

# Mulukanoor Women's Mutually Aided Milk Producers' Cooperative Union Limited: An Analysis of the Growth Path

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*The Mulukanoor Women's Mutually Aided Milk Producers Cooperative Union Limited (henceforth Mulukanoor Union) is a promising community enterprise in enhancing livelihoods of large numbers of rural producers. It began its operations in Aug' 2002 and in Mar'06 it was providing services to its 15,000 members. This case study is an attempt to identify the various factors/dimensions that have contributed to the growth of this rural women initiative. The focus on analysis of the growth path is particularly important as the development sector is trying more and more to discover the process of enhancing large number of livelihoods for rural poor and producers*

## **Introduction**

This unique initiative of rural women in and around Mulukanoor in Karimnagar District of Andhra Pradesh, is one of its kind where women are completely managing and governing a commodity based community enterprise. 90% of the operating staff in the Mulukanoor Union are women. Together in the last three and half years they have achieved something commendable. Membership has grown from 5500 to 15,000 in Jan'06. Members' share capital and development deposits have grown to Rs. 3 lakhs and Rs 112 lakhs respectively in Jan'06. Milk procurement has risen from 2.4 million litres to 6.5 million litres in the year 2004-05. Sales have increased from 2.9 million litres to 7.1 million litres during the year 2004-05. Net surplus has grown from Rs 19 thousands to Rs 1.9 millions. At the start of the project Rs 3.4 crores was extended as loan to Mulukanoor Union by Cooperative Development Foundation for meeting the capital investment needs. At the end of Jan'06 the loan stood at Rs 0.33 crores. Impressive as the figures indicate, the benefit to the members is equally commendable. Price realization per litre has improved by Rs 3 to 4 on an average and they have access to integrated veterinary services. Above all, the last three years have been a testimony that rural women given an opportunity and necessary support can handle large community enterprises.

This case study is an attempt to identify the various factors/dimensions that have contributed to the growth of this rural women initiative. The focus on analysis of the growth path is particularly important as the development sector is trying more and more to discover the process of enhancing large number of livelihoods for rural poor and producers. At the first look the Mulukanoor Union is very impressive and many would be impulsive to initiate such a project in their own areas but

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unless the growth is fully comprehended and understood it will be difficult to live through such an initiative. Thus in the analysis the factors that have been highlighted are strategic conception of business, high members stake, positive cooperative environment, robust design – centrality to members and patronage, empowering culture of promoting organization and enabling legal environment. There are few other factors, which have also equally contributed to the growth path, and they have been summed up in the penultimate section. The final section deals with the challenges, which the Mulukanoor Union is facing at present.

This document is based on the available secondary data about Mulukanoor Union in the form of Annual Reports, the project proposal, some internal documents, reports of Cooperative Development Foundation and other documents.

## **1. Background**

### ***1.1. Foundation of Social Cohesion***

By the year 1999-2000 Women's Thrift Cooperatives, promoted with the guidance and support of Cooperative Development Foundation(CDF), had reached new peaks and considerable levels of maturity in their savings and lending activities. The savings were growing steadily and they were always recording more than 97% recovery consistently for ten years. As the eligibility to the size of loans increased the women were exploring the options for productive investment. Around the same time the interest rates were falling and credit absorption measured in terms of idle cash available with these cooperatives was as high as 6 to 8%. Coupled with continuous drought for almost four years the rural producers in and around Mulukanoor were looking for other options to derive additional income. This prompted active consideration of promoting a women's cooperative milk producers dairy project. Dairying as an activity was selected as it is an activity which most rural people are capable of managing.

Based on this expressed need for alternative supplementary income CDF with the technical help of National Dairy Development Board conducted a series of surveys. The surveys were conducted to find out the production potential and marketable surplus in villages and market demand in the nearby cities like Warangal. In these surveys it was found that in 72 villages around Mulukanoor there was at least 14,000 litres per day marketable surplus while the demand in Warangal city was about 30,000 litres per day. 60 – 70% of the total demand in Warangal City was being catered to by unorganized milk vendors. Most consumers were unhappy with the quality of milk being supplied. Looking at this potential, a processing plant with a capacity of 25 TLPD expandable to 50 TLPD was planned.

While construction and initial groundwork was started in Jan' 2000, by putting in place a spearhead project management team, the actual operations of the dairy began in Aug' 2002. With several problems like obtaining legal clearances under Milk and Milk Products Order, Pollution Control Board, delays in construction and erection in machinery the project took almost two and a half years to be completely ready for operation. However, this period was effectively used to build the capacities of women, their leaders and the staff which served as useful investment for the future. All along the women who had invested the share capital much before and waiting in anticipation were patient and were with the promoting organization CDF.

But once the operations started all estimates and financial projections made before the operations were far out beaten and it began registering surplus from the first year itself. Both physical and financial performance of the initiative is way above the estimates made initially. Thus a new

milestone was established and a growth path carved out for the rural milk producers and women in this area.

## 2. Performance of Mulukanoor Union

To understand this unique experience we need to understand the performance of the Mulukanoor Union in the past three years. Performance has been analyzed with the published data of the first three years of operations. However, wherever the latest data was available it has been quoted.

The Mulukanoor Union has grown in strength during the last four years of its operations. Net surplus earned has grown from Rs 17,383 to Rs 1,907,491 in the year 2004-05 as shown in the graph below. In fact the most surprising aspect has been that it has been in surplus from the first year of operation. The sales of milk and procurement of milk have also demonstrated steady increase as represented in the graph below :

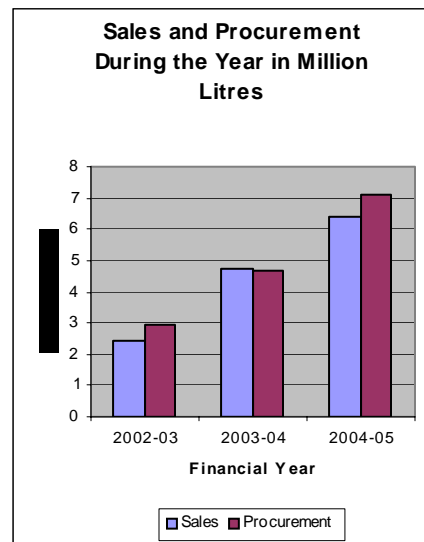
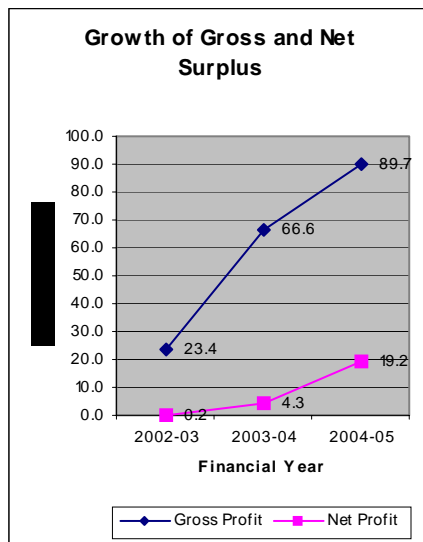


Table 2A indicates that the performance in organizational growth parameters has shown consistent improvement. The number of milk producers in the network has risen to 14,000 in the year ending FY 04-05. The number of societies has grown to 93 and the amount of total technical assistance has also risen by almost 5 times to Rs 4.71 Million. The dairy union is also employing more number than the previous years.

**Table 2A**  
*Key Organizational Growth Parameters for the Last Three Financial Years*

#	Parameter	2002-03	2003-04	2004-05
1.	Number of Milk Producers in the Network at the year end (31st March)	8,426	10,000	14,000
2.	Number of Village Level Primary Dairy Cooperative Societies	67	79	93
3.	Total Milk Procured during the year in Million Litres	2.43	4.71	6.43
4.	Average Milk Procurement per day in TLPD	10.54	12.90	17.63
5.	Total Milk Marketed during the year in Million Litres	2.93	4.68	7.08
6.	Average Milk Marketed per day in TLPD	12.69	12.83	19.40
7.	Value of Technical Support Services (Cattle Feed + Fodder Seeds + Medicines) Extended to Members Amount in Million Rs	0.82	2.01	4.71
8.	Average Value of Technical Support Services (Cattle Feed + Fodder Seeds + Medicines) Per Member Amount in Rs.	97.10	201.11	336.68
9.	Employment at Dairy Union	28	35	40
10.	Employment at Primary Societies	122	141	160

Internal capital of the members in the societies and in turn of societies in union and the network is growing at rapid pace. Together the members have almost invested about Rs 8.35 Million in it. For all the last 50 years of operations even in the most successful and model cooperatives the member capital stake is almost nominal where as in Mulukanoor Union it is almost approximately 25% of the total capital investment.

**Table 2B**  
*Growth in Internal Capital for the Last Three Financial Years*

#	Parameter	2002-03	2003-04	2004-05
1..	Share Capital of the Primary Societies at Union at the year end (31st March) Amount in Rs.	201,000	240,000	276,000
2.	Development Deposits of Primary Societies at Union at the year end (31st March) Amount in Million Rs.	1.19	3.99	8.07
3.	Total Primary Societies Funds with the Union at the year end (31st March) Amount in Million Rs.	1.39	4.23	8.35

**Table 2C**  
*Growth in the Primary Institutions in the Last Three Financial Years*

#	Parameter	2002-03	2003-04	2004-05
1.	Total Loan Primary Societies have taken from Union at the year end (31st March) Amount in Million Rs.	2.31	1.50	1.28
2.	Number of Primary Societies availing Loan from the Union at the year end (31st March)	67	67	53
3.	Average Loan Amount with Primary Societies at the year end (31st March)	34,503	22,405	24,103

**Table 2D**  
*Financial Performance Parameters in the Last Three Financial Years*

#	Parameter	2002-03	2003-04	2004-05
1.	Surplus Earned During the Year - Amount in Rs	17,383	427,700	1919,297
2.	Surplus Earned per Litre of Milk Procured - Amount in Rs.	0.007	0.09	0.30
3.	Bonus to the Primary Societies at the year end Rs	-	1,062,397	1,503,004
4.	Bonus to the Producers Rs	250,000	500,000	750,000

The analysis of the various costs involved in the process of marketing milk as shown in Annexure – 1. It also shows that the dairy is performing very well as on date.

### **2.1 Performance of Primary Societies**

While the performance of the milk union is impressive it is important to analyze and understand the performance of the primary societies also. At the year ending 2005 nearly 85 out of 93 societies are running profitably. About 60 societies, which were there from the inception of the dairy union, have repaid their entire loan taken from Mulukanoor Union for initial establishment and infrastructure including electronic machinery. The attendance in the monthly board meetings has always been above 70%. Most societies have accumulated good amount of reserve funds at least Rs 30,000/- at the end of the year and were paying sizable amounts as patronage rebate. While the complete picture of all the societies on various parameters is difficult to obtain an analysis has been built upon 3 sample societies selected on basis of convenience.

The figures for three years for the three societies are mentioned in the Annexure - 2. In all these three societies the membership has increased, total milk procured has increased by 83% and milk sold to the union has increased by 73 %. At the same time there is also drastic increase in sales at the local level as the price realized per litre is higher than that is realized from the union. All three societies have repaid the loans that they owe to the union. They have together built up nearly Rs 3,88,000/- as reserves together. The total share capital and development deposits in the three societies were Rs 80,000/- and Rs 4,60,000/- respectively. The total Surplus earned in three years for these three societies together was Rs. 340,000/-. Together they also availed technical services worth Rs 460,750.00/-. Thus looking at all these parameters, the performance of the societies seems to be good.

Various factors have contributed to the success of Mulukanoor Union. Apart from the factor and demand conditions discussed above the institutional conditions carved out and strategies adopted played an important role in making Mulukanoor Union a successful enterprise. The same has been discussed and analysed in detail below.

### **3. Strategic Conception**

#### ***3.1 Business Model of Mulukanoor Union***

The business model that was conceived for the Mulukanoor Union can be termed highly strategic. The following points will clearly enunciate the facts –

1. *Procurement Costs:* By keeping a limit on the maximum distance of the village from the dairy where procurement of milk will be done at 25 km, it has ensured that the cost per liter of procurement to be as low as Rs 0.30 in the year 2004-05. This has certainly given a strategic advantage as most other dairies even in the private sector incur at least Rs 0.70 to 1.00 for procurement. There are even situations like in the case of state promoted Karimnagar Milk Producers Cooperative Union procuring almost from a distance of 300 km and incurring a cost of Rs 3 to 4 per Litre of milk procured. The other advantage of very low distance is also the possibility of maintaining very high quality of milk. Since the collection time cannot be higher than 2.5 hours before it is chilled which is well within the safe limits to ensure that the microbial quality of milk does not deteriorate, the union can maintain highest standards of milk quality. Another important parameter to be observed is the sourage of milk in summer season is also less than 1% of total milk procured in the year 2004-05, which reduces the loss.
2. *Marketing Costs:* The idea to concentrate on markets of mid sized cities and smaller towns in and around Mulukanoor like Warangal, Siddipet, Karimnagar, Macherial and Godavari Khani provides strategic advantage to the union. It is able to compete with the private and cooperative dairies easily as it has sizable share in the markets. For the volumes that Mulukanoor Union is dealing it would not have constituted even 2% of total Hyderabad market. But in these cities where it is marketing it is able to acquire at least 60 – 90% of the total organized market share. This gives the brand competitive advantage and a chance to command the distribution network rather than play according to their tunes. Here again it can be easily observed from the annual reports that it hardly spends Rs 0.37 per litre (yr 2004-05) of milk marketed in these cities. This ensures that greater margin is transferred to the producer. A compact marketing and procurement area has increased the margin.
3. *Product Portfolio:* By sticking to milk, cream and buttermilk marketing the union is able to ensure that the money from the market flows back every day. Investments in the product markets demands huge working capital as the business cycles are much longer (sometimes even as long as 2 to 3 months). Also products need to be marketed in larger markets like Hyderabad, Vijaywada and Vizag where the movement is much faster and there is higher demand. The need for venturing in to the product market also does not arise, as today the market demand is far higher than the local procurement. From the provisional figures of year 2005-06 upto Jan the milk procured to marketed ratio stood at 1:1.86.
4. *High Financial Liquidity:* The dairy in the year 2004 – 05 on any day has at the minimum the following liquid amount available with them:

**Table 3.1**  
**Money with Dairy Union**

#	Money with Dairy Union (as per financial statements of Yr 2004-05)	Amount Rs
<b>A.</b>	<b>Interest Free Capital With Union</b>	
1.	Milk Bill Payable – as payment is made only once in 15 days is approx.	3,500,000.00
2.	Various Deposits from the different players like transporters, marketing agents, and AI staff	1,360,000.00
3.	Agent Sale Benefit Payable – a part of the commission, Rs 0.25 per Litre of milk sold, to the agent is accumulated at the Union which is given only at the year end	1,375,000.00
4.	Various Funds with Union – including depreciation, inflation cover, building and welfare	13,058,000.00
5.	Other small payables or credit available to the dairy union very short period approx.	1,000,000.00
<b>B.</b>	<b>Low Cost Capital With Union</b>	
6.	Savings account balances of primary societies – as all societies have accounts only at the dairy union – approx.	400,000.00
7.	Share Capital and Development Deposits of Members	8,346,000.00
	<b>Total Money Available in any given day</b>	<b>29,093,000.00</b>

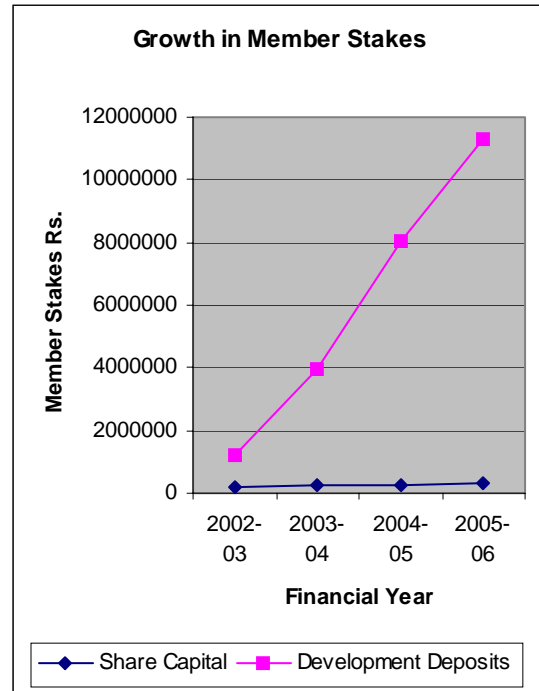
Thus the above table clearly brings out that at the end of year 2004-05 on March 31st the union had at least Rs 29 Million liquid cash available. This capital either at no or low cost is really great advantage to the business.

5. *Human Resource Cost:* The human resource cost of Mulukanoor Union is far below the industrial standards. The advantage here is the union has only employed staff from within the villages where the milk is being procured and trained them over the period. Since the union is only dealing in liquid milk marketing, the technology intensity is also relatively low. With bare minimum professionals from outside the unions annual overall salaries are Rs 9.6 lakhs, which is just about Rs 0.15 per litre of milk marketed in the year 2004-05. However since there are not many technical staff members with the dairy there, is a risk of poor plant maintenance, potential wastages and losses in handling to be high, which only get reflected in the next few years. But, as on date the members of the dairy union are enjoying the low cost of human resources contributing to higher margins for them.

Thus the business of Mulukanoor Union has been strategically conceived to ensure that greater margins get transferred to the members. From the various statements it is clearly visible that the Mulukanoor Union is able to transfer Rs 0.68 (Yr 2004-05) of every rupee generated through sales. This could have been much higher had the difference between the local procurement and market demand is reduced. To bridge this gap and to overcome the flush lean procurement fluctuations presently the dairy is dependent on skimmed milk powder reconstitution, which has increased the cost drastically. While the business conception was done strategically the model or structure adopted was also a modified version of the blue printed by NDDDB during operation flood.

### *3.2 High Member Stake in Mulukanoor Union – Internal Drive for Efficient and Transparent Performance*

By design the Mulukanoor Union has been conceived in a way that the members' stake is high. In the last four years of operations the dairy has been able to increase the members' stake by introducing the patronage linked development deposits at the rate of 5% of every milk bill that the member realizes. The share capital has grown from Rs 2.01 lakhs to Rs 3.03 lakhs while the deposits have grown from Rs 11.89 lakhs to Rs 112.70 lakhs in the last four years. The figures for the present year are taken up to Jan 2006 only. Within the first four years the Mulukanoor Union has been able to pay a major part of the investment loan taken from CDF. At the start of the project CDF had invested Rs 34.0 millions. On 31st Jan 2006 the loan amount still to be repaid to CDF was about Rs 3.3 million. The growth in the share capital and development deposits is shown in the graph.



The amount from the development deposits and also from other sources as shown earlier has been used to repay the capital investment brought in by CDF. As for the working capital the dairy is presently borrowing using call deposits from thrift cooperatives and soft loan from National Dairy Development Board. In future as deposits grow it will be used to finance ventures in to product markets and plant expansion. Such high stakes of the members will ensure that there is internal drive for efficient performance

### *3.3 Visible Governance*

The Mulukanoor Union is strongly influenced by the promoting organisation's culture of maintaining high transparency and accountability. In order to ensure the same, the Union has taken the following steps.

1. It ensures that the annual report of performance is shared with all the member societies and the same is done at the member level.
2. It ensures that the complete performance report of each society is mentioned in the annual report for the information of the members.
3. The Directors are elected to represent a constituency of 6 to 8 primary societies. The performance of the Directors is measured at two levels - one on the basis of performance in their own milk society and other on the basis of performance in their respective constituencies. This performance is recorded and shared in the annual reports.

4. The proximity of the Union and the societies and the visibility of the union is also an important factor, which creates greater association and access to the members, which in turn ensures better governance practices.

In the Table 4 below an attempt has been made to understand the various factors that are contributing to the governance effectiveness and patronage cohesiveness. By governance effectiveness we mean the capacity of the board of directors to ensure that the operating system services the demands of members effectively while patronage cohesiveness is the ability of the board to service the needs of both the large and small members who contribute to the Mulukanoor Union's business.

**Table 3.2**  
***Assessment of Various Factors Contributing Improved Patronage Cohesiveness and Governance Effectiveness***

#	Parameters <sup>1</sup>	Remarks	Improved Patronage Cohesiveness	Improved Governance Effectiveness
1	Term period of the directors at the Union and Primary level	Medium term of 4 and 5 years respectively	++	++
2	Size of the board at the Union and Primary level	Small boards of 12 and 10 respectively	+++	++
3	Powers of registrar of cooperative	Limited to registering the new cooperatives and recommending advice when requested	+++	++
4	Accountability of CEO or General Manager	Very high to the board as the board solely appoints and removes General Manager	+++	++++
5	Voting right	Limited to those who meet minimum performance requirements as specified in bylaws	+++	+++
6	Reservations and nominees to the Board	There are no nominees and reservations in the board of Mulukanoor Union. Only special invitees as decided by the board from time to time	+++	++++
7	Right to recall non-performing board by the members	The members retain the right to recall the non-performing board by using the no – confidence clause and calling for special general body	+++	+++

<sup>1</sup> Parameters considered and the measures used has been taken from Catalyzing Co-operation – Design of Self-Governing Organisations by Shri Tushaar Shah

#	Parameters <sup>1</sup>	Remarks	Improved Patronage Cohesiveness	Improved Governance Effectiveness
8	Power of influence or area of influence of board	Covering all the decisions related to production, value addition, member services and marketing functions	++	++
9	High attendance <sup>2</sup> of the board of directors in the meetings	It is generally observed that at both Union and Primary level the attendance to the board meetings is always above 80%	+++	+++
10	Member share capital and development deposits	Contribute to the capital structure of the Mulukanoor Union	++++	++++
11	Division of responsibilities within the board	Zone wise division of the directors responsibility at the Union level	+++	+

Note + indicates the level of influence on the patronage cohesiveness and governance effectiveness of the board of directors of Mulukanoor Union and their Primary Societies. The extent of influence as indicated using + sign is authors own subjective interpretation

### 3.4 Institution Building Efforts

Systematic efforts were made at capacity building of all the stakeholders especially women for ensuring a smooth take off of the Mulukanoor Union. The 18 months period between conception and actual operation of the diary was utilized to develop the skills and capacities of primary actors namely women, their male counterparts, opinion leaders and political representatives of the area. National Dairy Development Board supported these efforts under its Women Dairy Cooperative Leadership Program to the tune of Rs 3.5 million. The programs undertaken are summarized in the table below.

**Table 3.3 : Capacity Building Programs Undertaken During Promotion of Mulukanoor Union**

#	Details of Programs	Remarks	Trained	Programs
1	Promotion Meetings for Primary Societies Formation At the village level 5 meetings	Meetings are for discussions on bylaws, viabilities and registration/elections	2880	360
2	Promotion Meetings for Mulukanoor Union Formation Representatives of Primary Societies	Meetings are for discussions on bylaws, viabilities and registration/elections	150	5
3	Exposure Visits to the Representatives	Representative of Primary Societies were taken for exposure of Sangam Dairy - 3 per village and Amul Dairy – 2 per village.	400	15

<sup>2</sup> Observed from the data available in the annual reports of the primary societies and from the information obtained from the Mulukanoor Union board meeting minutes book

#	Details of Programs	Remarks	Trained	Programs
		Apart from this opinion leaders and men were also taken for exposure visit		
4	Member Education	Member education programs were for discussions on bylaws, rights and responsibilities, cattle management and about the dairy business at the village level for all members	2880	72
5	Training of Management Committee Members of Primary Societies	All Management Committee members of 72 societies @ 10 per society were trained for nearly 8 days on the management of dairy society, the functions of the dairy union, their roles and responsibilities, business development, technicalities of dairy, strategies for procurement and marketing etc	720	24
6	Training of the staff of the Primary Societies	The women secretary and men veterinary assistant for the society were provided both technical training and generic trainings in cooperative management, roles and responsibilities, accounts and services for nearly 25 days	144	4
7	Training of the staff of the Mulukanoor Union	The technical and other staff were trained according to their functions initially for 30 days	25	1
8	Management Committee Members of the Union	All members were trained on various aspects of dairy management, technical aspects, other important governance aspects for almost 15 days	12	1

Thus these comprehensive programs along with demonstrations and regular meetings of the members ensured that the capacities of the various stakeholders were improved at least to initiate all the activities. Also the practical aspects were obtained anyway as the operations began. But if one looks at the size of activities and the amount that was spent it is a clear indication of the promoting organizations commitment to empower the women and ensure that the dairy union functions truly as member owned organization.

### ***3.5 Organizational Design***

The promoting organisation CDF has a credible record of promoting cooperatives for more than 25 years. The rich experiences thus accumulated came in handy while preparing an appropriate design for the Mulukanoor Union. The bylaws were prepared in a participatory manner so as to ensure that the emerging entity reflects the true nature of a cooperative. Some of the interesting yet important bylaw provisions are:

1. Linking the capital structure to patronage of members – The compulsory deposits from the members in the form of 5% of milk bill realized every 15 days by members will ensure that the deposits are sizable and the investment completely belongs to the members themselves. This will in turn ensure that the members demand for better performance of the cooperatives.

2. Standards for minimum performance of members in terms of milk supplied to society should be at least 180 litres of milk for 180 days in a year. This was fixed to differentiate between the active and inactive members. The standards for a primary societies membership in the Mulukanoor Union is at least a minimum of 20,000 Kilos of milk per year has to be supplied. The minimum performance standards are also for flush to lean seasons supply which is at 60:40 and for the quality of the milk supplied in terms of fat and solids not fat for both cow and buffalo milk separately. There are stringent actions that the cooperative will undertake if underperformance is noted. This ensures that only those active members who have interest in the dairy's performance will be allowed to be involved in governance of the union.
3. Local conflict resolution system was institutionalized with a 3-member senior members' committee being elected for resolving all disputes.
4. A strong internal audit system where at-least two members from among the management committee members and/or any other member auditing the accounts regularly further ensures that there are transparent and accountable transactions.
5. The surplus distribution at the primary societies to the members is done on the basis of total transactions with the cooperatives. Total transaction of the member with cooperative is a sum of the milk bill realized, interest earned on share capital and development deposits and the inputs purchased from the cooperative. This ensures that surplus distributed as patronage rebate are equitably distributed taking into considerations the members utilization of all services provided. In most dairies the surplus is purely distributed in proportion to the members milk bill but in order to compensate all the contributions that the member has made to the cooperative a comprehensive formula considering all the transactions needs to be developed which the Mulukanoor Union uses.

### ***3.6 Centrality of Business***

The design is evaluated on the standard parameters of centrality to the domain; members and patronage the following can be observed –

1. Patronage Centrality – Patronage Centrality is measured as the ratio of total domain's potential business, which can be transacted through a cooperative to the proportion that is actually routed through the cooperative. In the case of Mulukanoor Union when it was started the marketable surplus recorded in a survey within the 72 villages originally planned was 14,800 Litres per day. In the fourth year of its operation it is almost collecting roughly 14,000 Litres per day from this area. Even if one considers that there has been increase in cattle population due to the operations of the union the Mulukanoor Union is able to procure roughly 80% of the total potential marketable surplus available. Again if one looks at the potential members possible in the area it was surveyed to be around 13,500 of which at least roughly 12500 are members of the union, which means that 90% of the potential members are part of the dairy network.
2. Member Centrality - Member centrality is a measure of the density of a cooperative's presence in its members' economies. In the Mulukanoor Union on an average 90% members are active members supplying milk. In the year 2004-05 there were 12,600 active members supplying on an average 17,850 Litres of milk per day to the union. This means each member is supplying roughly 1.45 litres per day with around Rs 600 as monthly revenue from the dairy. This means on an average Rs. 7,200 is the income an average member is deriving. Karimnagar being one of the poorest districts of Andhra Pradesh the average income of the

households even if assumed on higher side is in the range of Rs 20,000 per annum. Which means the Mulukanoor Union is roughly contributing 36% of their total income. This ensures that members attach high premium to the efficient running of the dairy.

3. Domain Centrality – Domain centrality is measured by computing the cooperatives total business as a ratio of the rough estimate of the domain's economy. This has therefore not been estimated.

Thus we observe that the Mulukanoor Union is also performing well according to the three measures of centrality used as performance measure for the success of a cooperative as proposed by Shri Tushaar Shah in his book *Making Farmers Cooperatives Work*.

## **4. Fertile Grounds**

### ***4.1 Positive Cooperative Environment***

Mulukanoor has been serving as the base for cooperative institutions ever since the formation of Mulukanoor Cooperative Rural Bank (MCRB). CDF has promoted thrift cooperatives of both men and women and paddy farmers' cooperatives in and around Mulukanoor. The state promoted Karimnagar District Milk Producers' Cooperative Union Limited has also promoted few dairy societies in the same area. At the start of the project out of the 72 villages where the cooperatives were to be promoted there were 14 villages where there were 3 or more cooperatives providing different services to members running successfully. In 26 villages there were two cooperatives functional and in 17 villages there was one cooperative running successfully. Thus only 25 villages did not have any functional cooperative.

Also at the time of the promotion of the Mulukanoor Union the relations between CDF and MCRB were at its peak as the President of the MCRB was the then Secretary of CDF. The goodwill of the bank, which has a 50 years' history, was useful at the market and procurement side. Mulukanoor Cooperative Rural Bank was started in 1956-57 with 357 members from 14 villages within 10Kms radius of Mulukanoor. Today it has 6,000 members, a staff of 100 from within the 14 villages, with a turnover of nearly Rs 25 crores. The cooperative extends financial, marketing, input supply, consumer and welfare services to its members. The cooperative over the years has adapted its services to members based on the change in the livelihoods context. So while the members were producing maize it set up a maize processing unit and while some of them produced fruits the society started marketing it. Some of these operations were remunerative while others were not so remunerative. However it adapted to the member needs. At present it is one of the very few multipurpose cooperatives in the country running profitably. It has also the distinction of being one of the largest agriculture marketing and credit cooperative in Asia. The key to its success is the very high member stake built through the mechanism of deposits based on the patronage/transactions with the cooperative, which ensured that there is internal demand for efficient performance. The democratic governance practices by the leaders of the cooperative also contributed to the confidence of members. The cooperative has also the distinction of giving out annual reports to the members on its performance within four months of the end of financial year for the last fifty years. The existence of such a model cooperative was an inspiration and the good will it has helped the Mulukanoor Union during the initial phase.

The thrift cooperatives network of both women and men, which were at the time of promotion on an average, was at least 10 years old and hence helped tremendously in the promotion of dairy cooperatives. These cooperatives together had a membership of 59103 members in and around

Warangal and Mulukanoor in Karimnagar District in the year ending 1999. They had accumulated Rs 84 millions in savings and funds and were extending loans and other credit facilities to their members. At the year ending 2004 there are 110407 members with total own funds of exceeding Rs 30 crores. These societies were familiar with the work of promoting organization CDF and its culture. The discipline and more importantly the systems nurtured in line with cooperative principles in these cooperatives ensured that the promoting organization had lot of goodwill. The confidence that this movement has created in women ensured that they were ready to take greater challenges. In fact during the promotion of the dairy cooperatives the leaders of thrift cooperatives contributed a lot in mobilization of members, in spreading the message within the women about the project and also in supporting the formation of the new cooperatives. They also took a conscious decision that new leadership from among the women will be encouraged to govern the dairy union and societies.

#### ***4.2 Inspiring Leadership***

While the environment for cooperation was right in Mulukanoor the more important crucial factor has been the influence of Shri Vishwanath Reddy a great visionary and cooperator who was the man behind the success of Mulukanoor Cooperative Rural Bank. He is revered by the people of the area even today. The leadership of Shri Vishwanath Reddy was a benchmark, which most present day cooperative leaders in the area salute and strive to achieve. These factors have had definitive impact on the promotion process and the way the dairy is operating till date.

#### ***4.3 Enabling Legal Environment – Boon to Success of Mulukanoor Union***

The Andhra Pradesh Mutually Aided Cooperative Societies Act of 1995 is a watershed in the history of the Indian Cooperative Movement. This act respected the rights of the members to fully own and control their own cooperative enterprise. The act was enacted in order to promote self-reliant and autonomous cooperative societies and make the cooperative movement more vibrant in the state. The act itself was progressive by nature and unparalleled by any other state governments in the country. The act recognized the importance that a true cooperatives needs to respect the cooperative principles. It also ensures that members have the sole authority to determine the bylaws and the way in which the cooperative is governed. The other important provisions are holding members responsible for the Surplus and loss of the cooperatives, allowing to build members fund in the cooperative, and to determine the way the entire cooperative is run. Such an enabling act provided the true ground for the Mulukanoor Union to be promoted in a manner that it truly emerges as member owned entity providing effective services as per their needs. This also provided the scope to empower the women dairy farmers in the area, as structurally they needed to manage their own affairs without any support.

While the APMACS Act provided the space for promotion of member owned organisations the business space was created when the Milk and Milk Products Order (MMPO), which regulates procurement, in particular milk shed was liberalized. Once in a region it is proven that there is marketable surplus, which cannot be handled in the organized sector, due to inadequate processing capacity, permissions are granted to set up new dairies.

#### ***4.4 Empowering Culture of Promoting Organization***

The promoting organization<sup>3</sup> has strong commitment towards building the capacities of women so that ultimately in a short period they are able to manage all the affairs independently. Thus they have invested huge amounts in training and capacity building. At the same time this fact has been reemphasized during the handholding support extended during the last three years. Most affairs during promotion like the mobilization of members and also training the members were carried out by the women themselves. CDF ensured that the directors and representatives of villages were fully involved in the discussions for the preparation of bylaws, business plans and also framing certain basic rules. The women representatives were taking decisions right from the beginning. However, where there were technical matters involved they were helped to understand the issues. More interesting was the way the dairy was launched – just before the launch of operations nearly 500 women from various villages went around house to house in Warangal city explaining the launch and the effort involved in entire operations. This gave a tremendous boost to the image of the dairy union. There are have been exchange visits within the societies to share experiences and also to encourage improvement in performance of a particular society. All these and more has contributed to women taking more responsibility and working on the Mulukanoor Union.

## 5. Comparison with Operation Flood Model

Mulukanoor Model<sup>4</sup> – Modified Blue Print<sup>5</sup> of Unions Promoted by NDDDB during Operation Flood – Negation of Important Thumb rules

The promoters CDF have carefully thought through the design of the Mulukanoor Union. Since the model adopted was a deviation from the standard model as recommended by NDDDB, it refused to finance the Union initially. Although they did not finance, they provided all the technical support for the construction of plant and making it operational. However, once the model was successful and was profitable from year-1 NDDDB has recognized this model ushering some change in the sector and is presently also financially supporting it. The following points will chronicle some of the important deviations from the standard model or thumb rules-

1. *Gradual Growth Path vs. Big is Beautiful* : Dairy Unions were always District Unions having a capacity of 100 TLPD processing capacity. While the Mulukanoor Union was initially constructed at almost 1/4th the capacity as usually constructed under operation flood. The distance of the processing facility from the members meant that much less visibility. Also the members do not have the opportunity to associate and feel as proud owners of the dairy. This feeling of ownership is important if the cooperative has to be truly member owned organizations in a sustainable manner. The idea of limiting the area of operation within 25kms of the dairy in the Mulukanoor Union increases the possibility of the members easily associating with it, and also makes better business sense as it reduces the collection time thus ensures the superior milk quality at the same time economizes on the procurement cost.

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<sup>3</sup> Refer Annexure – 3 for the background of promoting organization Cooperative Development Foundation

<sup>4</sup> Refer to Annexure – 5 for the structure of Mulukanoor Union as designed by the promoting organization CDF

<sup>5</sup> Refer to Annexure – 4 for the Structure of Anand Pattern of Dairy Cooperatives promoted by NDDDB during operation floods

2. *Facing Competition vs. Seeking Monopoly Rights*: During the promotion of the Unions under operation flood, NDDDB and the State Government enter in to an agreement that the Unions will be given monopoly rights for procurement in the demarcated milk-shed. However, subsequently the liberalization of MMPO (Milk and Milk Products Order) paved the way of promoting multiple diaries in the same milk shed area as long as there is an unorganized market. Thus when Mulukanoor Union was promoted the competition was not only from the local vendors but also from the state run Karimnagar District Milk Producers Union. This ensured better performance of Mulukanoor Union. This competitiveness between the various Unions ensured that the milk producers had more choice and were receiving better services from every one.
3. *Organizing Prime Producers vs. Traditional Households Heads*: It is a known fact that 80% of the work in the management of cattle at the rural household level is done by women. However, most dairies promoted under operation flood were male bastions. Out of roughly 830 primary milk societies in AMUL – Kheda District only 80 societies are fully women cooperatives. The membership is important not only from the empowerment view point but also for the success of extension services on animal husbandry, milk production practices and health care of cattle. Thus with this understanding the Mulukanoor Union was promoted as all women’s dairy where the governance and operations are managed by women themselves.
4. *Milk Shed Area vs. Administrative Boundaries*: The fourth important deviation is recognizing the fact that the milk-shed of any union should not be based on the administrative jurisdictions of a district. It is a common site in most milk unions promoted by NDDDB that a village hardly 20 km away is not a member of the union as it falls in different district while a village nearly 200 km away is also a member. This definitely defies the business logic on economizing the procurement cost. In the Mulukanoor Union the villages, which are members are based on contiguity rather than district boundaries. Thus it has nearly 15 milk societies out of the total 93 societies in the year ending 2005 from Warangal District while the rest from Karimnagar District.
5. *Members Stake High vs Low*: The fifth deviation, which has implications on the governance and sustainability of milk union, is the level of members stake. As mentioned elsewhere in the case study in the Mulukanoor Union member financial stake has been increased systematically to Rs 8.35 millions by the year ending 2005, 1/4th the total investment. An increased member stake means greater demand from the members to govern the dairy in a way that is beneficial to the members and also greater efficiency in the operations. In the unions promoted in the operation flood this point has been completely ignored and thus it is still seen as state promoted one as compared to member owned entity. This essentially means in the Mulukanoor Union there is very high internal locus of control while in all other cases it is seen that there is high external control.

## **6. Other factors contributing to Success of Mulukanoor Union**

In addition to the above mentioned factors, some other important features that contributed to the success of Mulukanoor Union are discussed below.

1. Profile of the directors/leaders and staff both at the union and primary society level shows that there are a lot of them who are young and unfamiliar with the business. This has helped in a way as the chances of people capitalizing on the loopholes in the system being very low. When the operations of the union began quiet possibly there must have been high inefficiencies and scope to misutilize resources however unfamiliarity would have given the

advantages and enough breathing space before the systems are strengthened. The second thing is, it gives a clean slate to experiment and fine-tune the blue print of Anand Pattern of dairy cooperatives to be adapted to the local scenarios.

2. Favourable factor conditions like the continuous drought for four years before Mulukanoor Union started its operations also ensured that members showed keen interest in the success of the dairy as it provides the much needed supplementary income.
3. The insistence of almost using only women staff at the union and societies to the extent possible has helped in better coordination and efficient work. Especially the efficiency of extension work has been better.
4. Democratic governance and conduct of secret ballot for elections ensures that fair chances are given both to electorate that is members and the candidates. The chances of electing more efficient leaders are high.
5. Investment in technology at the primary society level where electronic milko-tester and electronic weighing machines are placed in order to ensure fair transactions with members has also ensured that the members' confidence on the system improves and there are no leakages in it.
6. Internal focus on constantly improving performance rather than anything else in all the meetings of boards at primary society and union level has also contributed to the success of the dairy.

## **7. Challenges for Future**

Mulukanoor is an example of enterprise and ability, endeavour and affinity of rural women. But in order to be able to contribute to improved lives and livelihoods of its members on a sustainable basis, it needs to address the following challenges on a priority basis.

1. *Improving Member Business:* The biggest challenge before the union is the ratio of milk procured as against being marketed presently, which is 1:1.87. The demand for milk is far exceeding the milk being procured. So the member's contribution to the total union processing is hardly 53%. The more the milk procured from other milk sheds or reconstituted milk, greater the costs and lesser the margins. Also there is a danger that servicing the members will not become central to the present operating staff. On posed with this question the President of the union says they are thinking of developing mini dairy farms for the unemployed youth within the existing villages.
2. *Productivity Enhancement:* An average member is still pouring only 1.2 litres per day in the year 2004-05 which means there is lot to be done in breed improvement and improving cattle holding.
3. *Plant Expansion:* - The present plant, which is designed to handle only 25 TLPD is handling on an average 27 TLPD as indicated in the figures upto Jan'2006. This means the plant is operating at 108% constantly. During certain days it might even be running at 120% the capacity. This consistent high capacity utilization will put additional stress and contribute to wear and tear. So planning for expansion has to be done in right earnest.
4. *Reduce Plant Maintenance Expenditure:* The expenses incurred on repairs and maintenance of machinery was Rs 460,000 in the year 2004-05 and this year it will increase even more.

Lack of minimum technical professionals in the plant is definitely taking a toll on the way machinery is being maintained.

5. *Building Governance Effectiveness:* The tussle to control the union and societies between the operating staff and governing bodies has just begun. The staff is generally more permanent than the governing body members and so they are beginning to exercise their control over the systems, which may be detrimental to the entire structure.
6. *Capital Restructuring – Retiring Capital:* As the development deposits are growing the board of the union should think of judiciously using the capital. The more the liquid cash available there is a danger of improper investment, which should be guarded against. The union should think of developing a process or policy on how investment should be planned with some external technical assistance once in a while to ensure useful investment. Also may be since the business is running profitably there might be possibilities of obtaining low cost loans, which can be misused or not invested properly. Beyond this the dairy should also consider retiring excess capital now and then to the members.
7. *Improving Support Service Efficiency:* The input services are still running with lot of cross subsidy among the members. The union should think of providing the inputs at cost so as to improve the efficiency in operations. Whatever incentive the union would like to pass on to the members should be at the year end paid as the proportionate service utilization by members. It might be useful to see input services as also independent business units within the dairy union and linking the performance of the service providers to the services extended will improve the overall performance. Of-course there could be negative fallouts of this move, which have to be carefully monitored.
8. *Adhering to Code of Conduct:* The union in certain cases is strictly not enforcing some of their own bylaws. It can be observed that there are some non-performing members in the board of directors of some societies, which is also very poor governance representation and sets bad precedent to the functioning of the societies.
9. *Insulating Governance:* As the dairy is growing in size and also occupying large space in the domains economy the chances of political fallouts are higher. Vested interest of few members can creep in and bring down the entire effort. The union has achieved growth equivalent to that of MCRB in 3 years as compared to 50 years which the bank has taken. So leadership has to ensure that such political elements do not enter and spoil the union.

## **8 Conclusion**

Mulukanoor offers important lessons for all the stakeholders namely The Union, the promoting organisation, the dairy sector, the cooperative sector and the policy makers. Any attempt to replicate such an effort should not simply limit to understanding the structure and rework it in a new area. But understand the organic linkages of various factors and dimensions that have contributed to the success. Each one of these factors is important to achieve the final result.

Development organization and professionals interested in promoting livelihoods and collective efforts should appreciate these multiple dimensions. Many a times although derogatorily used, success has many fathers but the fact is it is the truth. Unless these all dimensions combine it is difficult to achieve the desired development. May be there is overemphasis on certain parameters but it was only intended to drive the mute point that promoting such projects which influence

large number of poor household livelihoods, requires a concerted and collaborative effort from various sides. Of course in emphasizing this, it is not to demean the most crucial role of the promoting organization, the staff and the leaders behind the project who have ensured that the growth path is carved.

Annexure – 1

**Costing of Mulukanoor Women’s Mutually Aided Cooperative Union Limited**

#	Costing of the Milk	2002-03		2003-04		2004-05	
		Actuals	Per Litre	Actuals	Per Litre	Actuals	Per Litre
1	Total Raw Milk Procured in the Year Liters	2,434,905		4,760,652		6,434,935	
2	Total Milk Marketed both Institutional and Branded	2,930,000		4,683,183		7,079,185	
1	Milk and Milk Powder Costs	25,736,416	10.57	69,837,163	14.91	94,142,332	13.30
2	Milk Procurement Costs	744,549	0.31	1,549,018.00	0.33	2,155,638	0.30
3	Processing Expenses	2,289,839	0.78	6,570,347	1.40	9,149,567.50	1.42
4	Lab Expenses	249,236	0.09	158,527	0.03	191,804	0.03
5.	Marketing and Promotional Expenses	737,888	0.25	4,567,512	0.98	5,778,507	0.90
6.	Financial Expenses	127,112	0.04	2,815,383	0.60	2,438,762	0.38
7.	Administrative Expenses	786,597	0.27	524,215	0.11	1,226,480	0.19
8.	Depreciation Fund	2,326,421	0.79	5,171,312	1010	5,545,270	0.86
<b>9.</b>	<b>Grand Total</b>	<b>32,998,058</b>	<b>13.10</b>	<b>91,193,477</b>	<b>19.47</b>	<b>120,628,360</b>	<b>17.38</b>

Annexure – 2

**Performance of Primary Societies – 3 Sample Societies**

#	Parameters	Kotapalli Primary Society			Katkur Primary Society			Raikal Primary Society		
		2002-03	2003-04	2004-05	2002-03	2003-04	2004-05	2002-03	2003-04	2004-05
1	Number of milk producers as members at the year end	219.00	225.00	179.00	324.00	374.00	411.00	156.00	164.00	160.00
2	Total members disqualified at the year end due to non compliance with minimum performance	-	58.00	60.00	-	-	-	-	-	-
3	Total milk procured during the year in litres	88,877.90	101,280.65	114,493.48	81,192.41	116,642.70	145,720.00	37,943.09	96,058.21	91,900.22
4	Average milk procured per day during the year in LPD	373.91	276.73	313.68	357.67	318.70	399.23	167.15	262.45	251.78
5	Total milk supplied to the union during the year in litres	87,054.17	96,912.40	108,924.98	79,637.61	116,819.02	142,775.00	40,199.36	92,767.00	86,312.00
6	Total milk sold locally at the village during the year in litres	1,925.45	4,368.25	5,568.50	1,546.89	3,858.50	7,447.50	299.45	1,121.38	1,229.00
7	Average price realised on the total milk marketed during the year in Rs per litre	9.95	11.73	11.50	11.14	12.75	13.26	9.06	9.50	10.14
8	Share capital of members with the society at the year end in Rs.	21,900.00	22,500.00	23,900.00	32,400.00	37,400.00	41,100.00	15,600.00	16,400.00	16,000.00
9	Development deposits of the members with the society at the year end in Rs.	36,588.24	87,054.00	146,411.00	41,500.08	116,177.84	212,992.00	17,228.06	62,578.75	100,654.10
10	Total other funds with the society (welfare + deficit cover + cooperative education + building +depreciation) in Rs.	20,332.85	76,300.99	138,344.00	34,831.32	77,462.39	182,186.88	5,555.32	33,872.43	67,325.18
11	Total loan repaid during the year to the union from primary society in Rs.	47,631.00	14,227.00	-	50,670.00	25,558.00	-	22,268.00	39,643.00	-
12	Patronage refund payable to the members of the society at the year end in Rs.	22,009.00	68,041.00	76,628.00	43,890.64	42,535.78	131,295.00	-	25,942.47	31,972.00
13	Surplus earned during the year in Rs.	14,657.00	45,361.14	51,316.39	73,151.64	28,357.19	87,509.24	219.54	17,148.63	21,315.40
14	Total value of technical support extended to the members (cattle feed + fodder + medicines) in Rs.	37,367.00	101,482.00	120,048.00	8,040.00	21,449.00	36,335.00	6,765.00	59,465.00	69,237.00
15	Average attendance of the board of directors to the monthly meeting during the year as %	76%	69%	76%	64%	71%	70%	78%	78%	73%

### **Cooperative Development Foundation – Promoting Organisation Background**

Sahavikasa is a voluntary association of 12 self-selected and self-motivated individuals. It was setup in 1975 and is registered under the Andhra Pradesh Societies Registration Act. It is not-for-surplus organization. Sahavikasa came into existence for promotion and development of cooperatives, keeping in view that these business enterprises would be effective, viable and sustainable instruments for multifaceted and integrated socio-economic development of rural people of meager resources and small incomes. The aim of Sahavikasa is to promote an environment in which cooperatives flourish as decentralized, democratic, self-help and mutual aid organisations effectively harnessing and fostering local resources – in consonance with the Concept of Cooperation. The work of CDF in last 30 years can be divided in to three phases. The last phase, which started after the enactment of Andhra Pradesh Mutually Aided Cooperative Societies Act 1995 (APMACS Act 1995) in mid – 1995, has four important objectives –

1. Assist women and men in the areas around Warangal in forming and developing new generation cooperatives under the APMACS Act, with a view to validate the fact that rural women and men are capable of managing their own organisations given a pro-citizen, liberal legal framework for that purpose;
2. Disseminate the contents and implications of the APMACS Act, through out Andhra Pradesh, with a view to motivate a large number of ordinary people to organize themselves into cooperatives for their own economic and social development;
3. Advocate for enactment of liberal cooperative law in other states with a view to see that the cooperative sector plays its legitimate role in a free market economy; and
4. Disseminate the contents and implications of parallel and liberal cooperative law in the states where such a law is enacted.

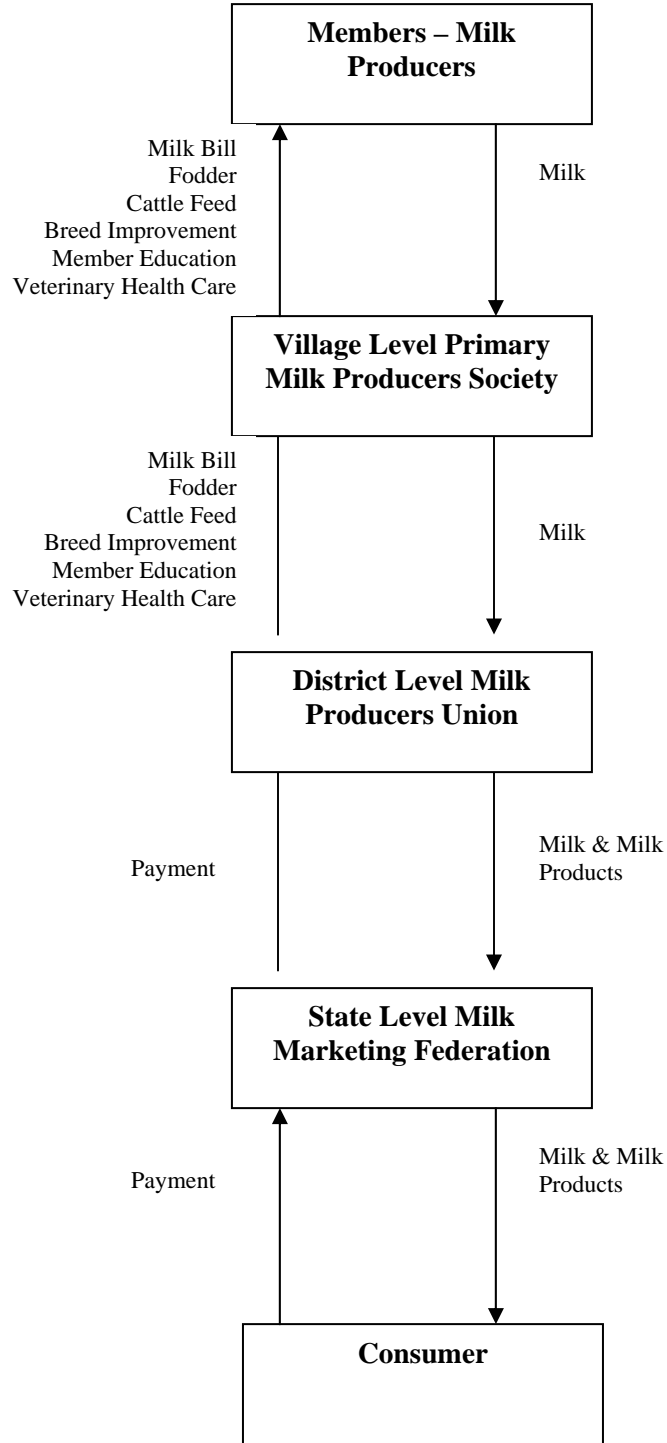
In the 30 years of work, CDF has built up a deep understanding on the concept of cooperation and the process of promotion of self-sufficient and self-managed cooperatives. In its field area today the organization has promoted and is supporting nearly 436 thrift cooperatives with a total membership of 110,407, 93 dairy cooperatives with a total membership of 14,000 members, and 4 paddy seed growers cooperatives.

During the initial years it has met with several failures in promotion of multipurpose cooperatives replicating the Mulukanoor Cooperative Rural Bank, and in promotion of Paddy Farmers Federation. These experiences along with the experience of drafting, advocating and finally lobbying and ensuring a liberal cooperative act is enacted in Andhra Pradesh have been the seeds for the organization to develop the large scale cooperative movements as mentioned above in the last 15 years.

Its members and staff have built the organization with a well-rounded experience in the area of promotion and supporting cooperatives on a sound financial and work discipline. The organization for 25 years of operation has taken only Rs 2.6 Crores as grants for recurring expenses. It has wisely developed a cooperative revolving fund to support the working capital and investment requirements of cooperatives it promotes and earns service fee, which supports its own costs. Financial prudence coupled with a critical mix of human resources (professionals and local grass root level development field staff) have helped the organization to emerge as an institution of high efficiency in development work. CDF can also be judged as one of those few organisations utilizing public funds maintaining very high degree of transparency and accountability in its transactions and work which is an essential cultural factor required for good cooperatives to flourish.

Annexure – 4

Structure of Anand Pattern Dairy Cooperatives Promoted by National Dairy Development Board under Operation Flood



Annexure - 5

**Structure of Mulukanoor Women’s Mutually Aided Cooperative Dairy Union Limited**

#	Level	Key Functions	Size	Structure
1.	Level 1 – Village Level Primary Dairy Cooperatives	<ul style="list-style-type: none"> <li>▪ Collection of milk twice from the producers in a day</li> <li>▪ Provision of all support services – fodder, cattle feed, veterinary health care, cattle insurance and member education services</li> <li>▪ Payments of milk bill</li> </ul>	93 primary cooperatives with 14,000 members, having electronic milk testing and weighing equipment	Active Members (180 litres per year for 180 days) constituting the general body of the society elect a 10-member board with 5 years term period. A women paid secretary to maintain the accounts and a male veterinary assistant is employed to provide all the services.
2	Level 2 – Sub District Level Dairy Union	<ul style="list-style-type: none"> <li>▪ Collection of milk twice from the societies in a day</li> <li>▪ Organization of all support services – fodder, cattle feed, veterinary health care, cattle insurance and member education services</li> <li>▪ Payments of milk bill to village level societies</li> <li>▪ Processing of milk into packaged milk and milk products</li> <li>▪ Marketing of milk and milk products</li> </ul>	25 TLPD Processing plant expandable to 50 TLPD	Presidents of all the active milk societies (supplying at least 20,000 Kgs milk in a year) constitute the general body of the union and they elect a 12-member board from 12 constituencies demarcated for 4 years. The union employs at least 50 staff including professional staff to carry on the regular work.

**List of Abbreviations:**

APMACS Act	Andhra Pradesh Mutually Aided Cooperative Societies Act 1995
CDF	Cooperative Development Foundation
LPD	Litres Per Day
MCRB	Mulkanoor Cooperative Rural Bank
NDDB	National Dairy Development Board
TLPD	Thousand Litres Per Day

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