were offered to farmers. A key factor contributing to progress was that PRAN Dairy Ltd. had shown strength in implementation.

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