

National Dairy Plan Phase I

Guidelines on Village Milk Procurement Systems through Dairy Cooperatives



Project Implementation Plan: Volume VI A

Project Management Unit

(located in NDDB)

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Abbreviations

AI	:	Artificial Insemination
AMCU	:	Automatic Milk Collection Unit
BIS	:	Bureau of Indian Standards
BMC	:	Bulk Milk Cooler
BOD	:	Board of Directors
CC	:	Chilling Centre
CEO	:	Chief Executive Officer
CMP	:	Clean Milk Production
DCS	:	Dairy Co-operative Society
DPMCU	:	Data Processing Milk Collection Units
EIA	:	End Implementing Agency
ESMF	:	Environment and Social Management Framework
EMT	:	Electronic Milko Tester
EPM	:	Enterprise Project Management
EWS	:	Electronic Weighing Scale
FD	:	Fodder Development
FSSA	:	Food Safety and Standards Act
GRM	:	Grievance Redressal Mechanism
GRO	:	Grievance Redressal Officer
IB	:	Institution Building
LPD	:	Litres per day
MBRT	:	Methylene Blue Reduction Test
MIS	:	Management Information System
MCM	:	Management Committee Member
MT	:	Metric Tonnes
NDDB	:	National Dairy Development Board
NDP	:	National Dairy Plan
PC	:	Project Coordinator
PFA	:	Prevention of Food Adulteration
PMC	:	Project Management Cell
QA	:	Quality Assurance
RBP	:	Ration Balancing Programme
SMP	:	Skimmed Milk Powder
SNF	:	Solids Not Fat
SWOT	:	Strength Weakness Opportunity Threat
TkgPD	:	Thousand kilograms per day
TS	:	Total solids
VBMP	:	Village Based Milk Procurement System

Foreword

Some 70 million rural households are engaged in milk production, the majority of them being small and marginal farmers and landless. Dairy cooperatives ensure inclusiveness and livelihoods especially for women. Under the Phase I of the National Dairy Plan, measures taken to help increase the productivity of milch animals through scientific breeding and nutrition would result in increased milk production which would meet the rapidly growing demand of milk. It is desirable that the cooperative sector retains the present 50 per cent share of the marketable surplus handled by the organized sector. To achieve this it would therefore be essential to ensure that this increased milk quantity is duly tapped by the dairy cooperatives by providing them a fair, transparent and assuring quality milk procurement system there by providing the rural milk producers greater access to the organized milk processing sector.

The strengthening of the Village based Milk Procurement Systems in dairy cooperatives would be carried out through:

- Expansion and setting up of village based milk procurement systems to collect milk in fair and transparent manner and ensure timely payments
- Strengthen dairy cooperatives to put in place village level infrastructure for milk weighing, testing, collection and milk cooling
- Provide support for creating institutional structures and training

This manual has been prepared primarily for the dairy cooperatives who would be implementing the Sub-Project Plans under Village based Milk Procurement Systems at field level.

This would help equip the project staff with an understanding

of how to go about in implementation of the activities, and equip them with essential information to implement the project effectively and in a comprehensive manner.

The manual has specific Standard Operating Procedures (SOP) and guidelines for implementing a Village based Milk Procurement system. It also describes the objectives, Standard Operating Procedures (SOP) and guidelines for each activity, management and monitoring mechanism, and key institutional arrangements necessary for implementing a Village based Milk Procurement System.

It is expected that this Manual for the Village based Milk Procurement Systems will be a useful guide for the people directly or indirectly involved with the project.

1. Introduction

1.1. What is this Manual and why it is needed?

1.1.1. A manual is a reference book, which presents information that is necessary for operating or implementing a particular system, project etc. It is written to give sound technical guidance to the people implementing a project. This Manual is expected to provide relevant guidelines to the key operations of the activity so as to achieve the desired targets with quality output. It explains as to who would be implementing and monitoring the activity, the processes involved, their importance, the Standard Operating Procedures (SOPs) to be followed and the support required. It defines roles and responsibilities of all those involved in the implementation of the activity.

1.1.2. It is needed since it becomes the guiding document according to which the project should be implemented.

1.2. Whom is this Manual for?

1.2.1. This Manual is for all those involved in planning , monitoring and implementation of the Village Based Milk Procurement Systems plans as per approved Sub-Project Plans. It is primarily for the End Implementing Agencies (EIAs), i.e the Milk Unions who have proposed to take up the VBMPS activity in their area of operation and also for those directly or indirectly associated with the activity.

1.3. Milk pooling

1.3.1. Milk is defined as the normal mammary secretion derived from complete milking of a healthy animal without addition or extraction. It is made of several constituents which can be broadly classified under two categories: water and total

solids. Further total solids have two components: fat and solids not fat (SNF).

- 1.3.2. In the Indian context, pooling of milk provides a source of livelihood for millions of rural producers and since many producers with little surplus live in far-off rural areas, it is important to pool their small quantities through village level institutions and provide sustainable market access to them.
- 1.3.3. Milk pooling is a process that includes all the activities starting from milk production at household level to its receipt at the dairy plant. Milk pooling not only takes care of handling of milk, but also encompasses the activities of various institutions and people involved directly or indirectly in milk business.
- 1.3.4. Milk producers come together and form a village dairy cooperative society (DCS) with the support of Milk Union and start supplying the surplus milk to the DCS, after retaining milk for their household consumption. The major operations of a DCS are hygienic milk collection and providing input services. Milk collection involves reception, testing, local and sample milk sale, dispatch of milk to the Milk Union, payment and accounts keeping. Input services include animal health coverage, artificial insemination, supply of cattle feed, mineral mixture and other feed supplements, fodder seeds, providing extension services to producer members including propagation of Clean milk production practices.
- 1.3.5. The major functions of the Milk Union are to procure, process and market milk and milk products, provide inputs such as cattle feed, veterinary services, extension services, etc. to the producer members through the DCS and arrange for training and education of management committee members, DCS

staff, milk producer members, Board members, officials and Staff of the Milk Union.

1.4. Village Based Milk Procurement System -an overview

There is a need for Village based milk procurement systems for weighing, testing quality of milk received and making payment to milk producers due to the following developments:

- Efforts to increase milk production through an increase in productivity would result in a growing marketable milk surplus. It will be necessary to support this effort by providing milk producers better opportunities for sale of surplus milk—by expanding village milk procurement systems that facilitate fair and transparent transactions.
- Private sector, large MNCs and retail chains are rapidly expanding their operations into the dairy business. It is estimated that they have created processing capacities in the last 15 years equal to those set up by cooperatives in more than 30 years. While the private sector will grow –it is important-in the interests of livelihoods and inclusiveness that cooperatives retain their existing 50 percent share of the milk handled by the organized sector even in 2016-17.
- Based on their growth trend in the last 15 years, cooperatives are likely to expand milk procurement from a current level of about 260 lakh kilograms of milk per day to about 360 lakh kilograms per day in 2016-17 even if they do not undertake any significant expansion in their current area of operations.
- Cooperatives currently procure about 16 percent of the national marketable surplus covering around 21 percent of the country's villages and 18 percent of the rural milk producing house-holds. It will be desirable for the cooperative sector to achieve a procurement share of at least 20 percent of the marketable milk surplus by 2016-17

so that it retains an overall 50 percent share of the marketable surplus handled by the organized sector. Therefore, strengthening of the dairy cooperatives has been envisaged. Proposed activities to be financed would include:

- Mobilization and institution building of small holder milk producers (30 per cent women and 17 per cent SC/ST members in their member DCS) through expansion of selected existing milk unions who in turn will strengthen selected existing village dairy cooperatives societies (DCSs) and organize new DCSs in the uncovered villages.
- Training and capacity building of milk producers and other functionaries; and
- Investments in village level infrastructure for milk collection and bulking such as milk cans, Bulk milk coolers for a cluster of villages, associated weighing and testing equipment, and related IT equipment.

1.4.1. Main expected results

The main expected results from the interventions proposed under VBMPS are:

- increase in the number of milk producers,
- providing encouragement to milk producers to produce more milk for sale,
- provide them improved access to the organised milk processing sector
- improved price realization.

1.4.2. Projects impact (qualitative)

The project is likely to contribute to some development outcomes (qualitative and not measurable), referred to as impacts such as:

- Facilitating socio-economic development in rural areas through dairying because of an increased coverage reaching out to more milk producers.
- Contributing to increase in incomes for rural milk producers.
- Greater participation of Women, SC/ST and small holders milk producers both as members and in the governance of village institutions.

1.4.3. Project outputs

The project envisages the following outputs:

- Coverage of additional 11900 villages under milk procurement systems.
- An additional of about 0.6 million milk producers pouring milk to village based milk producers' institutions.
- An additional milk procurement of about 26.65 lakh kg per day in the terminal year.
- Improving the quality of milk received by achieving more than 90 minutes of MBR time.

2. Institutional arrangement for VBMPS implementation

2.1. Participants in the VBMPS programme

2.1.1. The participants of milk pooling activity may include:

- Milk producing farmers
- DCS functionaries
- Field Staff of sub project implementing institution
- Milk Union

2.2. Functions of the participants of VBMPS

Table 1: Functions of key persons involved in Milk Pooling

Institution/ Individual	Functions
Milk producer	Regular, timely and maximum possible supply of unadulterated hygienic and good quality milk to DCS
Secretary	Coordinate overall functions of society including fair and transparent system of milk collection & testing, local sales dispatch, milk payment, supply of inputs and grievance handling.
BMC operator	Operation and maintenance of bulk milk cooler, including Milk collection, testing and dispatch by adopting fair practices, with/without the help of additional manpower.
Dairy Cooperative Societies Management Committee members	To ensure that operations are fair and transparent, grievances are promptly attended and financial soundness of the DCS is maintained
Supervisor	As the vital link between Union and DCS, ensure that SOP for the VBMPS operations are properly followed.
Project Coordination Committee	To ensure adherence to SOPs by all stake holders, people planning and implementation of each component of the VBMPS at field level. This would cover facilitation in implementation of the project at field level, coordination between equipment procurement, deployment and field level activity and monitoring the overall project so as to meet physical and financial targets.

2.3. Identification/ recruitment of Manpower

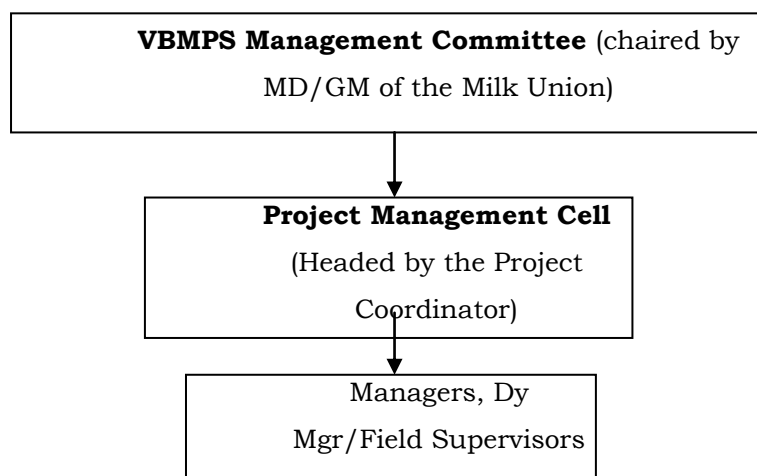
2.3.1. Identification of Project coordinator

- As per the approved Sub-project plan, the Milk Union shall ensure that the officer identified as Project Coordinator remains continuously responsible for overall coordination of sub project implementation, as also resolving issues related to the Project through liaison with the PMU during the Project period

2.3.2. Identification/ recruitment of Field supervisors

- The Milk Union shall ensure that essential manpower resources as listed in the approved SPP are deployed either from its existing pool or if essential through recruitment for all field activities under the SPP, right from the Project Implementation planning to actual execution as per timelines. The field supervisors shall be responsible for overseeing the proper functioning of the DCS and shall look after the DCS as assigned to him/her in the project area.

2.3.3. The EIA shall ensure that programme implementation is planned, managed, monitored and reviewed by constituting a VBMPS Management Committee and Project Management Cell at the Union level as per the proposed structure.



2.3.4. VBMP Management Committee

- The programme will be managed, monitored and reviewed by constituting a VBMP Management Committee at the Union level. The Committee shall comprise of :
 - MD/GM of the Union, who shall be the chairperson
 - Head (Finance) of the Union
 - MIS Officer
 - Grievance Redressal Officer (GRO)
 - Project Coordinator of the Union, who shall be the member convener

2.3.4.1. The Project Management Cell shall comprise of:

- Project Coordinator, Head of the PMC
- Designated Grievance Redressal Officer (GRO)
- Designated E&S Officer
- Area Officers
- MIS / IT Officer
- Finance Officer
- Purchase Officer

The Committee, if it so desires, may also call special invitees to attend the meeting. The general superintendence, direction, control and management of the affairs and activities of the sub project shall vest in the Committee, which shall include preparing long term strategies, plans, taking policy decisions related to sub project implementation including approval of budget, expenditure, reimbursement and release of advances, entering into contracts with agencies and other organizations, etc. The Committee shall ensure the effective implementation of the sub project with good governance so as to achieve the objectives defined in the sub project.

3. Milk Procurement operations

3.1. Milk pooling

3.1.1. Dairying is a source of livelihood for millions of rural producers. In a market driven economy, it is all the more important to have institutional structure that follow cooperative principles and provide the rural milk producers access to organised market.

3.2. Importance of milk pooling under NDP I

3.2.1. Milk pooling activities under NDP I broadly consist of milk collection, testing for quality and payment to producers for the milk supplied. It is essential that the milk is collected, measured and tested in the presence of producer members with standardised duly calibrated equipment (Electronic Weighing Scale, Analyser, Lactometer etc.). Payment to the milk producers is done through cash on daily basis, shift-wise or cycle-wise (may be weekly, fortnightly or 10 days). To ensure that milk producer members get their payment promptly and accurately, considering the technological advancement, where feasible, the Milk Union shall look into a policy shift from cash payment by DCS to DCS making milk bill payments through individual bank accounts or business correspondent model. With a view to sustain the quality of milk collected till it reaches the dairy plant for processing, Bulk Milk Coolers need to be installed in the villages.

3.3. Identification of potential area

3.3.1. Identification of potential area for dairying is the most crucial activity of the milk pooling. The first step involved in setting-up dairy cooperative societies (DCS) is to identify milk potential area through secondary data and validating it

subsequently by field surveys. Having identified the area, potential blocks consisting of villages/cluster of villages is selected for initiating milk pooling activities. Soon after the area identification for the intervention, it is required to seed the concept of milk pooling to the milk producers. It is important to persuade the potential producers coming together for their collective effort needed in milk pooling.

In case of a revival of a defunct DCS, the activity involved is similar but more effort is necessary in terms of confidence building and to ensure that the revival is sustainable.

3.4. Area of operation

- 3.4.1. Demarcation of operational area is very important in milk pooling activity. It helps in delegating responsibilities for various activities. A DCS generally caters to a revenue village, or as an area defined in its bye-laws.

3.5. Organisation of primary dairy cooperatives

- 3.5.1. Assessment of village potential
- 3.5.2. Survey is essential to assess the future prospects of a milk cooperative society, ascertain interest and faith of farmers in collective activity. While conducting a survey to assess viability of starting of DCS, some of the crucial aspects which need to be studied include : existing cattle and buffalo population, production and utilization/disposal pattern of milk and milk products, marketing channel for surplus milk and returns from sale of milk realized by farmers, agriculture facilities, production pattern, basic amenities such as access by an all weather road, water supply, rain dependence, communication links, educational facilities etc, other source of income, performance and strategies of other institutions

involved in dairying, different communities living in the village and their inter-relationship.

- 3.5.3. Field staff of the Union viz., field supervisors conduct the survey with the help of Village Sarpanch or Pradhan. Basic information is collected from Panchayat office. The supervisor also moves door-to-door to collect information about individual villagers. All information collected is then crosschecked for validity.

3.6. Organization and registration of society

After the survey, villages are categorized on the basis of milk potential and other related factors such as approachability and locations in the proposed milk routes. The Milk Union personnel initiate work pertaining to the organization of a dairy cooperative society once the categorization of villages is complete and proposed area for the routes is decided. The Sarpanch and villagers of the selected village shall be informed about VBMPS intervention under NDP-1, its requirements and details of assistance. Consent of Gramsabha needs to be taken before going ahead with implementation. Normally following steps are taken to form a society:

3.6.1. Organising the Gram Sabha

- Procurement personnel from the Union visit identified villages and arrange a village level meeting: Gram-sabha. A well accepted elderly person from the villages is requested to preside over the meeting. The officer/staff explains the purpose and advantages of forming dairy cooperative society in the village. Once the milk producers decide to form a DCS, an organiser is selected from amongst them. The organiser is authorized to collect the share subscription (as per state cooperative societies act, rules, model by-laws

of society, etc.) and entrance fee from all those milk producers who are interested in becoming members. After a sufficient number of milk producers become members (depending on the expected quantity of milk procurement, number of milk producers in the village, etc.), the amount of share money and entrance fee is deposited to a local bank in the name of proposed society.

- The importance of setting up or strengthening a DCS through revival as applicable shall be projected in Gram sabhas. The importance of getting organized, having better bargaining power, enhancing coverage, assured market linkage and prices, assured returns and input services could be explained to convince the milk producers
- Under NDP implementation, this meeting shall be conducted ensuring equitable participation by milk producers of all economic/social strata in an inclusive manner. Emphasis by the EIA field staff shall be on systematic inclusion of 30% women, 17% SC/ST, 70% smallholders during Gram Sabha meetings, village/ household surveys as also at each stage of DCS formation such as entry-level consultations, selection of initial promoters, selection of DCS members, etc

3.6.2. Society Organization Meeting

A general meeting of all the milk producers who have subscribed to the share deposit of the proposed society is convened and one of the members is elected as Chairman. The following issues are discussed and resolved:

- To form a milk producers' cooperative society on the lines of bye-laws as suggested by the milk union and to apply for registration in due course under the State Cooperative

Societies Act. Until the registration certificate is obtained, this will be called proposed society.

- To decide the area of operation of the society.
- To constitute an ad-hoc managing committee comprising members to look after the society's affairs till the registration, to elect the Chairman of the proposed society as per rule, to authorize the managing committee to appoint society staff for day-to-day work, to authorize the Chairman and Secretary to open a bank account in the name of the Proposed Society and operate jointly, to obtain tangible security from the Secretary to become eligible for operating bank account and handling of cash, to regularize the collection of share money and entrance fees from milk producers towards membership etc.
- To make the DCS duty bound to follow all the suggestions and directions given by the milk union to which the society desires to affiliate.
- To collect milk from all the members and supply the same to the Milk Union and to supply the inputs on cost to the members as provided by the milk union.
- To select the milk collection centre/location/premise for the society in the village which desirably a centrally located position and accessible by most of the members.
- To procure milk cans, milk collection and testing equipment, stationery, chemicals for testing etc. from the Union before the date of commencement of milk procurement by the society.

- To decide the modalities of milk transportation (head load), if the society is not on the transport route or is linked to a BMC.
- To raise fund/deposit from individual or to request milk union for an advance to facilitate quick payment in the beginning.

All these aspects shall be governed by the State Cooperative Societies Act, Rules and the Milk Union's policy of organisation and registration of society.

3.6.3. Registration of Society

- A performance review of the functioning of proposed society is carried out by union and if found satisfactory in terms of growth and sustainability, the union proposes for its registration to the concerned office of Registrar, cooperative societies of the State. The society is considered registered only when a registration certificate is obtained by the society with a registration number along with date of issue by the registering authority.
- It may be noted that under the VBMPS Sub-project implementation , DCS level activity can be undertaken even while the procedure for formal registration of DCS is in progress, i.e. soon after forming the DCS.

3.6.4. First Annual General Meeting of registered society

Once the society is registered, a general body meeting of all the members is convened by the Secretary of the proposed

society with the permission /consultation of the Chairman for following agenda:

- Election to the regular Managing Committee and Chairman of the Society as per bye-laws. *In this case, the EIA shall ensure fair and transparent election process for the regular Management committee and Chairman of the society promoting equal access to women, smallholders/vulnerable groups of society as per the State cooperative societies act, rules and bye-laws.*
- Regularizing / terminating the existing staff / appointing new staff, if required.
- Finalizing the statements of accounts for the period it functioned as a proposed society.
- Informing the bank about the registration of the society and request them to make the account of the proposed society in the name of the registered society.
- Regularization of membership according to the bye-laws. Enrolment of new members and affiliation of the society with the Cooperative Milk Union and other related organizations.
- Appointment of local internal auditor, etc.
- Records to be maintained about details of members

3.6.5. Functioning of a Dairy Cooperative Society

- EIA shall also facilitate smooth functioning of the society with reference to accounts, audit, regularization of membership etc. by providing regular/ refresher training to the Secretary and the Management committee members.
- For each new Society formed, EIA shall help identify or recruit a Secretary to look after the day to day activities & proper operations at the DCS level. Prior to actual milk procurement, a tester shall be selected, trained and positioned.

- During selection of the Secretary and Tester for the new DCS, the EIA Supervisor as well as the MCM shall ensure selection of the duly qualified candidates following a fair process of selection. The EIA shall also arrange to provide necessary training to the Secretary on function of dairy cooperative society for a period of 21 days, and to the tester as per standard procedure.
- The Management committee shall be informed about financial assistance to be provided for salary of DCS Secretary on tapering basis i.e. Rs.1500/- for 1st year, 1200/- for 2nd and 900/- for 3rd and explained that it is expected that during these 3 years the membership and milk procurement of the DCS would reach to a level of its financial viability

3.6.6. How a DCS grows and consequently functions change

In a DCS at infancy stage generally collection of milk in cans shall be done twice a day through basic milk collection accessories and dispatched to the nearest BMC or Chilling Centre or the Dairy plant through functioning milk routes deploying the optimum mode of transportation. When the number of milk pourers and volume of milk collected goes up, the DCS could be equipped with Data Processor based Milk Collection Unit (DPMCU) or Automatic Milk Collection Unit (AMCU) so as to provide fair and transparent milk collection system where the milk producer members would get an instant acknowledgement of milk payment receivable. A further upgradation of the DCS would be provision of a Bulk Milk Cooler so as to chill milk closer to point of production, in the shortest possible time after milking to preserve its bacteriological quality. In such a case, milk from surrounding village DCS (Satellite DCS) would be brought to the BMC DCS through head load. Each DCS has its own area of operation in procuring milk.

4. Standard Operating Procedures for putting in place infrastructure and start of operations under VBMPS

4.1. Different Components of VBMPS

An approved Sub-Project Plan would have all or some of the following components depending upon the requirement identified by the EIA for strengthening of its Milk Procurement operations:

- Setting up New DCS including supply of DCS accessories, cans
- Strengthening of its existing DCS including supply of DCS accessories, cans
- Installation of DPMCU/AMCU
- Installation of Bulk Milk Coolers
- Training and awareness creation

4.2. Understanding targets for each year and ensuring that they are met

The Project management Cell shall ensure that the yearly targets w.r.t the numbers, phasing of the activity, zones/locations where the activity has to be taken up, are clearly understood. The annual targets for each component/activity shall be sub-divided into quarterly targets and responsibilities and timelines for office staff in milk procurement operations and equipment procurement operations as well as field staff at different levels are clearly defined in the beginning of each year so that the synchronization of various functions is achieved and timelines duly met. The PMC shall also ensure that quality of work done

is to the mark and SOPs properly followed so as to attain the desired output.

4.3. Milk Procurement operations and testing

4.3.1. Preparatory aspects related to milk procurement infrastructure

- EIA shall ensure that the premises (owned/rented) selected for operation of the DCS shall be so located that it can be easily accessed by all social segments, especially women, SC/ST and small holder members.
- Location of DCS shall be so selected as to be easily approachable to transport vehicles. There should be arrangement of proper drainage to avoid environment and health hazards
- Much before milk procurement begins, the EIA shall ensure that all the pre-requisites for initiating milk collection from the DCS are duly met and essential equipment and registers of physical and financial records required for the initiation of milk collection shall be purchased and delivered. For new DCS or DCS under strengthening, the Cans and accessories shall be provided as per approved plan. For this, the equipment procurement procedure has to be initiated much in advance so as to synchronise all installations in time with the initiation of milk procurement. The indicative list of DCS accessories included under the approved Sub-plan is given at **Annex I**.
- The EIA shall ensure that price chart is communicated to DPMCU/AMCU supplier which would be suitably incorporated in the system before delivery
- In case where the DCS are to be upgraded with installation of DPMCU/AMCU as part of the Sub-Project Plan, the EIA shall arrange to create awareness among the members regarding the need for such change and advantages thereof.

Subsequently, when the DPMCUs are installed, on-the-job training of the Secretary and Tester shall be taken up through the equipment suppliers – a process to be coordinated by the field staff of the EIA, resolving initial teething problems and creating confidence among the milk producers about the system to enable a sense of ownership of the system among the members.

- The EIA shall ensure that during the training of the tester, she/he shall be technically equipped with details regarding the maintenance, calibration and standardization of the testing equipment so as ensure accurate testing of the milk samples. She/he shall also be sensitized to the need for fairness and transparency in testing of samples and transaction so as to gain member faith in the system.

4.3.2. For sustainable and successful implementation of the BMC Single/Cluster DCS system , the EIA shall ensure that:

- For the DCS which are to be upgraded with installation of Bulk Milk Coolers, the system of milk collection, quality checks, reconciliation of quantity and quality and payment in case of the cluster DCS are properly put in place. For this to happen, the EIA shall preferably deploy personnel with prior experience.
- The location where the BMC is to be installed meets all the technical pre-requisites for BMC installation, e.g. in existing/ potential tanker route, accessibility by tanker, space for tanker maneuvering, and space for placing equipment & safe working etc.
- Sufficient potable water supply is available for cleaning of the BMC and other equipment, preferably arranged prior to the installation of the BMC.

- Necessary arrangements are made for sanitary treatment and hygienic disposal of waste water, without creating any nuisance in the vicinity. EIA shall therefore ensure that,
 - The effluent generated from BMC shall be discharged as per statutory norms into municipal/village common drain or in absence of such an arrangement a soak pit is duly constructed to meet statutory norms
 - DG set operation shall not affect environment in vicinity and health of neighbouring residents, nor create a nuisance.
- Land/premises for setting up the BMC is free of any encumbrances.
- Further, under the Approved Sub-project Plan, at the BMC DCS, in addition to a Bulk Milk Cooler of the capacity as planned and included, an AMCU and a set of BMC accessories shall be provided (indicative list at **Annex I**). In this case too, BMC, AMCU and other equipment procurement procedure has to be initiated much in advance so as to synchronize all installations in time. Further to this, the DCS shall be equipped with all other essential items by the Union.
- EIA shall note that there is a provision for technical training in Framework Agreement for BMC/AMCU/DPMCU, which shall be coordinated with the suppliers. Further need based training if any, shall be co-ordinated by the EIA separately.
- All equipment procured and installed under the project are maintained regularly through preventive maintenance checks and practices. Beyond the warranty period, the EIA shall ensure that the equipment is covered under Annual Maintenance Contract with reliable service providers so as to ensure consistently effective operations.

- An asset register shall be maintained at the DCS recording details of present stock and movement of assets
- The Board of the new DCS shall depict its name, details of registration, assistance received under NDP with Mission Milk logo.
- Milk bill payment by DCS to be encouraged through the individual bank accounts of milk producers to maintain the transparency in transaction

4.4. Procurement of equipment/services

- 4.4.1. Milk union shall be responsible for the procurement of all BMC, AMCU, DPMCU, Cans and other equipment as included in the approved Sub-project Plan following the World Bank Guidelines. Further the Union shall ensure the proper installation, commissioning and operation of these equipment so as achieve the targets set within the timelines.

4.5. Procurement Management practices

Procurement Management practices for all equipment under the approved Sub-project shall be followed by the EIA as detailed in the Procurement Manual, Vol. III of the Project Implementation Plan (PIP document

4.6. Fund flow Mechanism and financial management

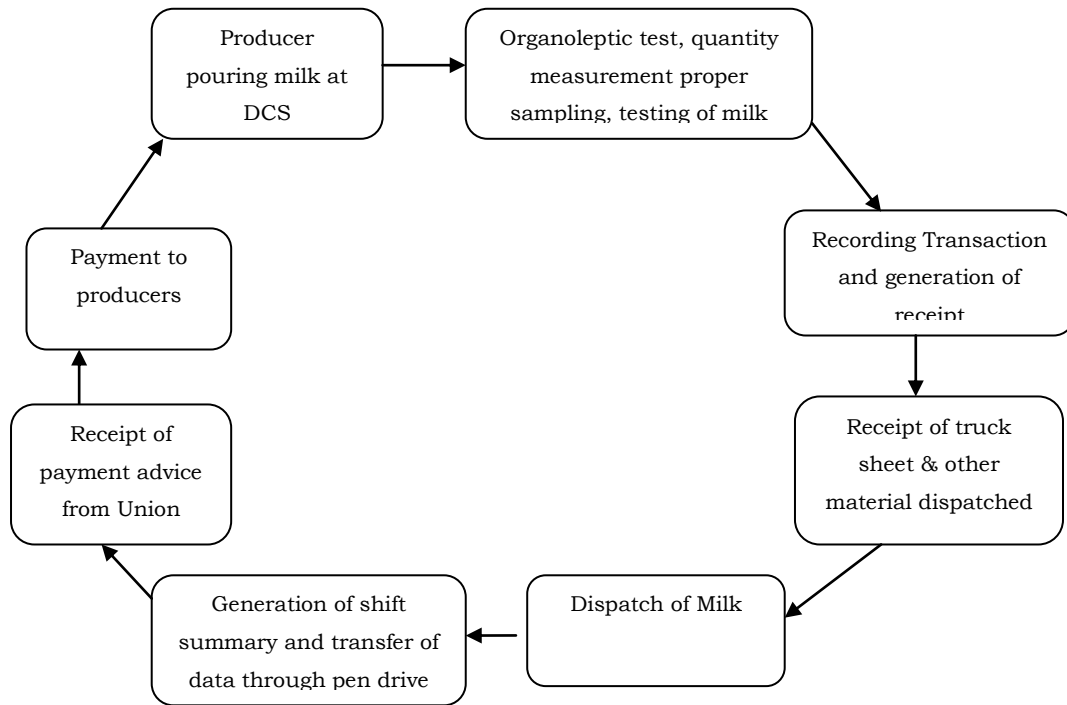
Fund flow mechanism and financial management practices for the approved Sub-project shall be followed by the EIA as described in the Financial Management Manual, Vol. II of the PIP document

4.7. Initiating milk Collection

- 4.7.1. Once the DCS has been supplied with Milk Collection Accessories, and milk transport logistics has been finalized,

the milk collection at the DCS would begin. The process of milk collection and payment is given in Fig.1 below :

Figure 1: Milk collection process (with AMCU/DPMCU)



4.7.2. Testing and transportation of Milk

- The Milk Union shall arrange to provide Gerber Centrifuge, its own EMT or an Analyzer for testing of fat & SNF of milk samples, as per the approved Plan. Milk samples shall be tested as per Standard Methods for testing of Milk and Milk Products and duly recorded.
- The DCS Secretary shall ensure that the measurement of milk is done carefully so as to avoid foam, shortage etc; quantity & quality of milk supplied by each individual along with the milk sample bottle number is duly recorded against her/his name in the purchase register and the card/pass book of the pourer where DPMCU/AMCU are not provided.

- In case of a DCS with DPMCU/AMCU, a printed slip is invariably generated and given to each member with details of date, shift, type of milk, producer identification number, weight, fat% & SNF% of milk, rate, total price etc
- The milk procured from the DCS village/ BMC cluster shall be sent without time delays to the BMC/CC/Dairy for milk chilling and/or processing. In case of DCS equipped with a Bulk Milk Cooler, after the milk collection is over, before dispatch of milk, a composite sample shall be drawn from the total quantity of milk collected, following the standard sampling procedure to test for Fat, SNF and MBRT.

4.7.3. Testing for MBRT

- In addition to testing of pooled milk from BMC DCS at dairy dock for MBRT, the EIA shall make arrangement for testing of milk samples at BMC level for Methylene Blue Reduction Test (MBRT) and reporting of average MBRT results in the Enterprise Project Management system
- Since the MBRT of milk at the BMC level is one of the important result indicators under VBMPS, the EIA shall pay due attention to this aspect.
- The EIA shall make necessary arrangement for scientific collection, (preservation if necessary) and testing of the milk samples for MBRT from each of the Bulk Milk Coolers provided under the Sub-plan, as specified below.
- The number of samples to be drawn and frequency of sampling shall be as follows:
 - In case of number of installed BMCs from 1 to 5 : a sample from 1 of the BMCs once a fortnight, (i.e. twice during the month from the BMC selected)

- In case of number of installed BMCs from 6 to 30 : a sample each from 5 of the BMCs once a fortnight (i.e.twice a month from BMCs selected)
- In case of number of installed BMCs from 31 to 60 : a sample each from 10 of the BMCs once a fortnight (i.e.twice a month from the BMCs selected)
- In case of no of installed BMCs over 60 : a sample each from 15 of the BMCs once a fortnight ((i.e.twice a month from the BMCs selected)
- The BMCs shall be selected for drawing samples every month in rotation so as to cover the entire spread of the installed BMCs in the project area over a period of time and the sample results depict a representative view of the MBRT of milk at the BMC level.
 - Reporting of the Results so obtained shall be based on the arithmetic average of the no of samples tested during the month. The MBRT time shall be reported in minutes.
 - The EIA shall arrange to test this sample for MBRT as per laid down procedure (**Annex II**).

5. Capacity Building related to VBMPS Sub-Plan

Educating and motivating the stakeholders in milk pooling operations as also the Union personnel in different functions is a continuous process which significantly impacts the operations of the dairy cooperative. This includes the milk producer members as also the DCS staff, as necessary from time to time, based on technological advancements made in the milk collection system

5.1. Training modules included under the Sub-plan

Some important training and awareness modules included in the Sub-plan based on the requirements identified by the EIA would be included in each approved SPP. The overall list of Awareness and Training modules is as listed below:

Awareness Programmes:

- Farmer Induction Programmes (FIP) -for farmers from new DCS
- Farmer Orientation Programmes (FOP)- for farmers from existing DCS
- Board of Directors (BOD) Orientation Programme –for Milk Union Boards
- Awareness programme on Clean Milk Production (CMP) – for milk producer members

Training modules:

- Basic training for new DCS Secretaries
- Refresher training for existing DCS Secretaries
- Training of Trainers(TOT)
- Training to new field supervisors on producer relationship management
- Business Appreciation Programme (BAP) – for procurement personnel as refresher

The guiding criteria for the programmes are detailed below:

- Farmer Induction Program (FIP): Two members (pouring milk to DCS) from each of newly organised/registered DCS shall be selected for this training program.
- Farmer Orientation Program (FOP): One active member from each from 20% of functional DCS of the EIA (e.g. 100 functional DCS means 20 member) shall be selected for this programme.
- Board of Directors (BOD) Orientation Program: All the elected board of directors of EIA will undergo training during NDP I implementation period at NDDDB, Anand
- Awareness program on Clean Milk Production (CMP): Awareness program will be done at EIA level. Target 40 members from each of newly formed DCS.
- Basic training for new DCS Secretaries: Training to be done at EIA level for new secretaries identified/selected for operation of new DCS proposed (one secretary per DCS) under SPP
- Refresher training of DCS Secretaries : Training to be given to 20% of existing DCS (functional) secretaries at EIA level
- Training of Trainers: Training to be given to trainers/senior officers of the Union who are involved in training of milk procurement field staff at the Union level.
- Training of new field supervisors: Training to be given to newly inducted milk procurement officers/supervisors required for smooth functioning of NDP I as/to is proposed in SPP. Based on context this can be done at EIA level or at NDDDB, Anand/RTDCs.
- Business appreciation program for existing procurement staff: Refresher Training to be provided to the procurement staff

5.2. Educating cooperative societies members and staff

- 5.2.1. EIA shall also ensure induction and orientation of selected farmers through approved training modules to improve their animal management practices and better participation in cooperatives. These trained farmers would disseminate the learnings to the fellow farmers thereby having a snowball effect.
- 5.2.2. In addition to the programmes discussed above, the Milk Union shall ensure adequate on-the-job training is provided to the testers identified for the new DCS.
- 5.2.3. In case of strengthening of the DCS with DPMCU/AMCU/BMC, the EIA shall ensure that the training is duly provided by the suppliers to the DCS staff on basic operations of the equipment and trouble shooting aspects.
- 5.2.4. Creating awareness among milk producers on concurrent aspects of dairying is important. In case of New DCS or strengthening of DCS, the Union could consider a few large gatherings (in the form of Dairy Sahakarita Jagruti Abhiyaan i.e. Cooperative dairying awareness campaign) of potential milk producers of villages wherein awareness could be created on animal breeding, feeding and health aspects, as also on ongoing schemes floated by the Milk Union and Govt. schemes by the concerned officials, guidance on animal induction etc could be provided through interaction, posters, banners and other media.
- 5.2.5. In case any additional training is felt necessary by the EIA in the VBMPs sub-project area for effective implementation of the same, it shall be separately arranged by the EIA.

5.3. Other measures for Awareness creation among milk producer members

Extension activity and extension material are critical for the accomplishment of targets and wider outreach of the VBMP activity and fulfilment of its objectives. Under extension material expenditure, the EIA could include creation of awareness on specific aspects related to cooperation/dairying. This shall be taken up by the EIA through Placing/Fixing of Pictorial Slogan posters at the DCS level covering different themes under VBMP activity for dissemination of messages on Institutional values, Clean milk production, Involvement and empowerment of women in dairying etc.

**6. Key rules for milk procurement to be followed under
VBMPS implementation**

6.1. Fairness and Transparency in Milk Collection

Parameter	Fairness	Transparency
Place	Neutral venue	Any stake holder can visit and observe milk collection
Sampling	Will use standard equipment to take the sample as per set procedure of sampling.	Will be done in front of the milk producers.
Milk measurement and Testing	Equipments/measures/ technologies used will accurately weigh/measure milk irrespective of who is measuring and whose milk is being measured. Will immediately acknowledge the quantity, quality and value of the milk and issue a slip. Milk testing to be done in the presence of the milk producer after following the required calibration procedure	Will show to producers the standards adopted / methodologies used to calibrate the equipments. Will give same quantity of measure by using any form of standard equipment Readiness to do re-testing for a genuine demand and show the results i.e. repeatability in case anyone asks for it.
Payment	Will be paid completely for the milk they have poured as per the declared bill cycle on the specified dates of payment during every bill cycle	Any producer can cross check the rate in the slip with the rate chart displayed in the collection point. Payment preferably through individual bank account/Business correspondent. Cash payment last option Will show the records of shift-wise pouring to the individual producers on demand.
Grievance handling	Giving an opportunity to all milk producer members to express, record their grievances and avail timely redressal.	Every milk producer transacting with DCS funded under the sub project is to be made aware about the system of grievance handling.

6.2. Providing equal opportunity to all milk producers

6.2.1. Every milk producer irrespective of caste-creed and religion shall be given equal opportunity to become a member of village dairy cooperative society, pour milk at the DCS and participate in the management of the DCS/Union based on

his/her capability and experience, as per provisions of the byelaws. Union shall ensure that discrimination of any kind is discouraged. The Union shall also ensure involvement of women as well as SC/ST members in operations of the cooperative as per the approved plan.

6.3. Accountability

6.3.1. Roles and responsibility of each participant should be very clear. Every stake holder shall be accountable for responsibility delegated to him or her. It is essential to have clearly defined roles so as to fix accountability at each and every level of the operation.

6.4. Ensuring value of milk supplied

6.4.1. Farmers should be able to realize the importance of pouring good quality milk which will provide them better price for their product. On the other hand, milk should be tested and measured properly with duly calibrated equipment to ensure fair price to farmers.

6.5. Information Disclosure with awareness creation

6.5.1. The Milk Union shall preferably have a website containing suo moto disclosures of the sub project related information, details of the activities, area(s) where the activities are being implemented, procurement plan etc. It will also regularly post the progress of the sub project and particulars of the person to be contacted for seeking further information.

6.5.2. Further, physical progress, important announcements, news, tender notifications, details of facilities available, type of milk product sold and details of welfare schemes being implemented by the Union can be disclosed. Relevant

information may also be disclosed through annual report and specific information booklets.

6.5.3. In addition to periodic publications, following measures shall be put in place for information disclosure as well as awareness creation related to other activities:

- Display boards in the villages / DCS offices providing a monthly update of members enrolled, women members, milk collection, profitability of DCS, etc through the VBMPS activity.
- Display slogans charts in the villages / DCS containing information that describes VBMPS as well as other activities under taken such as FD/RBP activities i.e., animals covered under RBP, aggregate number of producers benefited from the activity in a simple and reader friendly manner.

6.5.4. In addition to these following also needs to be ensured by the EIA:

- EIA shall ensure adequate safeguards in terms of composition of each DCS Management Committee and its proper functioning to encourage consensus based decision-making
- Motivational actions to encourage good governance e.g. performance based incentives and penal actions to rectify/ improve inappropriate governance and other actions as may be appropriate
- In addition, a system of participatory governance and monitoring norms for milk producer institutions and dairy cooperative societies shall be developed to monitor the key performance indicators
- Information Education and Communication Campaigns
- Adoption of common standardized IT based MIS for the sub project activity

6.6. Grievance Redressal Mechanism (GRM)

- 6.6.1. “A grievance usually refers to some form of dissatisfaction by a stakeholder, which needs to be redressed in order to continue smooth implementation of the project”. The sub project will evolve a system for redressal of grievances that may arise in the course of implementation. The GRM will be structured in a manner so that it can be monitored, as it provides important feedback on the sub project activities.
- 6.6.2. The Union shall designate an officer as GRO for grievance redressal whose contacts will be displayed on the notice boards at EIA and respective societies and the website of the Union. A grievance register to be maintained by the EIA at the respective societies. GRO will be made responsible to maintain a log of complaints/grievances related to the sub project and submit monthly reports to PMC. The GRO shall need to:
- Maintain a computerized database of Grievances (through a unique identification number), acknowledgements and information about their disposal
 - Monitor the progress of disposal of the grievances.
 - Fix time limit for disposal of the Grievances.
 - Deal with each Grievance in a fair manner.
 - Determine an appropriate periodicity when internal / external meetings would be held to implement the GRM in an efficient manner
 - The grievance system put in shall be on continuous basis without a break during the year. The procedure to be followed for grievance handling is given at **Annex III**.

7. Project Management, Monitoring and evaluation

7.1. Why is monitoring required?

7.1.3. Monitoring and evaluation is essential to analyse achievement against targets and to take corrective actions as and when required. Monitoring of sub project at a regular time span helps in improvement of quality of work and optimal use of available resources.

7.2. The Project Management Cell

7.2.1. Project Management Cell

7.2.1.1. The Project Management Cell has a key role to play in management and monitoring of the Project. It shall manage implementation of the sub project under the supervision, direction and control of the VBMP Management Committee. As Head of the PMC, the Project Coordinator shall monitor it on day-to-day basis and will be accountable for achieving the targets.

7.2.2. Monitoring is to be carried out by reviewing all the activities as per approved Sub-Project Plan (formation of new DCS, strengthening of existing ones, setting up infrastructure at DCS, maintaining quality measures, payment to milk producers, grievance handling etc.) on a regular basis. Monitoring the progress of the sub project shall include monitoring and analyzing each sub-component/sub-activity in the chain of milk pooling. This shall be carried out through regular internal review meetings and discussions with other stake holders as necessary. Visiting villages and interacting with producers and staff involved in the milk pooling activities shall form a crucial part of monitoring the sub project. Set of indicators against each activity may be

worked out to compare target against achievement on regular basis and to revise or modify targets accordingly.

The Roles and responsibilities of each of the members of the Project Management Cell are detailed in **Annex IV**

7.3. Parameters to be monitored

7.3.1. In addition to monitoring of physical and financial progress of the Sub-project and trouble shooting, routine operations and efficiency parameters, few key parameters to be monitored and evaluated in the context of VBMPS include :

- Producer profile (membership enrolment, changes in membership profile, women members, SC/ST and small holders etc.)
- Milk collection (procurement data – DCS wise, MBRT data BMC DCS-wise)

7.4. Monitoring & Evaluation

7.4.1. The VBMPS management committee shall meet every quarter or more frequently if required and would review the following

- Targets and achievements of last quarter
- Reasons for any underachievement, and strategy to cope with the yearly targets
- Targets for upcoming quarter, plan for achievement and arrangement of resources necessary
- Reporting of the progress to concerned stakeholders
- Grievances received by GRO and actions taken thereon, any issues to be resolved
- Status of FUCs and their timely submissions
- Minutes of meeting of the PMC and action taken reports

- Status of data entry in the Enterprise Project Management - EPM developed by PMU-NDDDB and submissions to PMU for performance review.
- Any specific instructions/guidelines received from PMU regarding implementation of VBMPS to be communicated to PMC and acted upon

7.4.2. The Project Management cell would meet every month or more frequently as required. Every month they shall review the following

- Targets and achievements of last month with field staff
- Reasons for any underachievement and strategy to cope with the lag
- Targets for upcoming month, plan for achievement and arrangement of assistance required if any
- Reporting of the progress to MD/GM
- Grievances received by GRO and actions taken thereon any issues to be resolved
- Document minutes of meeting and review Action Taken report of previous meeting
- Status of data entry EPM, reporting to management Committee and submissions to PMU for performance review.
- Any specific instructions received from PMU regarding implementation of VBMPS is to be communicated and acted upon

7.4.3. The PMC shall also arrange to submit periodic consolidated reports to PMU for performance reviews. The report will have the following inter alia,

- periodic up-to-date physical and financial expenditure data compared to the targets;
- Regular quarterly submission of Fund Utilization Certificates on prescribed format

- Success stories and problems encountered during the reporting period with suggested remedial actions;
- Reports on adherence to the Environment and Social Management Framework (ESMF) and problems encountered, if any; and
- any other reports as required from time to time by PMU

7.4.4. Performance data would be made available to all concerned officials through EPM with appropriate security mechanisms.

**Annex I: List of items/equipment at different locations under
VBMPS**

1. Items required at a BMC DCS

S. No	Particulars
1	Bulk Milk Cooler of capacity defined- 1 set, Technical Specifications as per latest Framework agreement
2	SS 304/Aluminium Alloy Cans Technical Specifications as per latest Framework agreement
3	AMCU Technical Specifications as per latest Framework agreement
4	BMC Accessories set (indicative list given below)

2. BMC level accessories list : DCS with BMC - Milk Collection

Equipments/ Accessories and Milk Testing accessories:

This item set will be only for the BMC DCS villages. Union will have flexibility to purchase any items combination from the below mentioned items as per requirement.

Sr No.	Name of Milk Collection Equipments/ Accessories and Milk Testing accessories	Indicative Quantity one time (nos.)
1	Milk Collection Tray, made 1.2mm thick S S 304, size 440x 590x65mm, Minimum weight -4200gm.	1
2	Milk Sampler, Made from 1.2mm thick S S 304. Minimum weight -90gm	1
3	Lactometer Cylinder, made from S S 304 Pipe having 1.6mm wall thickness , Minimum weight 270 gm	1
4	Funnel with Strainer, made from 1.2mm thick S S 304. Minimum weight -1600gm	1
5	Strainer Sieve for Funnel, Material S S 304	1
6	Measure 100 ML, Made from 1.25mm thick S S 304. Minimum weight 125gm	1
7	Measure 200 ML, made from 1.25mm thick S S 304. Minimum weight -180gm	1
8	Measure 500ML, made from 1.6mm thick S S 304. Minimum weight - 425gm	1
9	Measure 1000ML, made form 1.6mm thick S S 304. Minimum weight- 650gm	1
10	Milk Can Plunger, made from SS 304. Minimum weight-650gm	1
11	Milk Bucket, made from S S 200 series, seamless with bottom ring, 15 litre capacity. Minimum	1

Sr No.	Name of Milk Collection Equipments/ Accessories and Milk Testing accessories	Indicative Quantity one time (nos.)
	weight -1600 gm	
12	Electric Gerber Centrifuge Machine, with safety cover. 24 tests	1
13	Lock Stoppers, Brass (Dozen)	8
14	Lock Stopper Keys (Aluminum)	5
15	Lactometer Zeal type ,0 to 40 with ½ division, Calibrated ,Accuracy+_0.25 LR	10
16	Thermometer(Alcohol), 0 to 100° C, yellow back, accuracy 100%	10
17	Pipette 10.75 ml ,ISI mark, Double tested	10
18	Graduated pipettes 10 ml	10
19	Test tubes 18 X 150 mm	24
20	Butyrometers (ISI Make), double tested, for milk 0-10%, accuracy 100%	96
21	Graduated burette, 25 ml, made of laboratory grade transparent plastic, Guaranteed accurate.	2
22	Burette Stand of Iron , 8" long with clamp	1
23	Glass Beakers , 100 ml	2
24	Glass Beakers, 500 ml	2
25	Porcelain dish , 3 Inch	2
26	Sprit lamp, Stainless Steel , 100 ml.	2
27	Butyrometers shaking stand , 12 holes (HDPE)	4
28	Plastic sample bottles , 50 ml, with cap, made from food grade plastic, Minimum weight-5.5 gm	120
29	Plastic tray for holding 24 Nos. sample bottles securely , made from food grade plastic, minimum weight 300 gm +_10 gm	6
30	Tray for reagents, Size 16x12 Inches, made from food grade plastic	4
31	Plastic tilt measure 1ml for alcohol with rubber cork & with plastic bottle of 250 ml.	6
32	Plastic tilt measure 10 ml for acid with rubber cork & with plastic bottle of 500 ml	6
33	Test Tube Stand for 12 tubes of size18X150mm , made from Aluminum	2
34	Nylon Brush for cleaning Butyrometers , full length bristles	8
35	Nylon Brush for cleaning pipettes, nylon length 4 Inches, total length 12 Inches	8
36	Nylon Brush for cleaning 50 ml milk sample bottles,nylon length 4 ",with tail & thick steel wire	8
37	Plastic measuring jug for acid dilution ,1 Litre	1
38	Plastic hammer for can opening	1
39	Hot Plate	1
40	NDDB Adulteration Test kit	1
41	Furniture	1 set

3. AMCU /DPMCU at other DCS as approved : Technical Specifications as per latest Framework Agreement

4. Milk Collection Accessories for Non-BMC DCS :

This item set will be only for the non BMC DCS villages. The Union would have the flexibility to purchase any items combination from those mentioned below as per requirement.

Sr. No.	Name of Milk Collection Equipments/ Accessories and Milk Testing accessories	Indicative Quantity one time (nos.)
1	Milk Collection Tray, made 1.2mm thick S S 304, size 440x 590x65mm,Minimum weight -4200gm.	1
2	Milk Sampler, Made from 1.2mm thick S S 304. Minimum weight -90gm	1
3	Lactometer Cylinder, made from S S 304 Pipe having 1.6mm wall thickness ,Minimum weight 270 gm	1
4	Funnel with Strainer, made from 1.2mm thick S S 304. Minimum weight -1600gm	1
5	Strainer Sieve for Funnel, Material S S 304	1
6	Measure 100 ML, Made from 1.25mm thick S S 304. Minimum weight 125gm	1
7	Measure 200 ML, made from 1.25mm thick S S 304. Minimum weight -180gm	1
8	Measure 500ML, made from 1.6mm thick S S 304. Minimum weight - 425gm	1
9	Measure 1000ML, made form 1.6mm thick S S 304. Minimum weight- 650gm	1
10	Milk Can Plunger, made from SS 304. Minimum weight-650gm	1
11	Milk Bucket, made from S S 200 series, seamless with bottom ring, 15 litre capacity. Minimum weight -1600 gm	1
12	Gerber 24 tests (Manual)	1
13	Lock Stoppers, Brass (Dozen)	2
14	Lock Stopper Keys (Aluminum)	2
15	Lactometer Zeal type ,0 to 40 with ½ division, Calibrated at 84 F, Accuracy+ 0.25 LR	2
16	Thermometer(Alcohol), 0 to 100° C, yellow back, accuracy 100%	2
17	Pipette 10.75 ml ,ISI mark Double tested	2
18	Graduated pipettes 10 ml	2
19	Test tubes 18 X 150 mm	6
20	Butyrometers (ISI Make), double tested, for milk 0-10%, accuracy 100%	30
21	Glass Beakers , 100 ml	1
22	Glass Beakers, 500 ml	1

Sr. No.	Name of Milk Collection Equipments/ Accessories and Milk Testing accessories	Indicative Quantity one time (nos.)
23	Porcelain dish , 3 Inch	1
24	Sprit lamp, Stainless Steel , 100 ml.	1
25	Butyrometers shaking stand , 12 holes (HDPE)	2
26	Plastic sample bottles , 50 ml, with cap, made from food grade plastic,Minimum weight-5.5 gm	60
27	Plastic tray for holding 24 Nos. sample bottles securely , made from food grade plastic, minimum weight 300 gm +_10 gm	2
28	Tray for reagents, Size 16x12 Inches, made from food grade plastic	1
29	Plastic tilt measure 1ml for alcohol with rubber cork & with plastic bottle of 250 ml.	2
30	Plastic tilt measure 10 ml for acid with rubber cork & with plastic bottle of 500 ml	2
31	Test Tube Stand for 12 tubes of size 18X150mm , Aluminum	1
32	Nylon Brush for cleaning Butyrometers , full length bristles	5
33	Nylon Brush for cleaning pipettes, nylon length 4 Inches, total length 12 Inches	5
34	Nylon Brush for cleaning 50 ml milk sample bottles, nylon length 4 ",with tail & thick steel wire	5
35	Plastic measuring jug for acid dilution , 1 Litre	1
36	Plastic hammer for can opening	1
37	Heater	1
38	NDDB Adulteration Test Kit	1
39	Furniture	1 set

Annex II: Testing of milk at DCS/BMC DCS level

In order to ensure standard and safe supply of milk and milk products to consumers, it is essential that raw milk reaching the dairy conforms to the standards set. This implies that raw milk needs to be tested at DCS and Dairy dock before it is accepted for further processing. Generally, the milk is tested at following levels:

- At the DCS level when the producers supply/pour milk.
- At the Dairy Dock on receipt of milk from the DCS.

Testing should be quick, accurate (high repeatability) and leave minimum chance of human error

At the society level, a rapid examination has to be carried out on each and every sample of milk including organoleptic tests and quantitative estimation of fat and SNF present in milk as per Standard Methods for Testing of Milk which include Qualitative Tests such as Organoleptic tests, Clot-on-boiling Test (C.O.B. Test), Alcohol Test, Acidity test etc.

At the BMC DCS level and the Dairy Dock, testing for Methylene Blue Reduction Test (MBRT) is essential. MBRT at BMC DCs level is also one of the result indicators of the Sub-project. Hence the details for the MBRT are included herein:

- **Methylene Blue Reduction Test (MBRT)**

Principle

This test is based on the principle that methylene blue (an oxidation-reduction dye or indicator) which is blue in its oxidized state, is reduced to a colorless compound (leuco form) as a result of the metabolic activities of bacteria in milk. When a solution of dye is added, the organisms present in milk consume the dissolved oxygen and lower the Oxygen reduction potential (ORP) to a level where

methyl blue or similar indicators are reduced and the milk once again retains its colour

Apparatus: (a) Test-tubes 20 ml each, 15 x 150 mm (Borosil), (b) Sterile SS bowl (to sterilize silicon bungs), (c) Silicon rubber bungs, (d) Pipette 10 ml (e) Pipette 1ml, (f) Water-bath thermostatically controlled at 35 to 37+1 deg. C,

Reagent: Methylene blue thiocyanate tablets dissolved in hot water

Procedure: Transfer 10 ml of the milk sample to the test tube in a 20 ml test tube appropriately labeled. Add 1 ml of the Methylene blue thiocyanate reagent into the test tube. Shake slowly to dissolve the dye and ensure uniform mixing. Tubes may be placed in the water bath immediately (or may be stored in the refrigerator at 0 to 4 Deg. C for a more convenient time of incubation. When ready to perform the test, the temperature of the samples should be brought to 35 Deg. C within 10 minutes). When temperature reaches 36 Deg.C, slowly invert tubes a few times to assure uniform creaming. Do not shake the tubes. Record the time at the beginning of the incubation period. Cover the tubes to keep out light. Check the samples for de-colourization after 30 minutes of incubation. Make subsequent readings at 15 minute intervals thereafter. The difference between the final and initial time will give the MBRT of the sample. For raw chilled milk, the time should be noted in minutes.

Important note for EIAs:

End of the Project (EOP) Result indicator for MBRT at BMC level:

Minimum 90 minutes

Annex III : Procedure for submission of complaints and their Redressal

Grievance/Complaint Submission:

When a complaint is made, it can either be made orally or in writing and include the following details:

- Name of the individual or organization, address and telephone number (if any) of the complainant.
- Brief description of the matter which is the source of the grievance, including copies of any relevant and supporting documents.
- Redressal or relief sought

Grievances may also be submitted in the Complaint Box kept at reception of the office of the EIA. The Complaint Box should be opened on daily basis by the GRO. Complaint can also be sent by post.

A complaint made through electronic means (e-mail, fax) should also be accepted and replied, if requested, should be sent through e-mail also.

In case the complainant is not satisfied with the response at a certain level, he/ she will be free to approach the next higher level.

Procedure for redressal of grievances:

Every application received shall be tagged with a specific reference number. Every application or petition shall be acknowledged through standard acknowledgement slips or a copy of the receipt dispatched to the complainant within 3 days of receipt of complaint or handed over to person at the time of receipt for complaints submitted in person.

Every application shall carry such a slip for future reference indicating the name, designation and telephone number of the official who is processing the case. The time frame in which a reply would be sent shall also be indicated.

The complainant shall be quickly informed of the action taken by way of redressal within the proposed response time.

A record of all complaints received and action taken till disposal shall be maintained.

A reply to any grievance shall cover all points raised and not address the grievance partially. Follow-up action if any shall be duly pursued.

No grievance is to be rejected without having been independently examined. At a minimum, this means that an officer superior to the one who delayed taking the original decision or took the original decision that is cause for grievance, shall actually examine the case as well as the reply, intended to be sent to the complainant. If a complaint is rejected, reasons for such rejection shall be made explicit and intimated to the complainant within the time frame.

Grievance redressal mechanisms will consider the vulnerability of gender, SC/ST and other underprivileged persons.

Annex IV: Roles & responsibilities of PMC members for the Sub-project

Designation: Project Coordinator		Unit: EIA
Key Responsibilities	Performance Indicator	Technical Competency
Execute legal agreements between the EIA & PMU	Achievement of sub project result indicators	Basic understanding of milk business and recent trends in dairying in the area of operation.
Implementation and monitoring of the sub project targets		
Placement of requisite manpower & arrange their training		
Organise meetings of Management Committee and review of project implementation		
Behavioural Competencies		
Broad Competency	Ability to	
Leadership	Clarify goals, take initiatives, inspire the team, allocate resources	
Team work	Develop a common cause and build cohesiveness	
Minimum Qualifications and experience: Graduate in any discipline with minimum 20 years of experience in milk procurement operations including Managerial experience of 10-12 years		

Designation: Environment & Social (E&S) Officer		Unit: EIA
Key Responsibilities	Performance Indicator	Technical Competencies
To identify Environment and Social (E&S) issues associated with subprojects.	Incorporation of relevant environment and social issues in the sub project proposal. No of IEC campaign, Attitude, behaviour and practice change of local stakeholders on E&S issues. Understanding of community about the project impacts. Proper documentation of project reports, case studies and technical briefings on E&S issues. Number and quality of reports submitted.	Working knowledge of MS Office.
To provide relevant inputs from the community on E&S issues, in the subproject proposal.		
To undertake the information, education and communication (IEC) campaigns to educate the local villagers/stakeholder on E&S issues associated with subproject.		
To provide support in baseline assessment of E&S issues through appropriate stakeholder consultations.		
To ensure effective implementation of Environment and Social Management Plans (ESMPs) prepared by EIA.		
To track progress of impact on social groups like women, SC/ST communities and provide regular updates to PMU.		
Behavioural Competencies		
Broad Competency	Ability to	
Written & verbal Communication	Effective communication skills. Must possess the ability to work with a team.	

Minimum Qualifications :	Prior work exp:
Bachelor or Masters degree in Social Sciences or Environmental Sciences.	Post Qualification experience of 1-2 yrs on environmental and social issues related to agriculture and allied sectors. Experience of working at community level is desirable. Experience in dairy sector (Dairy farms) preferred but not essential.

Designation: Grievance Redressal Officer		Unit: EIA
Key Responsibilities	Performance Indicator	Technical Competencies
Maintain a computerized database of Grievances	Every application received tagged with a unique reference number, issued receipt in standard acknowledgement slip within 7 working days Inform complainant the action taken within the response time suggested at each level Number of meetings held	ICT based support management, coordination with different levels for resolution. Ability to collect & document critical information about the complaint
Fix time limit for disposal of grievances and monitor the progress of disposal of the grievances		
Holding periodical meetings to implement the Grievance Redressal Mechanism in an efficient manner		
Behavioural Competencies		
Broad Competency	Ability to	
Written & verbal Communication	Confidently & effectively communicate & respond to complainants	
Minimum Qualifications :	Prior work exp:	
Graduate	One of the existing Senior Officers or above in the EIA	

Designation: Area Officer		Unit: EIA
Key Responsibilities	Performance Indicator	Technical Competency
Monitoring milk procurement activities in the operational area of the milk union	Achievement of targets in his area of operation	Knowledge of milk procurement operations such as DCS management, route optimisation, DCS record keeping, milk pricing, material balancing, transport management, input services
Monitoring installation and proper functioning of BMCs and DPMCU in the identified area of operation		
Arrange for training & awareness programs for Supervisors, BMC/CC In charge and milk producers		
Behavioural Competencies		
Broad Competency	Ability to	
Communication	Speak confidently to the group	
Problem-solving	Man management. Ability to go to root-cause of the problem for an effective solution	
Minimum Qualifications s and experience: Graduate in any discipline with 10 years of experience in milk procurement		

Designation: Field Supervisor		Unit: EIA
Key Responsibilities	Performance Indicator	Technical Competency
Monitoring the functioning of DCSs under his jurisdiction.	Achievement of targets in terms of villages covered, membership, milk quality and quantity and growth in no of DCS in tandem with SPP targets.	Practical knowledge of organising a DCS, DCS accounting, material balancing, milk quality and testing
Responsible for maintaining harmony in relations at DCS, BMC/CC level and Union level		
Behavioural Competencies		
Broad Competency	Ability to	
Communication	Speak in simple language and confidently to the group	
Problem-solving	Ability to go to the root-cause of the problem for an effective solution. Should have mature approach, and capability of conflict resolution	
Team building	Ability to work in cooperation with stakeholder	
Minimum Qualifications and experience: 12 th pass with 5 years of experience in milk procurement or Matriculate with 10 years of experience in milk procurement.		

Designation: Secretary		Unit: DCS
Key Responsibilities	Performance Indicator	Technical Competency
Responsible for milk collection, testing at the DCS level and despatch of milk and Milk payments	Good quality of milk collected.	Sound knowledge of milk procurement procedures. Understanding of testing procedures and Price chart. Knowledge of basic accounting, book keeping and statement preparation. Working knowledge of operating computers.
Responsible for preparing all receipts, vouchers, annual reports, Trading and P & L account, Balance Sheet for DCS	Correct and timely payment to the pourers Ensure Timely Audit	
Provide support to Chairman in conducting MCM and AGM.	Timely circulation of agenda notes and minutes	
Behavioural Competencies		
Broad Competency	Ability to	
Communication	Write and speak confidently to the group in local language	
Problem-solving	Should have mature approach and ability to address the grievance of pourers on milk quality, quantity and pricing.	
Minimum Qualifications : Preferably 10th pass and have completed Secretary training programme		Prior exp: Nil