Dairying through Cooperatives (DTC)

(Referred by JICA as "Project for the Dairy Development")

Component B of NPDD Scheme

Project Operation Manual

(Draft)

Updated (August 2024)

Table of Contents

List of Table

List of Figure

List of Attachment

Annexures (Separate books)

Component wise implementation manuals (Component from A to E)

Procurement manual of PIs

Financial management manual of PIs

A Model Subproject Plan

List of Abbreviation

A to C	Assistance to Cooperatives
AMCU	Automatic Milk Collection Unit
AMUL	Anand Milk Union Ltd.
BIS	Bureau of Indian Standard
BOD	Board of Directors
BS	Biological Sciences
BMC	Bulk Milk Cooler
CD	Capacity development
CPI	Consumer Price Index
CPSC	Central Project Steering Committee
CIP	Cleaning in Place
CRP	Calf Rearing Program
CS	Cooperative Services
CT	Cooperative Training
CEO	Chief Executive Officer
COMFED	Bihar State Milk Cooperative Federation
CVD	Cooling Valve Diversion
DAC	Development Assistance Committee
DCS	Dairy Cooperative Society
DD	Dairy Development
DEDS	Dairy Entrepreneurship Development Scheme
DIDF	Dairy Processing and Infrastructure Development Fund
DAHD	Department of Animal Husbandry &Dairying
DPMCU	Data Processor Milk Collection Unit
DPR	Detailed Project Report
DSCR	Debt Service Coverage Ratio
EEC	European Economic Community
EHEDG	European Hygienic Equipment Design Group
EIA	End Implementing Agency
ETP	Effluent Treatment Plant
EU	European Union
FAOSTAT	FAO (Food and Agriculture Organization of the United Nations) Statistical Databases
FBO	Food Business Operator
FPR	Field Performance Recording
FMD	Foot-and-Mouth Disease
FSSAI	Food Safety and Standards Authority of India
FSSC	Food Safety System Certification
FSMS	Food Safety Management System
GCMMF	Gujarat Cooperative Milk Marketing Federation Ltd.
GFSI	Global Food Safety Initiative
GDP	Gross Domestic Product
GoI	Government of India
HACCP	Hazard Analysis and Critical Control Points

HF	Holstein-Friesian
HTST	High Temperature Short Time
IAS	Indian Administrative Service
ICT	Information and Communication Technology
ICB	International Competitive Bidding
IDDP	Integrated Dairy Development Program
IDFA	International Dairy Foods Association
IDMC	Indian Dairy Machinery Company
IIL	Indian Immunological Ltd.
IRMA	Institute of Rural Management, Anand
IMARC	International Market Analysis Research & Consulting
INR	Indian Rupee
ISO	International Standard Organization
IT	Information Technology
JMF	Jharkhand Milk Federation
JICA	Japan International Cooperation Agency
LCB	Local Competitive Bidding
LLPD	Lakh Liter Per Day
LKgPD	Lakh Kilogram Per Day
MDFVPL	Mother Dairy Fruits and Vegetable Pvt. Ltd.
MPCDF	Madhya Pradesh State Cooperative Dairy Federation Ltd.
MoFPI	Ministry of Food Processing Industries
MoSPI	Ministry of Statistics and Programme Implementation
MPC	Milk Producer Company
MPI	Milk Producers Institution
MPP	Milk Pooling Point
MIT	Mansinh Institute of Training, NDDB
MT	Metric Ton
MU	Milk Union
NABARD	National Bank for Agriculture and Rural Development
NAP	National Action Plan
NCDC	National Cooperative Development Corporation
NCR	National Capital Region
NDDB	National Dairy Development Board
NDP	National Dairy Plan
NDS	NDDB Dairy Services
NGO	Non-Governmental Organization
NOC	No Objection Certificate
NPBB	National Program for Bovine Breeding
NPDD	National Program for Dairy Development
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
PCDF	Pradeshik Cooperative Dairy Federation Ltd., Uttar Pradesh
PE	Productivity Enhancement
PI	Participating Institution
PHE	Public Health Engineering

POIs	Producers' Owned Institutions
PPP	Public Private Partnership
PSU	Public Sector Undertaking
PSC	Project Sanctioning Committee
RBP	Ration Balancing Programme
RCDF	Rajasthan Cooperative Dairy Federation
RDTCs	Regional Demonstration & Training Centers
RKVY	Rashtriya Krishi Vikas Yojana
ROA	Return on Asset
ROE	Return on Equity
Rs.	Rupees
SC	Scheduled Caste
SCC	Somatic Cell Count
SHG	Self Help Group
SIQ-CMP	Strengthening Infrastructure for Quality and Clean Milk Production
SMP	Skim Milk Powder
SLTMC	State Level Technical Management Committee
SNF	Solid Not-Fat
SNS	Social Network Service
SPC	Standard Plate Count
SPP	Sub Project Plan
ST	Scheduled Tribe
TKgPD	Thousand Kilogram Per Day
TPC	Total Plate Count
TSL	Two Step Loan
TLPD	Thousand Liter Per Day
UHT	Ultra High Temperature
VAP	Value Added Product
WAMUL	West Assam Milk Producers' Cooperative Union Ltd.
WHO	World Health Organization
WMP	Whole Milk Powder

INR 1 (Rs. 1) = JPY 1.62

USD 1 = JPY 111

(stated in the Minutes of Discussion)

1 lakh = 1,00,000

1 crore = 10,000,000

Part I INTRODUCTION

1. INTRODUCTION

1-1.   Background

This project operation manual sets forth the objective, basic policy and operating procedures of the project – Dairying through Cooperatives (known as Project for the Dairy Development in JICA documents)_ to be implemented in accordance with the loan agreement signed on 21st, December 2018 between Japan International Cooperation Agency (JICA) and Government of India (GoI). The project has been approved by Govt. of India as Component B of "National Programme for Dairy Development (NPDD)" scheme. This manual is technically based on the Administrative Approval along with Operational Guidelines issued by Govt. of India and Minutes of Discussion signed by JICA, DAHD, and NDDB.

In this project, JICA will lend ODA Yen loan to the Government of India (GoI). These funds along with share of GoI will pass through the budget of Department of Animal Husbandry and Dairying (DAHD), GoI to National Dairy Development Board (NDDB). NDDB as the Implementing Agency (IA) will disburse these funds in forms of sub loan[1] and grant to Participating Institutions (PI) for implementation of eligible component/activities envisaged under the project for the dairy development.

1-2.   Objective of the Manual

Overall objective of the manual is to provide guidance in implementation of the Project. Specifically, it describes the policies and procedures that would be involved in the day-to-day operations of the Project, and enable JICA and Indian counterparts (DAHD and NDDB) to have uniform understanding of the operation and management of the Project.

1-3.   Contents and Coverage

This project operation manual is divided into four parts and 11 chapters. Part I covers introduction of the manual. In Part II, project scope, implementation procedure and project monitoring & reporting are described to have overall understanding about the project and its implementation processes.

Part III provides more information on implementation of loan and grant components to PI in detail, and Part IV gives detailed information to implement the capacity development component.

Component wise specific implementation manuals/guidelines have been prepared. These documents are part of the manual as Annexures (refer to List of Annexures).

---

[1] "Sub loans" here means loans extended from NDDB to PIs because "loans" are used generally to indicate ODA Yen loan from JICA to GoI. However, considering PI's viewpoint, loans to PI in the project are also described as "loans", not "sub loans" in this manual to avoid confusion by PIs..

1-4.   Target Users

Target users of this manual are NDDB, DAHD officials, and Participating Institutions (PI) who will be involved in the implementation & monitoring of the Project.

Part II THE PROJECT

2. BACKGROUND AND OBJECTIVE

2-1. Background

2-1-1. Background

The volume of milk production in India has reached 155 million tons, accounting for about 20% of total global production in 2016 (FAOSTAT). The share of livestock sector Gross Value Added at the national level was about 4% in 2015-16, where in the contribution of milk in livestock sector was 67%. (National Accounts Statistics, GoI, 2017). Additionally, the ratio of expenditure on milk and dairy products to household's total expenditure between 1977 and 2011 increased from 11.9 % to 18.7% in rural areas and from 15.9% to 20.3% in urban areas (Consumer Expenditure Survey, GoI, 2011-12). Milk production and processing is an important industry in India and, as the Indian economy and urbanization are expected to expand, the demand for dairy products is forecasted to increase.

From the aspect of milk production in India, the intensification of production has not progressed; the percentage of farmers who own more than five milking cows/buffaloes is only 5% (Detailed Project Report). Furthermore, 70% of total milk production is by small farmers with less than 2 ha of landholdings (JICA's Data Collection Survey). While the income from agricultural activities is influenced by weather, dairy activities, which can be undertaken round the year, can be a stable source of income for farmers. Dairying is not only a source of cash income for farmers, but also acts as an asset which stabilizes their livelihood in the time of distress. Thus, dairying is an important livelihood activity for small & marginal farmers and landless households.

Since, quality of fresh milk quickly deteriorates, to maintain the quality of milk immediate refrigeration after milking is required. Thus, dairy farmers in remote areas who do not have access to refrigeration facilities have difficulties in selling their milk to urban areas having demand for milk. Currently, amount of milk marketed in the modernized markets, called as organized sector, is limited to about 34% of total milk marketable surplus. Therefore, the market access to the organized sector is a crucial issue for dairy farmers in the regions where Dairy Cooperatives and private dairy companies are not present.

In India, Operation Flood, a dairy development project, was implemented between 1970 to 1996. The National Dairy Development Board (NDDB) was the implementing agency and the project has been implemented with the objectives to increase the milk production, augment rural income and make available milk to consumers at reasonable prices in cities through National Milk Grid. Under the Operation Flood, the cooperative model of Anand Milk Union Ltd. (Amul) known as "Anand Pattern" was extensively used to establish dairy cooperatives across the country. The "Anand Pattern" is a three-tier cooperative structure

comprising of Dairy Cooperative Society (DCS) at village level, District Milk Union at district level, and Milk Marketing Federation at state level. Implementation of the Operation Flood programme led to an increase in milk production and the establishment of value chains extending from the production to the processing and sales of milk. However, at present the amount of milk marketed by the organized sector is limited to 34% of total milk marketable surplus. This indicates that there is a need of further support to farmers for providing greater access to the organized milk market.

The Government of India highlighted the importance of up-gradation of cold chains as well as dairy processing and manufacturing facilities for the Value Added Products (VAPs) in the "Vision-2022:National Action Plan on Dairy Development". It is also mentioned in NITI Aayog's policy document "Doubling the Farmers' Income Rationale, Strategy, Prospects and Action Plan" that dairy sector will play an important role to double the farmers' income. The project – Dairying through Cooperatives (DTC)(referred by JICA as the project for the dairy development), is an important project of the Government of India, aims to increase sales of milk and dairy products by increasing farmers' access to organized market, upgrading dairy processing facilities and marketing infrastructure and enhancing the capacity of Producers' Owned Institutions, thereby contributing to increase in returns to milk producers in the project area.

2-1-2. Rationale

(1) Growing demand for milk in India

The demand of milk in India has been growing and is expected to grow continuously due to population growth, economic growth, urbanization, change of food habit and life style. It is estimated that per capita availability of milk in the year 2015 will be doubled in 2033 (Vision - 2022-: National Action Plan on Dairy Development, Department of Animal Husbandry, Dairy and Fisheries, Government of India).

(2) Demand of investment for dairy infrastructure

Modernization/Refurbishment: The dairy processing facilities need to be modernized / refurbished after certain years to continue the operations efficiently. Most of the milk processing plants with POIs were commissioned during Operation Flood which ended in 1996 and majority of these plants have never been expanded and/or modernized thereafter. Therefore, there is an increasing demand for investment for modernization/ refurbishment of age old facilities.

Capacity expansion: In order to respond to the increasing demand of milk & milk products in the country, capacity of, processing facilities needs to be expanded or new capacity needs to be created at the same time.

Diversification: As demand for dairy products is increasing in the country, Dairy Cooperatives needs to diversify their product portfolio and increase their manufacturing capacity for Value Added Products (VAPs)

which have long shelf life. This will lead to efficient utilization of the procured milk and also help in generating higher profit margins to cooperatives as compared to packed liquid milk business.

At the same time, there is need to focus on increasing the milk production by enhancing the milk productivity of milch animals to meet the growing demand for milk & milk products in the country. In India, crossbred cattle produce 6.78 kg/day, while non-descript and indigenous breeds (which comprise the majority of cattle population) produce only 2.75 kg/day (Basic Animal Husbandry and Fisheries Statistics 2015, DAHD) whereas the milk productivity of cattle in Japan is 23.3 kg/day. There is potential to improve the milk productivity of milch animals in India (JICA's Data Collection and Confirmation Study on Dairy Sector). The reasons of low productivity are lack of feed in quantity as well as quality, genetic ability and spread of animal diseases. Animal nutrition management and fodder production are particularly important considering the fact that genetically improved breed can produce more milk only when appropriate feed & fodder in required quantity is fed to the animal. Therefore, in addition to aforementioned activities, productivity enhancement activity is imperative to increase the milk production.

(3) Targeting backward areas of modernized dairy supply chains

In India, organized sector handles about 34% of total milk marketable surplus. To increase the share of organized sector, there is a need to expand the village coverage and provide access to milk producers to organized milk market. The Producers' Owned Institutions (Dairy Cooperatives & Milk Producer Companies) are institutions which provide market access to rural dairy farmers in backward areas. Supporting Producers' Owned Institutions (POIs) which collect milk from backward areas will enable the farmers in those areas to obtain more income from dairying. The Project targets backward states for promotion of dairy development activities.

(4) Capacity development for Strategic Business Management

The Project provides opportunities for capacity development of POIs through various training & capacity development programmes prior to and during implementation of sub-projects. Capacity development for strategic business management includes strategic planning, marketing, financial management, product development, quality control (including 5S and KAIZEN), and cost management. Requirement of the capacity development may vary with the level of business skills of the POIs as well as their market situation. The POIs with low management skills and those in competitive market are in need of capacity development in these fields.

(5) Capacity development for food safety and quality assurance

Considering increasing demand for safe food in India, POIs being a dominant player, are in a good position to contribute towards supplying more hygienic milk and have potential to enhance food safety in the country. Capacity development for hygiene management includes food safety policy, risk analysis, management system, hygiene control, inspection systems. On the other hand, Japan has developed quality check and hygiene management system throughout supply chains of milk. The quality control of milk starts at farmer level and continues at loading to milk tankers, reception at plants, processing, storage, and dispatching to retailers. The quality control system is integrated with the pricing system, so that farmers are incentivized to supply clean and hygienic milk. In the Project, opportunities to learn these systems in Japan will be provided to Participating Institutions (PI) for further improvement in hygiene management.

2-2.   Name and Objective

(1) Name

The title of the project is Dairying through Cooperatives (DTC) (also known as "Project for the Dairy Development" in JICA documents)

(2) Objective

The objective of the project is to increase sales of milk and dairy products by increasing farmers' access to organized market, upgrading dairy processing facilities and marketing infrastructure and enhancing the capacity of Producers' Owned Institutions, thereby contributing to increase in returns to milk producers in the project area.

3. Scope

3-1.   Target Area

The states namely, Bihar, Uttar Pradesh, Madhya Pradesh, West Bengal, Andhra Pradesh, Rajasthan, Telangana, Uttarakhand, Punjab shall be covered under the Project. The State of Uttarakhand has been covered only for the activities related to Fodder Development.

3-2.   Component, Cost, and Loan Amount

(1) Project Component and Cost

The project components and project costs are summarized below:

Table 3-2-1: Project Component and Cost

(1/2) Source of finance of the project of the component from A to G

Particulars	Amount (Rs. Crore)	Amount (Million JPY)
ODA loan	924.56	14,978*
GoI Contri.	475.54	7,704
State/PI Contri.	168.18	2.724
Total	1,566.28	25,406

(2/2) Component wise outlay(Rs. Crore):

Component Name				Total
A. Strengthening Milk Procurement infrastructure				467.05
B. Milk Processing facilities and manufacturing facilities				693.74
C. Support for Marketing infrastructure				192.04
D. Support for ICT Infrastructure				9.81
E. Productivity Enhancement				79.85
G. Training and Capacity Development				63.62

Source: Survey team based on Minutes of Discussion and DPR

*The ODA loan includes ODA loan for consultant services (Project Management Consultants, PMC) of 372 Million Yen (Rs. 22.96 Crore). The ODA loan does not cover general administration expenses, taxes & duties, purchase of land and other real property, compensation, and other indirect items.

Eligible and Non eligible items are shown in Attachment-3-2-2

3-3.   Terms and Condition of JICA Loan

The terms and condition of JICA loan to the Government of India are as below:

·   Option 3 of General Terms (fixed) for lower middle-income countries, (as per the Terms & Conditions of Japanese ODA loans effective from October 1st, 2018),

·   Interest rate: 0.85% per annum for main portion of the project while for consulting services interest rate is 0.01% per annum.

·   Repayment period: 15 years with five years of grace period on repayment of principal only

Disbursement of ODA loan from JICA to GoI would be up to eight years from the date of signing of the Loan Agreement.

3-4.   Overall Implementation Schedule

The project will be implemented during 2021-22 to 2025-26 and will continue till 2027-28.   The project will be implemented in   the States of Uttar Pradesh and Bihar (Priority States). The priority will be given to socially and economically backward districts having dairying potential (includes all 21 aspirational districts). If required, project area may expanded to other states as approved by Central Project Steering Committee (CPSC). . Stakeholder consultation with these states shall be undertaken prior to commencement of the Project.

The PIs will be sensitized about the project and preparation of the sub-project plan at the beginning of the project implementation. PI will submit the sub-project plan to NDDB and State Level Technical Management Committee (SLTMC). After screening & recommendation of SPP by SLTMC, NDDB will appraise the sub-project plans and put up to Project Sanctioning Committee (PSC) for its approval (please refer chapter 4). The proposals from Milk Producer Companies and Multistate Cooperatives will be routed directly through NDDB for consideration by the Project Sanctioning Committee (PSC), with intimation given to the concerned State Government/ SLTMC[2]. After sanction of the sub-project plans by PSC, NDDB will convey the same to the PI. Necessary training & capacity development programmes envisaged under the project will be provided at appropriate time during the project implementation. The project implementation schedule is shown in the figure below:

---

[2] As approved in the CPSC meeting held on 22.11.2022

	2018	2019	2020		2021				2022				2023				2024				2025			
	Q4			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Project Formulation																								
Pledge	▲																							
Signing of Loan Agreement	▲																							
Effectuation of Loan Agreement						▲																		
Sub project Implementation					For initial two states																			
Anouncement fo the Project to PIs					▆																			
Sensitisation of PI including explanation of Minimum Requirement for Business Management and Food Safety						▆																		
Period to Accept Subproject Plans																								
Appraisal and Sanction of Subprojects																								
Supervision of Subprojects																								
Component A: Strengthening of Milk Procurement Infrastructure																								
Component B: Milk processing facilities and manufacturing facilities																								
Component C: Support for Marketing Infrastructure																								
Component D: Support for ICT Infrastructure																								
Component E: Productivity Enhancement																								
Component F: Project Monitoring and Studies																								
Component G: Training and Capacity Development																								
Consulting Services																								
Assistance in Project Management/Financial Support/Capacity Development																								
Exposure Visit to Japan (by Loan PMC Consultant)									▆						▆							▆		

Figure 3-4-1: Project Implementing Schedule

4. Organizational Arrangement

4-1. Project Management

(1) NDDB

The project will be implemented by National Dairy Development Board (NDDB) through Participating Institutions such as Milk Cooperatives, Multi State Milk Cooperatives, Milk Producer Companies and State Milk Federation. NDDB is an internationally recognized institution in the dairy sector. It has adequate number of technically qualified and experienced professionals working across various disciplines such as Cooperative Services, Engineering Services, Animal Breeding, Animal Health, Animal Nutrition, Financial &Planning Services, Cooperative Training, Sectoral Analysis & Studies, Quality Assurance, Product & Process Development, Information & Communication Technologies, Public Relations & Communications, Accounts, Human Resource Development, Purchase, Legal and Administration. NDDB has four subsidiaries namely Indian Dairy Machinery Corporation (IDMC), Mother Dairy Fruits and Vegetable Pvt. Ltd. (MDFVPL), Indian Immunological Ltd. (IIL) and NDDB Dairy Services (NDS).

(2) Institutional Arrangement for the Project

The institutional arrangement for the Project is depicted below:
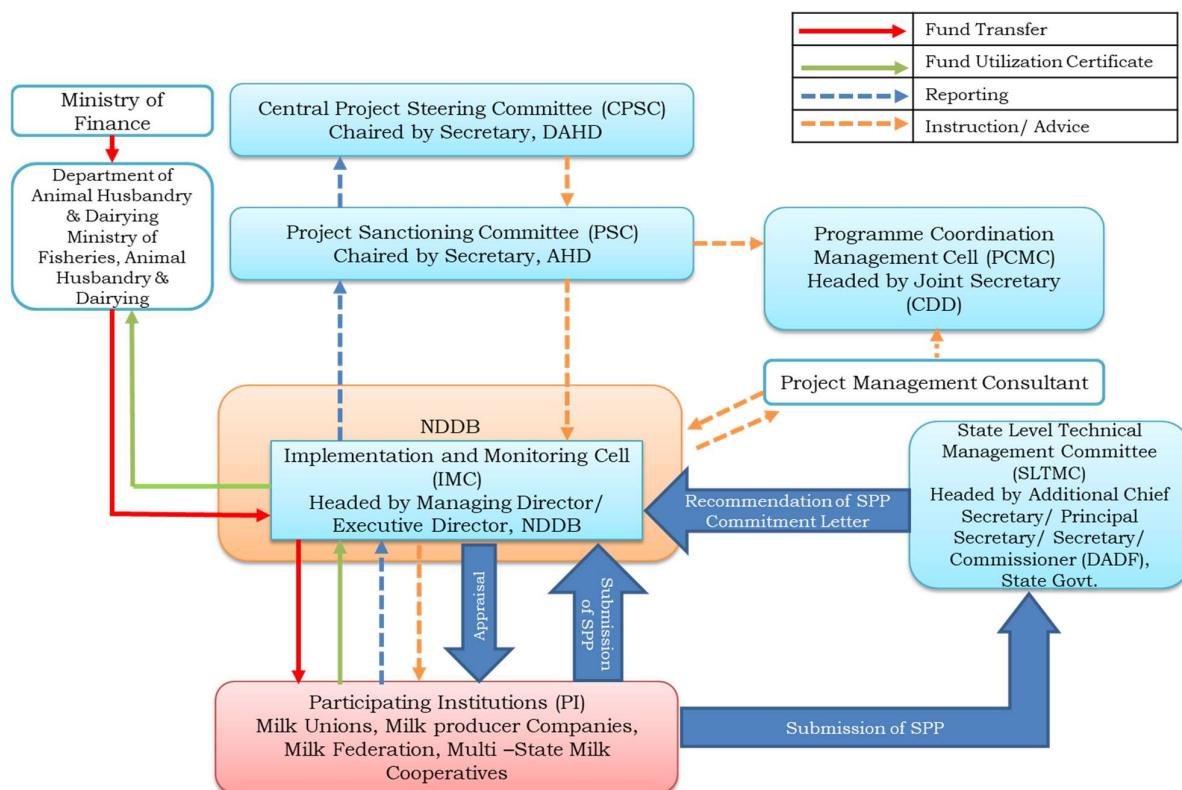
Figure 4-1-1: Project Institutional Arrangement

At apex level, Central Project Steering Committee (CPSC) will be formed, which will provide policy and strategic support to the project. Under the project, a Project Sanctioning Committee (PSC) will be formed, which will be headed by Secretary AHD, GoI and will have the authority to sanction projects recommended by Implementation and Monitoring Cell (IMC), NDDB. An IMC will be established at NDDB, Anand, which will appraise the subproject plans and screen them based on merit and manage the implementation and monitoring of day-to-day project activities

At central level, a Programme Coordination Management Cell (PCMC) will be created to provide Secretariat support to CPSC and PSC. PCMC will be responsible for analysis and placement of projects sent by NDDB to PSC as well as for providing inputs to CPSC for successful implementation of the project.

At the State level, there will be State Level Technical Management Committee (SLTMC), which will be headed by Additional Chief Secretary/Principal Secretary/Secretary/commissioner   of the State   for overseeing the land availability for village level institution like primary dairy societies, BMC centers   and cattle feed plants, statutory requirements, synergy between various schemes, co-ordination among PIs and NDDB, policy support, state-level monitoring of the projects etc.

At PI level, a Sub Project Management Committee will be constituted for monitoring and reviewing activities under various components being implemented under the project, which will be headed by Managing Director (MD)/Administrative Head of the PI. Also, Sub Project Implementation Cell (SPIC) will be constituted to effectively implement each component under the project, headed by Sub Project Coordinator (PC) who will be appointed by MD/Administrative Head of the PI.

Detailed responsibility is shown in Attachment 4-1-1.

4-2. Implementing Organization by Component

The project will be implemented by National Dairy Development Board (NDDB) through Participating Institutions such as Milk Cooperatives, Multi State Milk Cooperatives, Milk Producer Companies and State Milk Federation.

NDDB will provide technical guidance to PIs during implementation of the sub project.

4-3. Operation and Maintenance of Assets Created under the Project

All the assets created under the project will be operated and maintained by the PIs. PIs, in principle, should bear all the recurrent cost for operation of equipment, facilities and plants established under the Project. However, in case of viability gap (e.g. initial operational loss incurred by PIs for modernization /expansion/creation of processing facilities), the state government may decide to provide grant support to the PIs in order to fill the gap. Under the Project, management grant to newly set up village level institutions will be provided for initial two years on tapering basis. The details of institutions responsible for the operation & maintenance of assets created under the project are shown in the table below:

Table 4-3-1:   Project Component Wise Details of Assets and Responsible O&M Institutions

Sr.	Component	Asset	Detailed O&M institution
A	Strengthening Milk Procurement infrastructure	Bulk milk coolers (BMC), milk collection tank, cooling unit, generator, BMC accessories, Automatic Milk Collection Unit (AMCU), Data Processor Milk Collection Unit (DPMCU), DCS/BMC building	In most cases: DCS/MPP to which assets are provided Sometimes: Unions/Federations/Multi State Milk Cooperatives/ Milk Producers Companies if assets are managed by them.
		Tankers for milk transportation	Unions/Federations/ /Multi State Milk Cooperatives /Milk Producers Companies
B	Milk processing facilities and manufacturing facilities	Milk processing plant, Value Added Product Plant Cattle feed & feed supplement plants	Unions/Federations//Multi State Milk Cooperatives /Milk Producers Companies

Sr.	Component	Asset	Detailed O&M institution
	(milk & milk products and cattle feed)		
C	Support for Marketing infrastructure	Walk-in cold store, Milk parlour, Deep Freezer, Visi Cooler,　Insulation for marketing van	Unions/Federations//Multi State Milk Cooperatives / Milk Producers Companies
D	Support for ICT Infrastructure	Automatic Milk Collection System (AMCS) Solution	Unions/Federations//Multi State Milk Cooperatives / Milk Producers Companies (Some assets like internet dongle will be managed/operated by DCS/MPP)
E	Productivity Enhancement	Mower, chaff-cutter, micro-training center, silage units, fodder storage godown	In most cases: DCS/progressive farmers to which assets are provided Sometimes: Unions/Federations/Multi State Milk Cooperatives/ Milk Producers Companies if assets are managed by them
		Laptop, Tablet, camera	Unions/Federations//Multi State Milk Cooperatives / Milk Producers Companies

5. Project Operation and Procedure

5-1.　Target PIs

(1) Target Eligible Institutions

Target PIs across all the components are Milk Unions/ Multi-state Milk Cooperatives/ State Dairy Federations/ Milk Producer Companies.

5-2.　Eligibility Criteria to participate under the project

The overall eligible criteria are shown as below:

Table 5-2-1:　Eligibility Criteria

Sr.	Component	Criteria
		1)
I. Eligibility Criteria for PIs		
i. Institutional Governance Criteria for PIs		
		1) PIs should have a duly constituted Governing Body such as Board of Directors/Management Committee as applicable to the legal form of the PI. 2) PIs should have a full time Chief Executive/Managing Director (or equivalent) and adequate number of qualified technical and managerial personnel at key positions. 3) PIs should be willing to amend Bye-laws. 4) PIs should have fixed/ Undisturbed tenure for senior/ key management personnel including

Sr.	Component	Criteria
		Managing Director/Chief Executive.
		5) Board of the PI should nominate one expert each in the field of finance, Dairy Technology and marketing as independent directors.

ii. Financial Criteria for PIs

Sr.	Component	Criteria
	General criteria for all	1) Audit of accounts should be up-to-date and the auditor's observations should not contain any adverse opinion or disclaimer. 2) PIs should not have any over-dues to any financial institution. 3) PI should not be in a default to any bank/financial institution. 4) PI needs to contribute its share in the Project. However, in case PI does not have adequate resources to contribute its share, State Government may offer necessary grant.
	Additional criteria in applying loan	1) PI should have positive net worth. 2) All outstanding dues to producer members should not exceed four payment periods. 3) The financial returns of the project: Project will have uniform rate of Return on Investment (ROI) of 10%(minimum) and Debt Service Coverage Ratio (DSCR) of 1.5 times (minimum) for all sub projects. 4) The loan should be secured through collateral security, which should be minimum 1.5 times of the loan amount in terms of mortgage of immovable assets and hypothecation of movable assets. In case of shortfall, State Government guarantee will be required.

iii. Technical Criteria

Sr.	Component	Criteria
A	Strengthening Milk Procurement infrastructure	1) PI should have its own milk processing facilities or have a forward linkage with an existing milk processing facility. 2) PI should have the land/ premises for setting up DCS building and housing Bulk Milk Coolers free from any encumbrances. 3) Preference will be given to PIs that already have in place IT based reporting and monitoring systems. 4) PI should be capable in organizing producers' institutions, maintaining transparency in the processes of milk collection at village level, milk quality testing, timely payments to milk producers and grievance redressal system in place.
B	Milk Processing facilities and manufacturing facilities	1) PI should have required environmental/ statutory clearances for setting up of plants. 2) PI should have its own land/ long term lease, free from encumbrances, in case of setting up of new plant or expansion of existing plant. In case of lease, requisite No Objection Certificate from the concerned authority for mortgage to NDDB would have to be obtained.
C	Support for Marketing infrastructure	1) PI should have own milk processing facility and marketing network for sale of liquid milk & milk products.
D	Support for ICT Infrastructure	1) PI should have its own milk processing facilities or have a forward linkage with an existing milk processing facility. 2) PI should have competent manpower to manage ICT Infrastructure and applications.
E	Productivity Enhancement	Sub Component- E1: Calf Rearing Program, and E2: Nutritional Interventions for PE 1) PIs which will identify/recruit technical manpower exclusively for the project will be considered.

Sr.	Component	Criteria
		2) PIs must have their own plants for manufacturing and supply of cattle feed (pregnancy feed, calf starter & calf growth meal) and mineral mixture and fertility supplement or have an assured tie up for sourcing these products.
		3) Preference will be given to the PIs which have implemented animal nutrition activities (Ration Balancing Programme (RBP)/Fodder Development) under NDP I successfully.
		4) PIs which will create corpus from the beginning for sustainability of the activity, will be given preference.
		Sub Component – E3: Fodder Development
		1. <u>Fodder seed production and distribution/fodder conservation and green fodder enhancement and fodder technology demonstration</u>
		1) PIs should have a network of village level farmers organizations such as Village Dairy Cooperative Societies and Milk Producers' Institutions and Self Help Groups (SHGs) and have an experience in conducting demonstrations for technology transfer at field level.
		2) PIs should have capacity to formulate and implement a sound plan for demonstrations.
		3) Preference will be given to PIs that have prior experience in this area.
		2. <u>Crop residue management</u>
		1) PIs must have the capacity to formulate and implement a sound plan for crop residue enrichment and densification.
		2) Preference will be given to PIs that have prior experience in this area.
		3) PIs should have land (free of encumbrances) for setting up the units.
		4) Availability of surplus crop residues in the operational area of PI in large quantity from cereal /cash /fodder crops.
		5) PIs should have network of village level farmers organizations such as Village Dairy Cooperative Societies, Milk Producers' Institutions and SHGs for implementation work.

5-3. General Rule upon Application of Subproject

General rules upon application of project component are as below:

(1) Selection of components

Eligible PIs can choose among components from A to E separately as per their requirement. Component F: Project Management & Learning is a centralized activity which will be managed by NDDB. The component will be funded as 100% grant basis provided by Government of India, which shall be utilised for conducting trainings, overseas exposure visits and trainings, concurrent evaluation, impact studies, MIS development, regional review meetings, appointment of auditors for audit of accounts, taxes & duties for Project Management Consultancy, etc.

Component G: Training & Capacity Development has several modules and curriculums. The training programmes are linked with various activities of the components (from A to E). PI cannot apply only for Component G: Training & Capacity Development as a sub project.

(2) Linkage between each components and capacity development program

The PI availing assistance under a component (i.e. Component A to E) will be eligible to avail assistance for following training programmes under Component G as given below:

Table 5-3-1:   Linkage between Training Program and Component

Components →		A	B		C	D	E	F
			B1	B2				
Module Title in G: Training Program	ID	Milk Procurement Infra-structure	Processing Infrastructure		Marketing Infra-structure	ICT Infra-structure	Producti-vity Enhancement	Project Managem ent & Learning
			Milk processing facilities and manufacturing facilities for Value Added Products	Feed and Feed Supplements Manufacturing Infrastructure				
Streamlined core modules/programmes								
Business management								
Business management & strategic planning	BM-1-1	1	1	1	1	1	1	
	BM-1-2@PI	1	1	1	1			
	BM-1-3@PI	1	1	1	1			
	BM-1-R	1	1	1	1			
Marketing of Milk and Milk Product	BM-2-1	1	1	1	1	1	1	
	BM-2-2@PI		(**)		1(*)			
Food safety and Hygiene								
Clean milk production and Milk Quality Management at village level	FS-A1-1	1	1	1	1	1	1	
	FS-A1-2@PI	1						
	FS-A1-3@PI	1						
Dairy plant management and plant hygiene and sanitation	FS-B1-1 (#)	1	1	1	1	1	1	
	FS-B1-2 (#)	1	1	1	1	1	1	
	FS-B1-3 (#)	1	1	1	1	1	1	
	FS-B1-4@PI		1					
QC technique and practices for lab technician	FS-B2-1 (##)	1	1	1	1	1	1	
	FS-B2-2		1					
Reflection workshop for Food Safety	FS-R	1	1					
Individual training programme								
Farmers' induction program		1						
Awareness program on clean milk production		1						
Management Committee Members (MCM) Orientation programme for New DCS		1						
Board orientation program		1						
Business Appreciation Program for Existing Procurement & Input Staff		1						
Basic Training for new DCS Secretaries		1						
Refresher Training of DCS secretaries		1						
Operation & Maintenance of BMC/AMCU		1						
Retailers Awareness					1			

Components →		A	B		C	D	E	F
			B1	B2				
Module Title in G: Training Program	ID	Milk Procurement Infra-structure	Processing Infrastructure		Marketing Infra-structure	ICT Infra-structure	Producti-vity Enhancement	Project Managem ent & Learning
			Milk processing facilities and manufacturing facilities for Value Added Products	Feed and Feed Supplements Manufacturing Infrastructure				
Programme								
Training on Automatic Milk Collection Software at Union level						1		
Training on Automatic Milk Collection Software at DCS level						1		
Training of Animal Nutrition officer/ Animal Nutrition supervisors							1	
Training of Calf Rearing Supervisors on Calf Rearing Programme (CRP)							1	
Milch animal rearing for dairy farmers							1	
Training on Advances in Fodder Production, Conservation and its management practices							1	
Overseas/ National exposure visits/training								1 (overseas training under PMC)
Training programme on E&S aspects of the project								1
Training of Trainers on environment & social aspects								1

(#)　　PI to participate in FS-B1-1,-2,-3 should have its own dairy plant, not the one leased out. In some cases, the PI may be the processing milk in hired facility where their own manpower manages the plant operation. In that case those PIs may be allowed to take these trainings under the project.

(##)　PI to participate in FS-B2-1 should have QC Lab. PI not having QC lab may be having QC personnel posted at outsourced processing facility should be considered for this particular training programs as it has direct implications on food safety and quality aspects in dairy value chain.

(*)　　PI that conducts "Market Studies" under Component C will proceed to BM-2-2@PI and use the result of "Market Studies" to reflect it back to its own PI's business strategy.

(**)　　It is strongly recommended that PI that applies for Component B1 also apply for "Market Studies" under Component C and conduct "Market Studies"; thus proceed to BM2-2@PI.

Source: JICA Survey team

As shown in Table 5-3-1 above, a programme will be implemented in components which have "1" in the cell in the table above. Generally trainings of business management and food safety and hygiene are designed in all the components, indicating they are important in the whole value chain from production, procurement, processing, and marketing.

To have a typical image of how the components and the above training programme are related to each other, a model implementation schedule of a subproject which show all the components (from A to E), as well as the training programs of Component G for one PI is shown as below:

Year		2021			2022				2023				2024				2025			
Quarter		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Calendar Month		4 5 6	7 8 9	10 11 12	1 2 3	4 5 6	7 8 9	10 11 12	1 2 3	4 5 6	7 8 9	10 11 12	1 2 3	4 5 6	7 8 9	10 11 12	1 2 3	4 5 6	7 8 9	10 11 12
Months of subproject implementation after the sanction				1 2 3	4 5 6	7 8 9	10 11 12	13 14 15	16 17 18	19 20 21	22 23 24	25 26 27	28 29 30	31 32 33	34 35 36	37 38 39	40 41 42	43 44 45	46 47 48	49 50 51

Row	Description
Sensitization	Implementation
Appraisal and sanction	
Component A~E (infrastructure/activities)	
A. Strengthening Milk Procurement Infrastructure	DCS organisation, BMC Installation, Construction of DCS/BMC Building, Purcahse of tankers for milk transportation
B. Strengthening of Milk Processing Infrastructure	Priliminary activities, execution of civil work, delivery & installation of processing plant, refrigeration plant, steam generation plant and Effluent Treatment Plant, industrial electrical works, project completion & handing over
C. Strengthening of Marketing Infrastructure	Purchase & installation of walk-in cold store, identification of location & setting up of milk parlours, purchase of insulation material for marketing vans, Awareness programmes and maket studies
D. Support for ICT infrastructure	Hiring of agency for AMCS solution, Installtion of AMCS solution
E. Productivity Enhancement	Calf Rearing Programme, Animal Nutrition Advisory Services and Fodder Development Activities
Component G (Strealined core modules/programmes: Business management and food safety and hygiene)	
BM-1	Business Mangement and Strategic Planning
BM-2	Marketing of Milk & milk products
FS-A1	Clean milk production and milk quality management at village level
FS-B1	Dairy plant management and plant hygiene and sanitation
FS-B2	Quality control techniques and practices for lab technicians
Component G (Individual training programme)	
for Comp. A Program	Farmers' induction program
for Comp. A Program	Awareness program on clean milk production
for Comp. A Program	Management Committee Members (MCM) Orientation programme for New DCS
for Comp. A Program	Board orientation program
for Comp. A Program	Business Appreciation Program for Existing Procurement & Input Staff
for Comp. A Training	Basic Training for new DCS Secretaries
for Comp. A Training	Refresher Training of DCS secretaries
for Comp. A Training	Operation & Maintenance of BMC/AMCU/DPMCU
for Comp. C. Training, Capacity Building and Manpower Development	Retailers Awareness Programme
for Comp. D Training and capacity building	Training on Automatic Milk Collection Software at Union level
for Comp. D Training and capacity building	Training on Automatic Milk Collection Software at DCS level
for Comp. E Capacity Building / Training	Training of Animal Nutrition Officer/ Animal Nutrition Supervisors
for Comp. E Capacity Building / Training	Training of Calf Rearing Supervisors on Calf Rearing Programme
for Comp. E Capacity Building / Training	Milch animal rearing for dairy farmers
for Comp. E Capacity Building / Training	Training on Advances in Fodder Production, Conservation and its management practices

Remarks: Component F are not included, because it is a centralized activity, which will be managed by NDDB

Figure 5-3-1: A Model Subproject Implementation Schedule for One PI

(3) Funding pattern of components

The cost sharing pattern between NDDB and PI is as below:

Table 5-3-2:   Funding Pattern from NDDB to PIs

Sr.	Component		NDDB to PIs		State/PI contribution
			Loan	Grant	
A	Strengthening Milk Procurement infrastructure	SS milk collection accessories, all milk testing equipment at village level, DCS establishment	0	90	10
		Capital cost on BMC, AMCU/DPMCU, building for village level Producers' Institution, tankers for milk transportation	50	50	0
B	Milk Processing facilities and manufacturing facilities		90	0	10
C	Support for Marketing infrastructure		80	20	0
D	Support for ICT Infrastructure		80	20	0
E	Productivity Enhancement		0	90	10
G	Training and Capacity Development		0	100	0

The size of financial demand/physical target differs largely among cooperatives. Two categories according to sub-project size are set as below:

Category 1: Size of sub-project is less than Rs. 150 Crore
Category 2: Size of sub-project is more than Rs. 150 Crore

Considering the total project cost, in order to avoid situation where only a couple of cooperatives receive the majority portion of the fund from the Project, the number of sub-projects which require large investment should be limited. Thus, number of sub-project in Category 2 should be initially restricted up to four number, so that more number of cooperatives can have access to the fund. In case fund is still available after extending loans, the number of sub-projects in Category 2 will be reconsidered.

5-4.   Procedure of PIs selection and Implementation

5-4-1. Appraisal process:

(1) Procedure for submission of sub project plans

PI intending to avail assistance for any component/sub-component under the Project will have to prepare the sub project plan and submit it to NDDB and SLTMC. The proposals from Milk Producer Companies and Multistate Cooperatives will be routed directly through NDDB for consideration by the Project Sanctioning Committee (PSC), with intimation given to the concerned State Government/ SLTMC[3]. It is expected for PIs to prepare subproject plans as per the model SPP available in the NDDB's website. In case, a PI is not capable to prepare the subproject plan, on request, NDDB will assist the PI in preparation of sub-project plans.

(2) Screening the PIs based on the eligibility criteria

NDDB will examine whether the PI meets the required eligibility criteria of the Project. Sub-project Plans of those PIs which have fulfilled all required eligibility criteria will be considered for further processing.

(3) Sub-Project Plan Appraisal Procedures

At the State level, SLTMC will consolidate the funding requirement of each of the Participating Institutions in the state. The consolidated subproject plans screened by SLTMC will be forwarded to NDDB for appraisal along with commitment letters from State Government for offering guarantee for loan to PIs where adequate security(ies) of PI is not available and for providing grant assistance to meet the viability gap (if required). The proposals from Milk Producer Companies and Multistate Cooperatives will be routed directly

---

[3] As approved in the CPSC meeting held on 22.11.2022

through NDDB for consideration by the Project Sanctioning Committee (PSC), with intimation given to the concerned State Government/ SLTMC.

The sub-project plans of PIs that meet eligibility criteria will be appraised on technical and financial aspects. Environmental and social assessment according to both government regulation in India and JICA's Guideline for Environmental and Social Consideration (April 2010) shall be conducted at the time of appraisal to ensure that sub-projects should not have any adverse impacts (Screening format provided at Attachment 5-4-1). Steps to be followed for appraisal of the sub projects is given at Attachment 5-4-2. Based on the screening for the eligibility criteria and technical & financial assessment of the sub project plan, NDDB will prepare the appraisal report.

Once the subproject appraisal is completed, a 'Note for Approval' will be prepared with recommendations and will be submitted to PSC for approval.

PSC will sanction the sub-projects when the aforementioned procedures are completed. PSC meetings will be held periodically or as frequently as required. On approval of PSC, NDDB will request JICA to review sub project plans with reference to categorization of environmental and social consideration of loan, terms and conditions of loan, viability of the sub-projects, collateral securities and/or guarantee of the loan etc. Format to request JICA's review is given at Attachment 5-4-3.

It is expected that JICA will give a notice that JICA receives information of approved subproject plans within 15 days of submission of approved sub project plans by NDDB. Once JICA gives the notice, NDDB will issue sanction letters to PIs and complete the required documentation process for loan/grant.

(4) Closure of Acceptance of Subproject Plans

There are two conditions for closure of acceptance of subproject plans as given below:

· The entire funds allocated to the project are sanctioned to the PIs and there is no fund left to accept new sub project plans.

· Remaining project period is not adequate (short) to efficiently implement all components/activities proposed in the sub project plans.

NDDB will closely monitor the above and report to CPSC for decision to close acceptance of new sub project plans under the project.

(5) Project External Audit

The accounts of NDDB are audited by an independent firm of Chartered Accountants, duly qualified to act as Auditors of companies under Section 224 of the Companies Act, 1956 and the appointment of auditors and remuneration payable to them is approved by the Central Government in terms of section 28 of the NDDB Act. The statutory auditors of NDDB will also carry out audit of the project – "Dairying through Cooperatives" (project audit) on an annual basis resulting in an issuance of an audit opinion on the consolidated financial

performance and position of the project. The Project Auditor would also audit the project accounts of Participating Institutions (covering 60% - 70% PIs) as well as the project account in NDDB.

5-4-2. Implementation

Once sanction of the sub project plan is given by PSC and required documentation process is completed with NDDB, the PI can start implementation of the activities. Indicative list of the required documents to be executed between NDDB and PI is given below.

1. Duplicate copy of the sanction letter duly accepted by authorized signatories
2. Certified copy of the Resolution of Board of Directors authorizing acceptance of terms & conditions of the Sanction Letter and execution of documents.
3. Loan cum Grant Agreement

In case of PIs availing loan, following additional documents to be provided:

4. Demand Promissory Note
5. Letter of Continuity
6. Letter of Hypothecation
7. Undertaking to mortgage future assets
8. Memorandum of Entry – Deposit of Title Deeds
9. Undertaking
10. Declaration
11. Irrevocable General Power of Attorney
12. State Government Guarantee Deed, if applicable
13. Any other document as required by NDDB

Component wise project implementation manual has been prepared as provided in the Annexes. NDDB will report the progress of the project implementation periodically to CPSC for review. It may be noted that a logo as per the Attachment 5-4-4 shall be installed for all assets created under the Project to show that the asset has been created by receiving assistance under the JICA funded project for the dairy development.

The components are briefly summarized as below:

Component A: Strengthening of Milk Procurement Infrastructure

All the activities proposed under this component would be implemented by the PI and it will be the responsibility of the PI to ensure that the activities are implemented as per the approved sub-project plan.

Activities of the component are as given below:

i. Assistance to village level producers' institution

       a.   SS milk collection accessories, testing equipment, DCS board, furniture etc.

       b.   DCS building

       c.   AMCU (Automatic milk collection unit)/ DPMCU

       d.   Management grant to village level functionary

ii.   Support for BMC

       a.   Bulk Milk Coolers

       b.   Building for BMC

       c.   Tanker for milk transportation

Component B: Milk processing facilities and manufacturing facilities (milk & milk products and cattle feed)

All the activities proposed under this component would be implemented by the PI and it will be the responsibility of the PI to ensure that the activities are implemented as per the approved sub-project plan.

Activities in this component are as given below:

i.   Modernization & creation of new milk processing plants, drying plant and VAP

       a.   New plants

       b.   Modernization/expansion of existing plants

       c.   Manufacturing facility for Value Added Products

ii.   Feed & feed supplements manufacturing infrastructure

       a.   Cattle Feed Plants

       b.   By-pass Protein Plants

       c.   Mineral Mixture Plants

Component C: Support for Marketing Infrastructure

All the activities proposed under this component would be implemented by the PI and it will be the responsibility of the PI to ensure that the activities are implemented as per the approved sub-project plan. Activities in this component are as given below:

·   Installation of Walk-in-Cold stores

·   Insulation for Marketing Van

·   Setting up of Milk Parlours with Visi Coolers & Deep Freezers

·   Conducting Consumer Awareness Programme

·   Marketing Studies

·   Market Promotional Activities

Component D: Support for ICT Infrastructure

All the activities proposed under this component would be implemented by the PI and it will be the responsibility of the PI to ensure that the activities are implemented as per the approved sub-project plan.. Under this component Automatic Milk Collection System (AMCS) solutions will be provided to the PIs. AMCS is a software to streamline milk collection operations at village level and provide farmers and other stakeholders with the information on milk procurement transactions on real-time basis. It helps in bringing transparency in milk collection operations of the PI, improve process efficiency and provide real time information to dairy cooperatives. AMCS enables milk bill payment directly to farmers' bank accounts. Farmers will receive instant SMSs for every transaction and will have access to all past transactions with AMCS mobile application. PIs can avail financial assistance for following items under the project:

a)   Internet dongle and charges at DCS/MPI Level and Union/PC

b)   Software implementation support

c)   Annual Maintenance Contract (AMC) for AMCS

d)   Server hosting support

e)   SMS charges

Component E: Productivity Enhancement

There are three subcomponents as given below:

E1.   Calf Rearing Programme (CRP)

E2.   Animal Nutrition Advisory Services

E3.   Fodder Development

All the activities proposed under this component would be implemented by the PI and it will be the responsibility of the PI to ensure that the activities are implemented as per the approved sub-project plan. The main objective of these subcomponents are; E1: to create awareness amongst milk producers on scientific feeding and management of cow & buffalo calves at various stages of growth, including foetal stage; E2: to inculcate the practice of feeding of various feed supplements among farmers and generate awareness regarding their importance; and E3: to enhance the fodder availability for the livestock.

Component F: Project Management & Learning

This is a centralized activity which will be managed by NDDB. The component will be funded as 100% grant basis provided by Government of India, which shall be utilised for conducting trainings, overseas exposure

visits and trainings, concurrent evaluation, impact studies, MIS development, regional review meetings, appointment of auditors for audit of accounts, taxes & duties for Project Management Consultancy, etc.

<u>Component G: Training & Capacity Development</u>

Training & capacity development programmes envisaged under the project are explained in Part IV of this manual.

5-5. Procurement, Fund Management and Accounting

5-5-1. Procurement

Procurement of goods and services covered by Japanese ODA Loans should be implemented in accordance with "Guidelines for Procurement under Japanese ODA Loans", dated April 2012. And employment of consultants should be implemented in accordance with "Guidelines for Employment of Consultants under Japanese ODA Loans", dated April 2012, in case NDDB procures goods and services and employ consultant under the project These Guidelines will not be applied in the case of procurement of goods and services and consultant which are, by nature or scope, unlikely to attract foreign firms and, thus, to be domestically procured.

The PIs will follow the procurement (purchase) guideline (enclosed as annexure) for procurement of goods, works & services.

5-5-2. Fund management and Accounting

(1) Disbursement procedure by JICA

The following disbursement procedures are to be followed:

Table 5-5-1:   JICA's Disbursement Procedures

Payment Procedure	Condition	Explanation
Commitment Procedure	Payments are made in foreign currencies (payment to PMC could be a major one as of now)	After the letter of credit (L/C) is issued by L/C issuing bank in India and Letter of Commitment (L/COM) is issued by JICA, suppliers can receive the fund from JICA passing through only commercial banks (L/C issuing bank and supplier's bank).
Reimbursement Procedure	Payments are made in local currencies	After NDDB makes payment to suppliers, NDDB will request JICA through Controller of Aid Accounts & Audit (CAAA) to reimburse the fund. In this case, the funds transferred by JICA to the bank account of GoI will pass through the budget of DAHD to NDDB. DAHD will have to provide mobilization advance budget to NDDB for smooth activation of the project.

The above mentioned procedures, described in the brochures prepared by JICA shall be followed. Any expenditure to be made under the project shall be done after the effectuation of the loan agreement to get reimbursed. Retroactive claim is not allowed under the project. In addition, swapping of existing loans, which potential PIs have already committed and owed, with loan of this project will not be allowed.

1. Commitment Procedure

This procedure is applied only to payments made in foreign currencies. Unless NDDB directly pays for goods and services, this procedure is used for the payment of loan to PMC consultant i.e. Yen portion in the project as shown below:
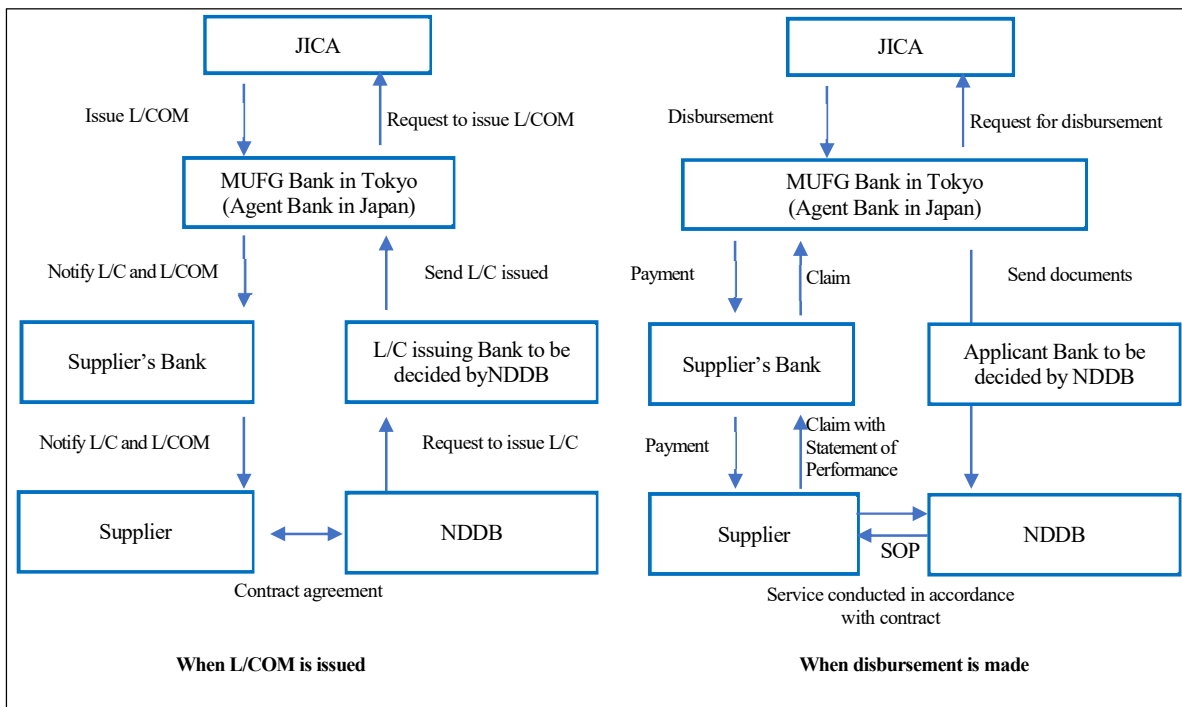

Figure 5-5-1: Image of Commitment Procedure

Letter of Credit (L/C) is a commercial letter issued by a commercial bank under which import of goods and services are arranged. Letter of Commitment (L/COM) is issued by JICA and makes transaction smooth to provide payment guarantee. For the effectuation of the Loan Agreement, Government of India shall select L/C Issuing Bank, and submit the notice concerning L/C Issuing Bank which is stipulated in the Commitment Procedures Brochure. In case the L/C Issuing Bank is not the same as the Paying Bank, the notice shall be together with the banking arrangement concluded among the concerned parties which is satisfactory to JICA.

Once all documentations are made in preparing L/C and L/COM, services are to be provided in accordance with contracts to be concluded with NDDB. Upon disbursement, Suppliers will receive Statement of Performance (SOP) from NDDB, and claim payment to supplier's bank, which will communicate with JICA through MUFG bank, Japan for disbursement and payment. Forms of L/C and SOP are shown in Attachment 5-5-1.

2. Reimbursement Procedure

This Procedure covers most of the expense of the Project. The image of the flow is depicted as below:
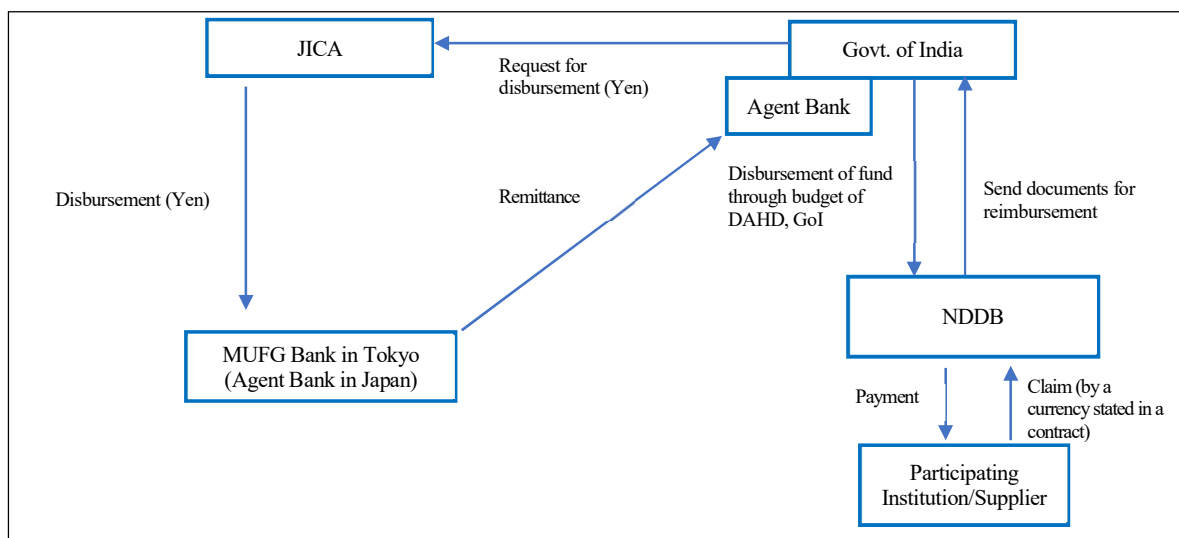
Figure 5-5-2: Image of Reimbursement Procedure

This Procedure is applicable in cases where expenditures, eligible for JICA's financing, have already been incurred. Government of India shall request JICA to make reimbursement for a sum not exceeding the amount actually paid to Participating Institutions/Suppliers by sending to JICA a Request for Reimbursement in accordance with the form as shown in Attachment 5-5-2. Each Request for Reimbursement shall be accompanied by the following documents:

(a) Summary Sheet of Payments made as shown in Attachment 5-5-2;

(b) Supporting documents of each payment and its usage, as stipulated in the Loan Agreement.

These documents shall be prepared by NDDB, and submitted to DAHD for further processing. Once all internal process is completed, DAHD will submit the request for disbursement via Ministry of Finance, GoI to JICA. Disbursement could be requested on quarterly basis in general and on ad hoc basis if required.

This procedure is applicable to most of the NDDB's expenditure, if NDDB directly procures goods and services. PI's expenditure, which is eligible for JICA Loan, is theoretically covered by loan/grant to PIs given by NDDB. Therefore, supporting evidence documents shall be loan cum grant agreements between NDDB

and PIs of approved subprojects, and Fund Utilization Report (FUR, explained later) to be submitted by PIs to NDDB for onward disbursement to PIs. General Administration Expenses, Taxes & duties, Purchase of land and other real property, Compensation and Other indirect items are not eligible for financing and will not be considered for reimbursement as loan.

3.   Statement of Expenditure

SOE (Statement of Expenditure) procedure can be applied to Reimbursement procedures to reduce administrative burden if there are many small transactions/expenditures incurred under the project. Normally to receive disbursement, necessary contract related evidences such as invoices, receipts etc. should be submitted, but under this procedure, simplified summary of expenditure called SOE can be substituted with many evidences and be submitted for disbursement. Standard format is attached in Attachment 5-5-3.

If this procedure is adopted, the records and accounts related to expenditures financed from Japanese ODA Loans shall be audited annually by an auditor appointed by NDDB in concurrence with PSC, and audit reports shall be submitted to JICA. Also, NDDB is obliged to keep all evidences of expenditures.

(2) Overall Fund flow under the Project

Government of India will receive the ODA loan from JICA in the designated account in Yen term. These funds along with share of GoI will pass through the budget of DAHD to the project operating accounts of NDDB as loan and grant in Rupee term, for onward disbursement to the PIs.

As mentioned in Minutes of Discussion, mobilization advance budget needs to be provided from DAHD to NDDB for smooth activation of the project.

The overall fund flow of the Project is indicated in the diagram below:
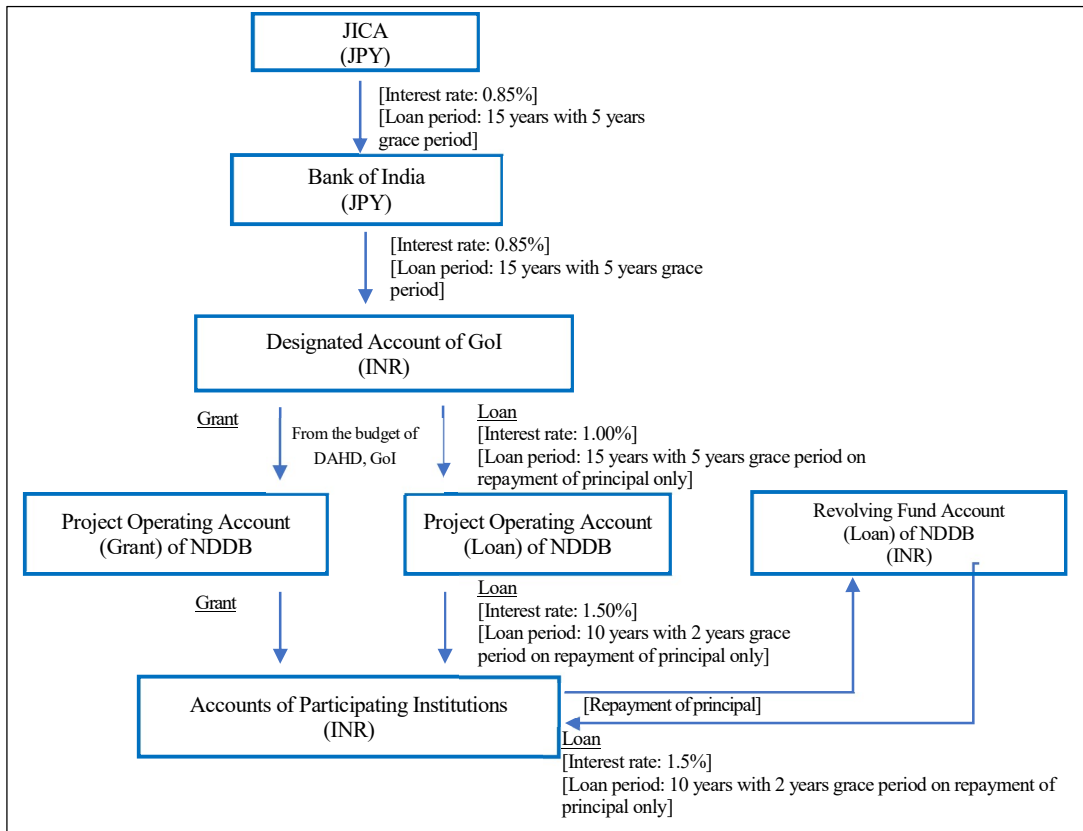
Figure 5-5-3: Overall Fund Flow under the Project

DAHD and NDDB will prepare the statements as per the format of statement of designated account and project operating account, and revolving fund account given in Attachment 5-5-4 and submit the same to JICA. From the subproject implementation point of view, NDDB will submit on-going sub-project summary report to JICA and DAHD as per the format given at Attachment 5-5-5. The format in Attachment 5-5-4 is submitted once in two quarters, and that in Attachment 5-5-5 is done quarterly, both attached to Project Status Report.

The following figure explains the fund source. At DAHD, the JICA loan and GoI budget come together and are sent to NDDB following two patterns of fund flows to PIs, namely loan and grant. Therefore, both loan and grant to PIs include both JICA loan and GoI budget as the fund source. The above formats enable to monitor the fund source from JICA Loan and GoI budget.
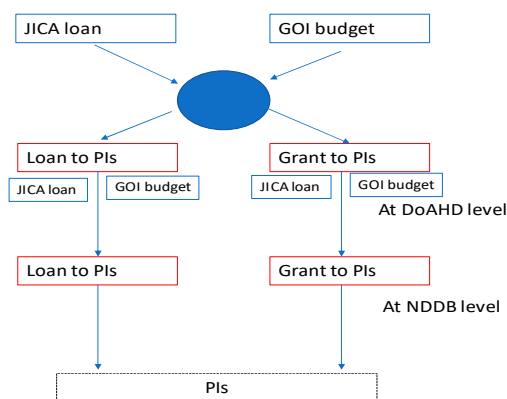
Source: Survey Team

Figure 5-5-4: Flow of Fund Source

(3) Fund management of NDDB

NDDB will be responsible for disbursement/repayment of the fund extended under the Project.

1. Project Operating Accounts

NDDB will maintain two separate project operating accounts, one for loan and the other for grant, including bank account under the Project. NDDB will disburse loan and grant as per the terms of the project. A sample format of account management is shown in Attachment 5-5-6, and NDDB shall maintain up-to-date information using this format.

2. Revolving Fund Account

NDDB will create Revolving Fund Account in order to extend loans to additional sub-projects under the same terms and conditions of the Project, by utilizing the fund generated from the gap between repayment period of Japanese ODA Loan and loans under the Project. Principal repaid from PIs will be managed in the Revolving Fund Account, and will be extended from NDDB to other PIs. NDDB will report the status of the Revolving Fund to JICA for three years from the completion of the disbursement of the Japanese ODA Loan. Physical target for such fund should be set based on the actual repayment of the 1st lending from PIs, therefore, physical target for the loan from Revolving Fund should be determined by the mid-term review. A sample format of account management is shown in Attachment 5-5-7, and NDDB shall maintain up-to-date information using this format.

3. Audit of Fund

NDDB shall appoint an external auditor for audit of the project operating accounts created for the project.

NDDB shall ensure that audit is done and report the result to JICA every year till the completion of the Project. The audit report shall be submitted to JICA within nine months from the end of the fiscal year. As Revolving Fund is created for subsequent disbursement, NDDB shall continue audit for three years after the completion of the Project.

(4) Fund Flow from NDDB to Participating Institutions

1. Release of funds to finance subprojects

Upon completion of the required documentation by the PIs with NDDB (to be mentioned in the Sanction Letter) and compliance of pre-disbursement terms & conditions, if there are for instances environmental clearance, and collateral arrangement etc., the PIs could avail funds sanctioned under the project. PIs will be required to open two separate Bank Accounts (one for loan and one for grant) for transactions related to the implementation of the Sub-Project. The name of the account will be "name of the Participating Institution – sub-project under the Project for the dairy development (loan/grant) ____" (this will also be specified in the Sanction Letter).

Loan and grant portion of the fund will be disbursed in the form of Reimbursement of expenditure or in the form of Imprest advance.

2. Reimbursement of expenditure

Participating Institutions will implement the sub-project from its own resources and submit audited quarterly Fund Utilization Report (FUR) of which a format is shown in Attachment 5-5-8 within 15 days of the completion of the quarter. On receipt of the FUR, NDDB will examine the claim and after proper vetting will disburse the funds. FUR shall include statement showing list of contracts/purchase orders awarded on a quarterly basis as per the format attached in Attachment 5-5-8. General Administration Expenses, Taxes & duties, Purchase of land and other real property, Compensation and Other indirect items are not eligible for financing and will not be considered for reimbursement as loan.

3. Imprest advance

In case of non-availability of adequate funds with the Participating Institutions to implement approved project activities, the Participating Institutions may avail imprest advance from NDDB which carries the same rate of interest as that applicable to the loan. The amount of imprest advance is limited to 75% of the loan amount and 100% of the grant amount during the 90 days period.

The Participating Institutions will have to utilize the advance amount and submit Fund Utilisation Certificate within 180 days from the release of imprest advance. Any unutilized amount after 180 days will

have to be refunded immediately, otherwise it will attract penalty charges of additional interest at 3% per annum. In case utilization is more than 90% it will not attract such penalty.

The advance and subsequent fund disbursements shall be deposited in the separate bank accounts opened for transactions relating to the sub-project. The PIs shall utilize the advance for activities approved under the Sub-Projects and submit Fund Utilisation Certificate within 180 days from the date of release of imprest advance. General Administration Expenses, Taxes & duties, Purchase of land and other real property, Compensation and Other indirect items are not eligible for financing and will not be considered for reimbursement as loan. The Fund Utilisation Certificate shall be audited by the Auditors appointed by NDDB under the scheme. The PIs will submit the FUC every quarter within 15 days after the completion of the quarter.

The interest earned (in the bank account for grant) on imprest advance released as grant will have to be paid back to Government of India through NDDB. Any amount remaining unutilized after 180 days will have to be refunded immediately, otherwise it will attract penalty charges of additional interest at 3% per annum. In case utilization is more than 90% it will not attract such penalty. In case, it is noticed that funds have been utilized for activities other than approved under the sub-projects, the PIs will be required to refund the diverted amount immediately with interest @ 12% p.a. on the diverted amount from the date of release. Format of Imprest Advance is provided at Attachment 5-5-9.

4. Management of PIs contribution

In the cases where contribution of PIs is required for any particular item (capital or revenue), the following should be followed:

In case of capital items, the PIs contribution shall also be deposited in the Sub-Project bank account & the entire payment due to the suppliers/ service providers be made from the sub-project bank account. To re-iterate, in both the cases, all payments to suppliers/ contractors, service providers shall be released from the sub-project bank account only. This is to maintain proper audit trail of assets and expenditures incurred under the Sub-Project and monitor contribution of the PIs, where required.

Such expenditure should be reported including both the PIs contribution and grant assistance (i.e. gross expenditure) and the advance will be adjusted/accounted for by NDDB as per the approved pattern of funding of the specific activity.

5. Other consideration

For some cases in the components such as Component B, Participating Institutions may make agreement with NDDB for providing consultancy services, under which NDDB works as a Pure Agent and NDDB prepares and makes agreement with suppliers and contractors on behalf of the Participating Institutions.

Under the agreement for this service between Participating Institutions and NDDB, fund is not transferred to Participating Institutions and payment is directly made by NDDB, while the disbursed amount to supplier/contractor is calculated as loan of the Participating Institutions.

5-6.　　Monitoring and Reporting

(1) Contents of the Project Monitoring Report

NDDB will be responsible of monitoring activities for the project. Necessary reports to be submitted and their contents could be as given below:

Table 5-6-1:　Reports to be submitted to JICA, prepared by NDDB

Report	Contents	Timing
Quarterly Progress Report (QPR)	The progress report for the Project should be submitted by NDDB to JICA in the form of Project Status Report (PSR).	Quarterly basis, not later than 30 days after the concerned quarter
Project Completion Report (PCR)	As above, and plus the following: -　Overall evaluation -　Lessons learnt and recommendation	Not later than six months after completion of the project
Others	As per the request of JICA specific reports will be prepared by NDDB.	Upon requirement

The format of Project Status Report (PSR) is set in the minutes of discussion signed at the time of appraisal mission, and the above reports basically follow the format and update information in the format. Quarterly Progress Report, and Project Completion Report shall be submitted to JICA and DAHD with updated forms of Project Status Report. Field information is expected to be updated through monitoring officers of NDDB in respective states, and PMC.

Especially Monitoring Indicators, which are set in the Minutes of Discussion, shall be designed to be monitored from the beginning of sub-projects right after the sanction because the information will be used to compare before and after the project implementation.

Table 5-6-2:　Monitoring Indicators for the Project

Category	Indicators	Timing
Mandatory (quantitative)	-　Quantity of milk processed in upgraded/new plants (thousand litre/day) -　Quantity of liquid milk marketed by PIs (thousand litre/day) -　Revenue of participating institutions from milk and dairy products (million Rupee) -　Additional producer members of dairy cooperative society -　Share of women producer members to total additional members to be enrolled (%)	Baseline and end-line survey Periodically such as quarterly basis (at least once in a year)

Category	Indicators	Timing
Mandatory (qualitative)	- Stabilization of farmers' income - Improvement of level of trust on dairy products in terms of food safety - Nutrition improvement due to increased consumption of milk and dairy products	Baseline and end-line survey
Additional	- Activity wise physical & financial progress of the approved sub project plans.	Periodically such as quarterly basis

The above information could be included in appraisal reports, or baseline surveys, because the baseline and target information of the indicators should be set before implementation. Through the monitoring activities, these can be updated as specified (or some are studied in end-line surveys).

With regards to any arrears of sub loan repayment, if occur, the record of such events shall be reported to JICA using a draft format shown in Attachment 5-5-10, once in two quarters attached to Project Status Report.

(2) Preparation of monitoring reports

The PIs in each target state will collect the information related to the monitoring parameters of the sub projects and provide the same to NDDB. NDDB will compile all the information from all the states and prepare the above reports with the assistance of PMC (Project Management Consultant).

Part III Sub Project

6. Assistance available for PIs

6-1. Pattern of Assistance

PI can avail assistance (loan/grant) under the components A, B, C, D and E. Assistance under Component G: Training & Capacity Development can only be availed if a PI has applied for any or all of the components among A to E. Pattern of assistance for various components are given in Table 5-3-2.

6-2. Eligibility Criteria

PI has to fulfill institutional/governance, financial and technical criteria as mentioned in Table 5-2-1 to avail assistance under the project

6-3. Organizations eligible to avail assistance

Eligible organizations are Milk Unions, Multi-State Milk Cooperative, State Milk Federations and Milk Producer Companies.

7. Major Terms and Conditions of Loan & Grant to PIs

7-1. Terms and conditions

Major terms and conditions of the loan and grant are as below:

- Loan under the project will be available to PI mainly for Component B: Processing Infrastructure. Component A (milk procurement infrastructure), Component C (marketing infrastructure), and Component D (ICT infrastructure) (refer to Table 5-3-2).
- Terms and Condition of the loan to participating institution (PI):
  - ➤ Interest rate: @ 1.5% per annum
  - ➤ Repayment: 10 years repayment period including two years moratorium period on the repayment of principal amount.
- Grant under the project will be available to PI for Component A (milk procurement infrastructure), Component C (marketing infrastructure), Component D (ICT infrastructure), and Component E (Productivity Enhancement) (refer to Table 5-3-2).
- Terms and conditions of the grant provided under the project:
  - ➤ Grant should be used only for intended purpose as specified in the sub project plan.
  - ➤ PI will have to maintain the asset created from the grant assistance for 10 years (minimum) after the project completion.

▷   PI will have to take consent of NDDB before disposing any assets created from grant received under the project.

7-2.   Collateral Security requirement

According to the financial eligibility criteria of the project, the loan should be secured through collateral security, which should be minimum 1.5 times of the loan amount in terms of mortgage of immovable assets and hypothecation of movable assets. Collateral can be generally existing land, building, machinery, and equipment. In addition, new plants, machinery, building and equipment which will be installed under the project will also be taken as collateral security. The types of collateral security   to be taken will be decided during the appraisal process considering the condition of the PI.

7-3.   Suspension, termination, and default

During appraisal of the sub project, NDDB will assess the capacity of PI to repay the loan and limit loan amount within repayment capacity of PIs. However, NDDB may suspend/terminate the right of PIs to avail/withdraw from the loan/grant proceeds or otherwise cause the immediate cancellation of the unavailed fund upon default or violation of the loan agreement executed between PI and NDDB.

8. Operating Procedures

8-1.   Application Procedure

(1) Application Procedure

Process of the application procedure is shown in Chapter 5.

(2) Important points to be considered

PI will prepare the sub project plan as per the model SPP available in NDDB's website. Out of all the eligibility criteria mentioned in Section 6-2, the most important indicators to assess eligibility to provide loan to PI is in the third criteria i.e. ROI to be 10% and DSCR to be 1.5 times the loan amount. Definition of ROI and DSCR are shown as below:

- ROI = [Projected (Net Profit after depreciation and taxes + interest payment)]/ Total Investment
- DSCR = [Sum of projected (Profit after tax + Depreciation + Interest) over the repayment period] / Total repayment (i. e. , Principal + Interest)

Profit is to be calculated capturing results of all business operation of a PI. And, investment does not include grant portion. To come up with the subproject ROI, annual ROI is calculated for 10 years of repayment period, and average of them is taken. For this, cumulative investment per year including existing

net assets is used as denominator per each year. It should be noted that 10% sensitivity in respect of both sales and procurement will be considered for the two indicators in appraisal process.

To estimate net profit after tax for ten years of repayment period is very critical for sustainability, which must be based on practical and sound business plans, not just estimating the past business trend. Therefore, it is necessary that PI should provide the necessary information on the following items in the sub project plans:

- Capacity utilization rates of BMC, chilling centers, and plants (last 5 years)
- Annual milk procurement quantity (Last 5 years, in Lakh Kg per Day)
- Annual Sales Turnover (Last 5 years, in Rs. Lakh)
- Total price paid to members (as purchase of raw milk, bonus, price difference, and other benefits)
- Annual operating profit (Last 5 years, in Rs. Lakh)
- Net profit (Last 5 years, in Rs. Lakh)
- Administration cost as percentage of total cost
- Annual sales turnover (in Rs. Lakh) for each product (Last 3 years' trend).
- Market share of liquid milk of the institution in their jurisdiction including loose milk (Last 3 years' trend)
- Main competitors in the market. Market share of the main competitors.
- Value of sales made outside the state (revenue and quantity)
- If there are major institutional buyers, values of sales to these buyers (last 3 years) (quantity)
- Value of sales made through their own parlours or shops
- Strategies based on 4P (product, price, place and promotion), 3C (company, competitor, and consumer), SWOT (strengths, weakness, opportunities, and threats) and Cross SWOT analysis.
- Business Plan (with solid reason and explanation for each targeted indicator with future prediction)

The above aspects will be considered during appraisal of the sub project plan along with assessment of sub project viability by NDDB.

(3) Appraisal of the sub project plan

NDDB will appraise the sub project plan submitted by the PI and put up to PSC for its approval and sanction.

(4) Loan/grant agreement

After NDDB conveys its sanction to the sub project plan, the PI will execute loan/grant agreement with NDDB. Necessary conditions are stated in this agreement. A sample format of loan/grant agreement is available in the NDDB website.

8-2.   Disbursement and Repayment

(1) Disbursement of loan/grant

Once sanction is given, necessary documentation will be completed as per the list shown in Section 5.4. After that, the implementation of subproject and disbursement from NDDB will begin. As mentioned in Section 5.5, there are two disbursement methods of Reimbursement and Imprest Advance. PIs will receive the fund by either method and submit FUR to NDDB, of which format is shown in Attachment 5-5-8 and -9.

(2) Repayment of loan

Ten-year repayment period starts from the time of the first disbursement. After two-year moratorium period, repayment of principal commences while the interest payment will begin form the next month of release of first instalment. Repayment of principal and interest is to be made on monthly basis.

8-3.   Timeframe

Disbursement of loan and grant proceeds will be within 5 years after sanction of the sub project plan. PI will have to prepare the sub project plans accordingly.

8-4.   Procurement, Fund Management, and Accounting

(1) Procurement

Procurement of goods, works & services (including consultancy & non-consultancy services) using JICA's loan by PI should follow the procurement (purchase) guidelines for the Project (refer to Annexures). The PIs should also submit the statement showing list of contracts/ purchase orders awarded on a quarterly basis to NDDB along with FUR, as per format shown in Attachment 5-5-8.

(2) Fund management and accounting

As shown in Section 5.5, PIs should open two separate Bank Accounts (one for loan and one for grant) for transactions relating to the implementation of the Sub-Project. PIs should keep separate accounting records to distinguish 1) receipt and expenditures of loan received from NDDB, 2) receipt and expenditures of grant received from NDDB, 3) expenditures of PI contribution, and 4) interest accrued from the receipts (if any). When repayment starts, PIs should keep records of monthly repayment of principal and interest payment properly until all due is settled.

(3) Audit

The Fund Utilisation Certificate shall be audited by the Auditors appointed by NDDB under the scheme who will also examine the books of accounts, records of all the transactions under the Sub-Project and any other supporting documents. PI should submit audited utilisation certificate to NDDB after countersignature of the Administrative Secretary of concerned Department of State Government. Milk Producer Companies and Multistate Cooperatives are required to directly submit the audited Fund Utilisation Certificate to NDDB, without countersignature of the State Government. NDDB shall propose release of fund based on the utilisation and also new proposal. In case of a new proposal, the progress of ongoing proposals in the state also needs to be submitted.

The Board of Directors/ Sub Project Management Committee shall also review the audit observations and give necessary directions for compliance. Any adverse audit comments/ observations need to be complied immediately. A quarterly statement of observations pending compliance for more than six months shall be sent to NDDB with a copy endorsed to DAHD.

The Statutory Audit and finalization of annual accounts of the PIs should be completed and submitted to the NDDB within nine months of the close of the financial year.

8-5.   Monitoring and Reporting

PIs will   submit   following information on quarterly basis to NDDB with a copy endorsed to DAHD (at the end of March, June, September and December):

- Project-wise and component-wise progress report indicating total outlay, loan & grant assistance, PI contribution, fund released (loan & grant) to PIs, fund utilized by PI, unspent balance etc.
- Physical progress vis-à-vis key parameters vis-à-vis approved physical parameters. Status of tender/installation of dairy plant/BMC/cold storages/laboratory equipment etc.
- Utilisation Certificate audited by the Auditors appointed by NDDB under the scheme and also countersigned by Administrative Secretary of concerned Department of State Government) to NDDB. Milk Producer Companies and Multistate Cooperatives are required to directly submit the adutied Fund Utilisation Certificate to NDDB, without countersignature of the State Government. NDDB shall propose release of fund based on the utilisation and also new proposal. In case of a new proposal, the progress of ongoing proposals in the state also needs to be submitted.
- Audited report of expenditure vis-à-vis approved components/sub-components/items etc.
- SC/ST/Women population covered under the project.
- Support the NDDB in baseline and end term project survey and studies.
- Monitor the physical and financial progress of the sub projects and document success stories.

Part IV   CAPACITY DEVELOMENT COMPONENT

9. Overview and Contents

9-1.   Philosophy and Concepts in the Project

9-1-1. Overall principle

The Capacity Development (CD) component will introduce the following concepts to PIs and facilitate PIs to be able to drive their business based on them:

1)   market-oriented and quality conscious business strategy
2)   comprehension of their business and hygiene from an entire value chain point of view
3)   alignment with business strategy and human resource development plan

Most of the bottleneck of the POIs lies on the decline or stagnation in sales caused by a higher competition in the market.

Generally, POIs give more attention to their milk procurement operations. Therefore, the capacity development measures have also been focused more on milk production and procurement rather than processing and marketing. In recent years the dairy market in the country has become highly competitive and the demand for safe & quality food is increasing, especially in the urban areas. Thus, it is critical for POIs to have a market-oriented and quality conscious business strategy. In addition, PIs should also be able to determine their future strategies by comprehending their business from an entire value chain point of view. Accordingly, the human resource development should be planned and carried out with an aim to achieve the market-oriented and quality conscious business strategy.

#### 9-1-2. Principle towards methodology of the CD component

CD component does not mean just carrying out trainings like one-time event but rather providing a support to trainees' and ultimately PIs' changing PROCESS.   Trainings, one of the forms of CD component, target to support trainees' changing "process", would help them in applying their learnings at their workplace.

Having this aim in mind, "practical" and "field oriented" approach is applied while designing the training programmes. Therefore, the proposed trainings will:

1)   be practical, on-site, and action plan based;
2)   be monitored and followed up periodically;
3)   facilitate cross-learning and sharing; and
4)   include reward and recognition mechanism.

It is essential that facilitation mechanism will enable trainees to apply what they have learned through the trainings at their workplace. Thus, trainings will provide the trainees with the opportunity not only to learn concept and theory but also practice & develop the action plan to be implemented in their organization. The implementation process of the action plan will be monitored and followed up periodically through on-site review & guidance and would involve not only participants of the trainings but also other employees of the PI including the top management. Trainings will also promote the cross learning among the participants of various PIs and contribute to evaluation and revitalization of their own PIs. Participants might also find some hints to overcome challenges that they have been facing at their own PIs from other PIs' experiences. The reward and recognition mechanisms may also be introduced to motivate trainees to implement their learnings from trainings at their workplace.

Keeping in view of the learners' learning retention rate shown in Figure 9-1-1, at the detail design stage of the trainings, training method of instruction, in other words, delivery method, should be carefully selected. Methods that would bring out participants' active participation as well as their collaboration, such as discussion, practice by doing, teaching others, are encouraged to be applied while delivering trainings.
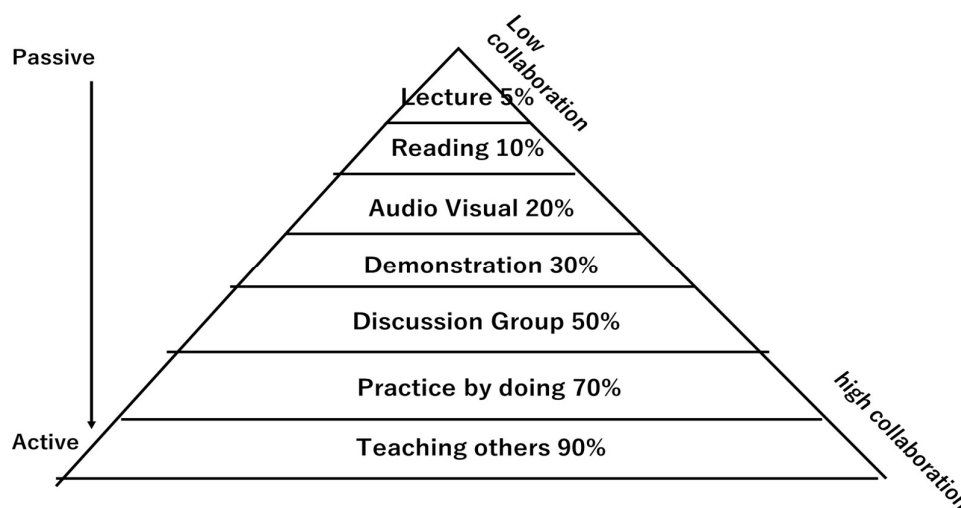
Source: National Training Laboratories Institute for Applied Behavioral Science

Figure 9-1-1: Learning retention rate

9-2.   Curriculum and Content Outlines of Capacity Development (CD)

9-2-1. CD activities in India

After examining the proposed curriculum & content outlines of training programmes proposed under the project, the following training programmes are identified to be carried out under the Component G:

Training & Capacity Building as a CD component of the Project. The curriculum indicating the overview and flow of the proposed CD programmes are shown in Figure 9-2-1. Regarding JICA proposed programmes, the word "module" indicates one package training consisting of several sequential "programmes". One module basically follows the following flow. After concept and theory learning programme is provided at a training center, action plan development and its review and guidance programme are held at PI site where NDDB and/or external resource persons will visit and provide advice to develop and implement the action plan. At the end of the module, the reflection workshop will be held together with other PIs. On-site review and guidance programme, and reflection workshop is supposed to provide follow-up functions of trainings.
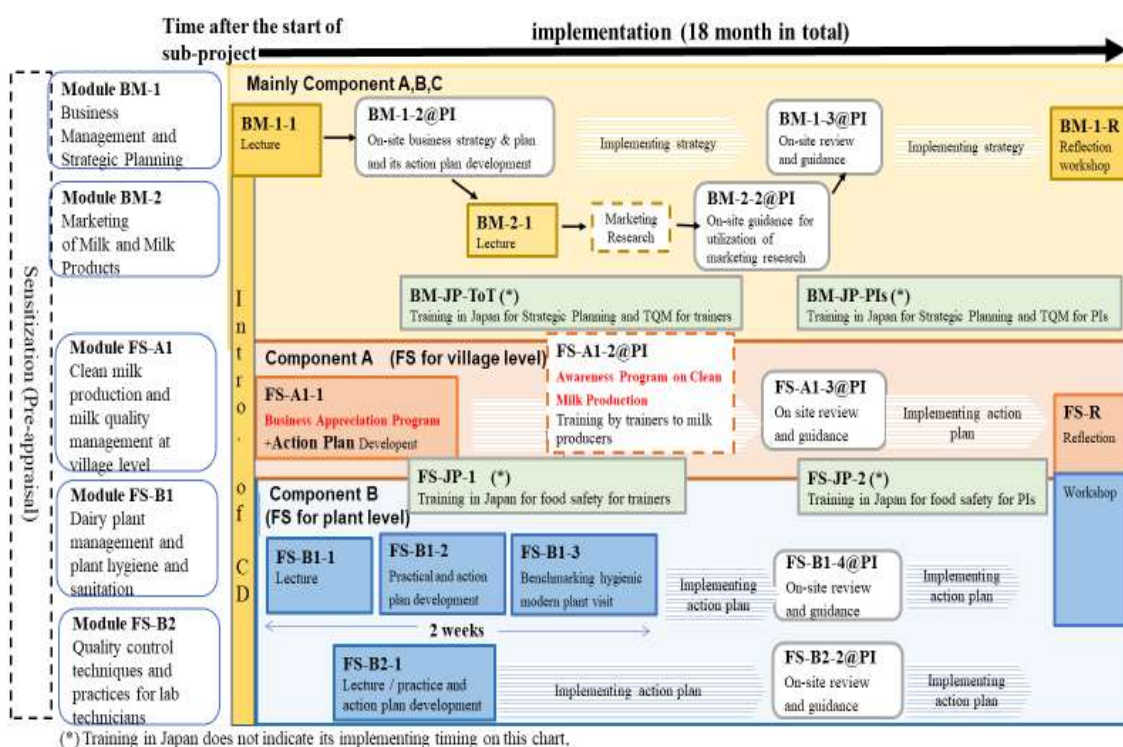
Figure 9-2-1: Overview and flow of CD modules / programmes

Most of the POIs have focused their efforts on strengthening of their milk procurement operations based on the conventional concept of product-out management. As the milk procurement volume increases, and competition in consumer market increases, the importance to incorporate marketing strategy and brand management as the cooperative's overall management strategy becomes crucial. Corresponding to the changes of business environment surrounding the POIs, business management CD modules incorporating the concept of market-in based business management will be provided under the project as given below

- Module BM-1(Business Management and Strategic Planning)

    The goal of this module is to enable PIs to develop/implement/revise their own business strategy & plan aiming to transform PI's business processes into more market- and quality-oriented.

- Module BM-2 (Marketing of Milk and Milk Products)

    The overall goal of BM-2 coupled with BM-1 is to promote supply of milk and milk products in the competitive market and increase the revenue of PI, and ultimately that of milk producers.

    During NDPI implementation, NDDB has developed and implemented various training & capacity development programmes. However, from food safety point of view, observing the current situation of dairy plants of POIs there is a need to provide the customized CD modules according to each PI's situations. Therefore, the following proposed modules have the **Action Plan** development to improve PI's situation from a food safety point of view and on-site review & guidance to provide PIs with necessary technical guidance/advice/recommendation to implement their developed action plan at their own PIs.

- Module FS-A1 (Clean Milk Production and Milk Quality Management at Village Level)

    The goal of this module is to enable PIs to improve quality control practices on the procurement of raw milk during the process of milk production & milking at village level and transportation from DCS/MPI to dairy plant.

- Module FS-B1 (Dairy Plant Management and Plant Hygiene and Sanitation)

    The goal of this module is to improve PI's dairy plant operation and management particularly from a hygiene and sanitation point of view.

- Module FS-B2 (Quality control techniques and practices for lab technicians)

    The goal of this module is to enable the PIs to improve milk quality control & assurance through the lab related affairs.

    The summary of streamlined core modules / programmes is presented in Table 9-2-1 and that of other individual training programme is in Table 9-2-2. Attachment 9-2-1 describes more detailed content outlines of core modules / programmes and Attachment 9-2-2 explains points needed to be considered at the detail design and implementation stage of them. The content outlines of other individual training programmes are also shown in Attachment 9-2-3.

    NDDB will have power to change the schedules/contents of the training programmes as well as add/delete the training programmes. Accordingly, the same will be informed to PIs by NDDB.

Table 9-2-1: Summary of streamlined core modules / programmes

Module ID & Title	Programme ID	Programme Title	Programme Objectives	Main Target participants	Potential resources to develop and deliver the programmes
BM-1 Business Management and Strategic Planning	-1	Concept & theory learning	This session has two functions. One is to brief the top management of PIs about the capacity development (CD) modules that the employees of PIs are going to participate in and get their supports for the subsequent CD activities. The other is to let the participants comprehend the key concept of the strategic management and marketing, which are the contents of the first session of the Business Management Strategic Planning module (BM-1).	・ Managing Directors/Administrative Heads of PI ・ Section Heads of PI	・ NDDB's internal resources ・ External resources in the field of: Strategic Management; Marketing; Quality Control and TQM, if required.
	-2@PI	On-site business strategy & plan and its action plan development	To guide the participants to develop: 1) the business strategy & plan of their own PI; and 2) the action plans to implement the developed business strategy & plan.	・ Chairman / Vice-chairman of the Board of Members ・ Managing Directors /Administrative Heads of PI	
	-3@PI	On-site review and guidance	To: 1) review the progress and achievement of the business strategy & plan, and action plans, and provide necessary technical guidance/advice/recommendation; and 2) guide the participants to identify the issues and points for further improvement and find out how to tackle them.	・ Section Heads of PI ・ Other key decision makers	・ NDDB's internal resources ・ External resources in the field of Strategic Management, if required.
	-R	Reflection workshop	To 1) guide the participants to reflect lessons learned through the implementation of the business strategy & plan and its action plans, learn from other PIs' experiences; and 2) also recognize PIs that have achieved significant improvement.	・ Managing Directors/Administrative Heads of PI ・ Section Heads of PI	
BM-2 Marketing of Milk and Milk Products	-1	Concept & theory learning	To 1) enable PIs to design the marketing research and outsource it to the marketing consultants; and 2) reflect its results into the action plans in accordance with the road map and marketing strategy of PIs.	・ Manager(s) of Marketing Department ・ Manager(s) of Marketing Department of the	・ NDDB's internal resources ・ External resources in the field of Marketing, if required.
	-2@PI	On-site	To 1) let the marketing officers of the PI comprehend how to		・ NDDB's internal

		guidance for utilization of marketing research	interpret and utilize the results of the marketing research conducted by the consultants outsourced by the PI into the action plans, in accordance with their own PI's road map and marketing strategy.	· Federation · Any other staffs of marketing department including administrative staffs, field supervisors, and field staffs.	resources · External resources in the field of Marketing, if required. Marketing consultant who conducted the marketing studies outsourced by the PI under component C.
FS-A1 Clean milk production (CMP) and milk quality managem ent at village level	-1	Business Appreciation Program + Action Plan development	This is based on the existing training "Business Appreciation Program" and Action Plan development is mainly added. To 1) enable the participants being able to train the milk producers at village level and 2) guide them to develop the action plans of their own PI to improve clean milk production and milk quality management at village level.	· Section head (Procurement and Inputs) · Working level officers especially for milk procurement · Supervisors and staff for milk procurement · Preference will be given to female employees	· NDDB's internal resources · External resources, if required.
	-2@village	Training by trainers to milk producers	Use the existing "Awareness Program on Clean Milk Production" See Table 9-2-2 Summary of NDDB planned programmes.	· Milk producers · Workers at DCS	· Working level officers of PIs in charge of milk procurement · Supervisors and staff for milk procurement
	-3@PI	On-site review and guidance	To guide the participants to identify the points needed to improve the training mechanism to train milk producers and workers of DCS on clean milk production and milk quality management	· Section head (Procurement and Inputs) · Working level officers especially for milk procurement · Supervisors and staff for milk procurement · Preference will be	· NDDB's technical officers · External resources, if required.

				given to female employees	
FS-B1 Dairy plant management and plant hygiene and sanitation	-1	Concept & theory learning	To let the participants comprehend the key concept of food safety and thereby be aware of the benchmark standards for plant environments, production facilities, operational aspects and quality control to carry out the necessary improvements at the production level of their own PIs.	· Plant Manager · Section Head (QA, Production, etc) · Working level officers / technicians / plant operators (control room operator, QA officer, etc)	· NDDB's internal resources · External resources in the field concerning plant hygiene and sanitation, if required.
	-2	Practical and action plan development	To: 1) familiarize the participants on maintaining and utilizing the actual milk processing machines at the dairy plant; and 2) guide the participants to develop the action plans to improve the current situation of their own PI's plant mainly from a hygiene and sanitation point of view.		
	-3	Benchmarking hygienic modern plant visit	To let the participants comprehend the quality benchmarks for the operation of dairy plants through the observation of the benchmarking hygienic modern plant and recognize the future improvement points for the plant of their own PI.		
	-4@PI	On-site review and guidance	To: 1) review the progress of the implementation of the action plans and provide necessary technical guidance/advice/recommendation; and 2) guide the participants to apply knowledge and skills acquired through the previous session FS-B-1,2, and 3 to improve the current situations of their own PI.		
FS-B2 Quality control techniques and practices for lab technicians	-1	Concept & theory learning / practice and action plan development	To enable the participants to enhance their knowledge and skills on milk quality control & assurance and develop the action plan to improve it of their own PI.	· QA section head · Working level officers / staff especially for lab	· NDDB's internal resources · External resources in the field concerning milk quality control and assurance, if required.
	-2@PI	On-site review and guidance	To: 1) review the progress of the implementation of the action plans and provide necessary technical guidance/advice/recommendation; and 2) guide the participants to improve their technique, practice, procedures and other activities to improve accuracy and as a result to assure the quality of the products of their own PI.		
FS-R	-R	Reflection workshop for	To 1) guide the participants to reflect lessons learned through the implementation of the action plans and learn from other	·	· NDDB's internal resources

		Food Safety	PIs' experiences; and 2) also recognize PIs that have achieved significant improvement.		· External resources in the field concerning Food Safety, if required.

Table 9-2-2: Summary of individual training programmes

Component of the Project	Program Title	Learning Objectives Participants will be able to:	Main Target participants	Main resources to develop and deliver the programmes	Content Outline ID
A	Farmers' induction program	· Appreciate the need for fair and transparent milk procurement operations, trained DCS staff and proactive management committee members. · Value member involvement and participation of women members at the DCS level for efficient operations. · Describe proper breeding, feeding, health care and management of animals to enhance milk production. · Adopt clean milk production practices at farm and DCS level.	· Milk Producer members of dairy cooperatives/ Producer Companies	· NDDB's internal resources · PI, if desires, can outsource agency or use its own training facility for the training	1
A	Awareness program on clean milk production	· Practice clean milk production techniques in their milk production and handling activities. · Pour good quality milk to producer institutions.	· Milk Producer members of dairy cooperatives/ Producer Companies	· Milk union trainers / officers	2
A	Management Committee Members (MCM) Orientation programme for New DCS	· Understand Financial and Accounting system of DCS · Understand DCS management system · Prepare Business Plan · Have a clear understanding of their roles and responsibilities · Have an awareness on provisions of Cooperative Bye-Laws	· Elected Management Committee members of DCS	· Milk union trainers / officers	3
A	Board orientation program	· Develop a clear understanding of roles & responsibilities of a Board of Director; role clarity between Policy make and executive	· Elected Board of Directors of Milk Unions /Producer	· NDDB's internal resources · PI, if desires, can	4

45

		· Identify strengths and weakness of their milk union business · Demonstrate systemic approach in solving problems and taking decisions based on policy formulation · Show more concern & meaningful participation during the discussions in board meetings for the growth of milk union.	Companies	outsource agency or use its own training facility for the training	
A	Business Appreciation Program for Existing Procurement & Input. Staff	· Work as effective and efficient facilitators · Achieve the desired key targets related to milk procurement and institutional development and facilitate member participation · Exhibit a high professional commitment and initiative for development of cooperative milk business	· Milk Union Producer Company Personnel involved in Milk Procurement and institutional Building activities	· ditto	5
A	Basic Training for new DCS Secretaries	· Carry out day to day business of the DCS in an efficient and effective manner to ensure functioning of the society as viable business unit · Understand the factors for DCS profitability · Ensure member participation in milk pouring and utilizing inputs activity · Address member grievances	· Secretaries of newly organized DCS/MPI	· ditto	6
A	Refresher Training of DCS secretaries	· Carry out day to day function of the society in an efficient and effective manner to ensure functioning of the society as viable business unit	· DCS/MPI Secretaries of older DCSs/MPIs (those who have already undergone DCS Secretary Basic Training)	· ditto	7
A	Operation & Maintenance of	· Efficiently utilize the assets BMC, AMCU, DG Sets etc. · Smoothly operate the Bulk Milk Cooler and AMCU.	· BMC operators/ Chilling Centre	· ditto	8

	BMC/AMCU		In charge		
C	Retailers Awareness Programme	· Understanding retailer's area of operation and reach · Understanding the demography of the surrounding locality and demographic based services required · Estimating milk and milk products demand of the surrounding locality · Understanding competitor's activity and volume, retailer's share in milk and milk products business in his /her area of operation.	· Retailers associated with Dairy Milk Union /State Milk Federation/ Producer Company	· Marketing Officers and Executives of Milk Unions / State Milk Federations / Producer Companies	9
D	Training on Automatic Milk Collection Software at Union level	· Operate the AMCS efficiently · Train the Village level functionaries on the software · Generate report, analyze and use it for decision making	· Milk Union/ Producer Company officials engaged in milk procurement activities and Management Information System	· External faculty	10
D	Training on Automatic Milk Collection Software at DCS level	· Operate the AMCS efficiently · Generate data and provide relevant information to the milk union · Provide information to Management Committee Members for business decision	· DCS/MPI secretary	· Milk Union / Producer Company official along the External faculty	11
E	Training of Animal Nutrition officer/ Animal Nutrition supervisors	· To orient the participants on Animal Nutrition - to acquire knowledge of scientific animal feeding & management at different stages for improving productivity and reproduction efficiency.	· Animal Nutrition Officers and Supervisors	· NDDB's internal resources	12
E	Training of Calf Rearing Supervisors on Calf Rearing Programme (CRP)	· To orient the participants on implementation of CRP and to acquire basic knowledge of feeding and management of dairy animals and calves.	· Calf Rearing Programme Supervisors	· ditto	13
E	Milch animal rearing for dairy farmers	· Adequate operational knowledge and understanding to for scientific animal management · Required skills through hands on training and perform	· Progressive Milk Producers	· NDDB's internal resources · External faculty	14

		the required operations within the specified standards		from Agriculture University, Financial Institutions	
		· Ability to make operational decisions pertaining to the dairy farming.			
E	Training on Advances in Fodder Production, Conservation and its management practices	· Providing advance knowledge and practical training on green fodder cultivation and conservation in villages. · Implementation of DCS based low cost commercial silage making and extension activities. · Introduction machinery and crop residue management · Skill development of trainee in extension activities and carry out village level development programmes · Data collection from farmers and handling and reporting · Procurement and maintenance of farm machineries	· Fodder development officer and his / her supporting field officers/staff	· NDDB's internal resources · External faculty from Agriculture University	15

9-2-2. CD activities in Japan

Under this, the trainings are planned to be conducted in Japan, three times each for Business Management and Food Safety area respectively. Linkage between BM trainings in Japan and the streamlined core BM programmes, and linkage between FS trainings in Japan and the streamlined core FS programmes are shown in Figure 9-2-2 and Figure 9-2-3 respectively.

The first batch of trainings in Japan, such as BM-JP-ToT for Business Management and FS-JP-ToT for Food Safety has the objective to train the trainers. Those who are or will be trainers mainly for BM-1 and/or BM-2 will join BM-JP-ToT, and those for FS-A1, FS-B1 and/or FS-B2 will join FS-JP-ToT respectively. After finishing the trainings in Japan, the participants should update the contents of CD programmes by utilizing knowledge, skills, and even attitudes that they have learned in Japan and actually deliver CD programmes for PIs.

The second and third batch of trainings in Japan are mainly for those PIs that have shown high performance and / or have improved their operational procedures well as the results of the CD processes throughout BM and /or FS modules.　Monitoring indicators suggested in the following section 11-3 **Monitoring and Reporting** (2) PI, could be referred as some examples of criteria to select the PIs that send the participants to trainings in Japan.　In addition, the final programme of series of CD programmes, such as a reflection workshop (BM-1-R or FS-R), could also be an opportunity to recognize each PI's achievement during the entire 18 month CD processes, which might be utilized as one of the references to select PIs to send trainees in Japan.　In this regard, trainings in Japan might work as some incentives for participants from PIs to implement their learnings from trainings at their own workplace.　It is recommended to have multiple number of participants from one PI attend the trainings in Japan in order to get as close as possible to the critical mass number of employees to actually facilitate the changes for the improvement by applying learnings in Japan rather than to scatter the participants to many PIs and only one employee from one PI attend.
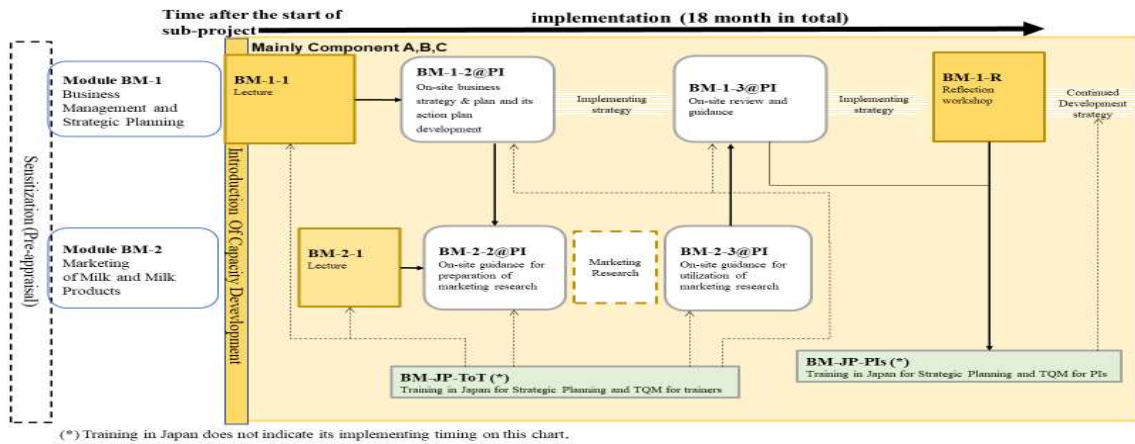
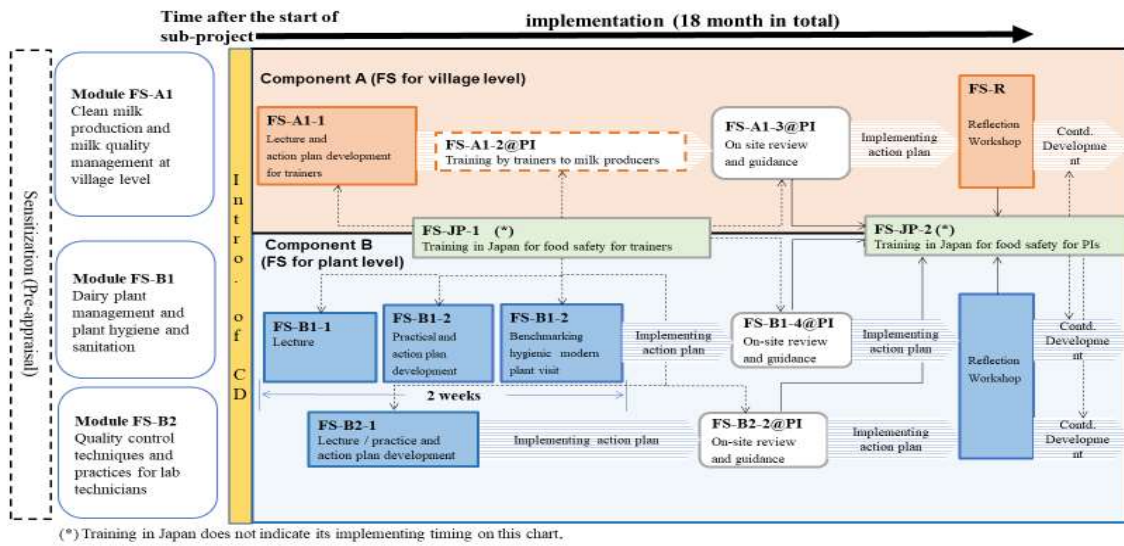**Figure 9-2-2: Linkage between BM training in Japan and BM programmes**

Figure 9-2-3: Linkage between FS training in Japan and FS programmes

The summary of trainings to be held in Japan are presented in Table 9-2-3 and the attachment 9-2-4 describes more detailed content outlines of them. Due to quarantine restrictions for foot-and-mouth disease prevention in Japan, visitors from a foot-and-mouth disease contaminated country are required to keep away from livestock and livestock related facilities for certain period, for example at least two weeks, after their arrival in Japan. Thus, training in Japan for Food Safety is planned to last about two and a half weeks and visiting dairy farms is placed in the last part after the participants spend two weeks for other training activities. Visiting dairy farms could be optional depending on the participants' job role as well as their availability to leave the workplace.

Table 9-2-3: Summary of trainings in Japan

Module ID and Title	Programme ID	Programme title	Objectives	Main Target participants
BM-JP Training in Japan for strategic planning and TQM	-ToT	For trainers	To let NDDB trainers who will be trainers of capacity development training modules such as BM-1 and/or BM-2: 1) comprehend a variety of concepts and practices useful to transform dairy cooperative institutions' business processes through the introduction of the strategic management based on the demand- and quality-oriented value chain management and Total Quality Management; 2) reflect what can be applicable to the training modules to be provided at NDDB and their working environment in India.	・ Trainers from NDDB who will be trainers of BM-1 and/or BM-2
	-PIs	For PIs and trainers	To let the participants: 1) comprehend a variety of concepts and practices useful to transform dairy cooperative institutions' business processes through the introduction of the strategic management based on the demand-oriented and quality-oriented value chain management and Total Quality Management; 2) reflect what can be applicable to (the training modules to be provided at NDDB and) their working environment in India.	・ Managing Director ・ Key persons in the PI responsible for implementation of project
FS-JP Training in Japan for Food Safety	-ToT	For trainers	To let NDDB trainers who will be trainers of capacity development training modules such as FS-A1, FS-B1 and/or FS-B2: 1) comprehend the advanced food safety related technology and actual practices in Japan; 2) reflect what can be applicable to the training modules to be provided at NDDB and their working environment in India.	・ Trainers from NDDB who will be trainers of FS-A1, FS-B1 and/or FS-B2
	-PIs	For PIs and trainers	To let the participants: 1) comprehend the food safety related technology and actual practices in Japan; 2) reflect what can be applicable to (the training modules to be provided at NDDB and) their working environment in India.	・ Plant Manager ・ Section Head (QA, Production, etc.) ・ Working level officers / technicians / plant operators (control room operator, QA officer, etc.) ・ Persons responsible for project implementation

10. Organizational Arrangement

10-1. Implementing Organization

Figure 10-1-1 depicts the organizational arrangement to develop and implement CD programmes written in 9-2 above although Component G also follows the overall framework of the Project.　NDDB

plans the overall contents and schedule of the programmes and mobilizes its internal, as well as external resources upon necessity to develop and deliver them.

As mentioned in 9-1-2. CD component comprises practical & field oriented approach and aims at providing a support to trainees' and ultimately improving PIs' changing process. As a result, the Action Plan development and its review and guidance at each PI will be conducted to improve PI's situation by utilizing what the trainees learned through the CD programmes. JICA team proposes to assign two professionals under the project who will facilitate the implementation of the Action Plan and other CD activities at PI for two years.   More details are elaborated in Attachment 10-1-1.
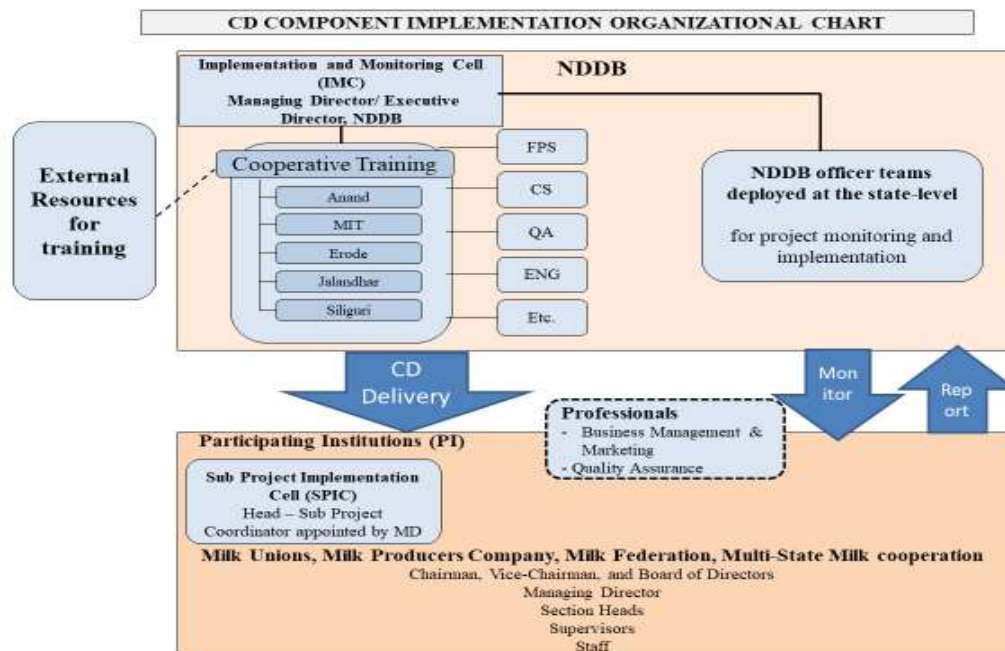

Figure 10-1-1 CD Component Implementation Organizational Chart

10-2.   Resource persons for Component G (Instructors or Trainers)

Potential resource persons who will develop and deliver proposed CD programmes are indicated in **Table 9-2-1**. For a newly developed programme, basically the resource persons who have developed the contents of a certain topic will also deliver it.

11. Implementation Schedule and Operating Procedure

11-1. Implementation Schedule

Implementation of Component G, especially for the CD of business management as well as food safety areas can be designed as below:

- The CD programme will start when the number of PIs that will participate in the programme reaches the appropriate number to carry out the programme from teaching/learning effectiveness and cost efficiency point of view. The content outline sheet in Attachment 9-2-1 suggests the approximate number of PIs suitable to carry out the programme.

- One group will consist approximately of 5 PIs and total 6 groups for Component G in the Project are assumed.

- Grouping of PIs into one group basically follows "first come first served" basis as the sub-project approval timing differs from one PI to another

- One group requires 1.5 years to complete the CD trainings.

11-2. Operating Procedures

There are two types of trainings proposed under the CD component. One is to be carried out off-site where the participants of PI will come to the NDDB training centers and the other is to be carried out at PI's location (on-site). The latter type is recognized by programme ID with @PI as a suffix. As the participants have their working duty at PI, it is difficult for PI to allow many of them at one time to leave their workplace and participate in trainings conducted at training centers far away from PI. Therefore, the off-site type of trainings of the same programme for one group will be offered basically multiple times in order to give PI a chance to send more employees to the programme in rotation.

As for the programmes to be carried out at PI's location (on-site), the number of times and its timing of on-site programmes need to be examined by considering each PI's characteristics and need for the effectiveness of on-site review and guidance for **Action Plan.** The number of instructors & trainers and their specialized fields who will go on-site would be decided based on the components approved for the PI under the project.

11-3. Monitoring and Reporting

To monitor the progress of CD Component, the following indicators are suggested to be monitored which would be collected by NDDB. On-site review and guidance @PI program and reflection workshop could be a good opportunity to monitor the qualitative indicators for PI.

(1) NDDB (Training provider side)

● Quantitative

- Total number of participants / CD programme with female / male distinction

- Total number of PIs / CD programme

- Number of times on-site review and guidance conducted @PI program / PI

● Qualitative

- How the contents and method of instructions of CD Programmes have been upgraded after trainers participated in trainings in Japan.

(2) PI (Training participant side)

● Quantitative

- Percentage of employees of PI who participated in CD Programmes

- Number of times that the Action Plan have been revised according to the workplace situation

● Qualitative

- How the Action Plan has been implemented

- Any changes in the operational procedures of PI contributing to driving its business into market-oriented and quality censorious direction.