

# Sustainability assessment of SHG cluster with a focus on Animal Husbandry

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Tata International Social Entrepreneurship  
Scheme (TISES)

Yannick Skop

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This report documents the current and potential performance of a cluster organisation formed to support SHG's in 6 villages. Key deliverables include the identification of productivity-enhancing technology, the creation of a sustainable institutional platform, and the customisation of scaling systems.

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## Introduction

TCSR D's rationale for laying stress on the income generation program was that the society wanted to reduce the dependence of the village people on natural resources for their livelihood. Moreover, where land holdings are small and population is high, it is imperative that any development effort focuses on income generation through animal husbandry programs. Activities that are downstream to agriculture and animal husbandry are given greater focus.

The first step is the formation of self-help groups, which ensures finances and collective team based work culture. The second initiative as a part of this program is the cluster formation of different SHGs, which is primarily aimed at organising the groups for providing an alternate source of employment and also a communication channel for the people.

The income generation programme was started by TCSR D in 1994, subsequently in the last decade it has become one of the most important activities of the society. The occupation is related to agriculture as cattle provide energy for ploughing and dung for fertilizer, thus it is considered as one of the important occupations in this region after agriculture.

The main purpose of the cluster formation would be to bring about change in the quality of life through widening the choice basket of the target communities, information facilitation of capability enhancement and effective process management.

Key deliverables include:

- To identify, validate and assimilate target groups-specific technology options for increased productivity and profitability.
- To create a sustainable institutional platform to link stakeholders for effective and efficient service delivery.
- To customize systems for effective scaling up of successful learning experiences through institutionalization of appropriate forward linkages.
- Based on the above study a project proposal needs to be designed along with budget for effective implementation in the area.

## **Background**

### **Self-Help-Groups & Micro-credit**

The distribution of micro-credit through self-help-groups is widely recognised as one of the most important tool for reducing poverty and empowering people. Unfortunately, this does not always prove to be sustainable; many SHGs fail after a number of years, either due to financial mismanagement or just a lack of interest from the members. These issues can be surmounted by integrating micro credit with an additional component of social and economic system<sup>1</sup>. For example, the potential of female SHGs for empowerment depends upon supportive channels such as education, health, housing and infrastructure.

Another fundamental support channel for development can be found in partnerships with the public and private sector. When public and private institutions and actors work in synergy with the population in need, there are greater chances of successful poverty reduction. Furthermore, linkages between the national, regional and local environment are necessary, and can be made with political will. The role of cooperation of SHGs with government institutions should not be underestimated. In some areas, the support from the government sector has proven to be vital for the development of the rural population. For example, the Rural Development Department of Gujarat set up seven district level capacity building centres to provide regular residential training to members from 600 SHGs in a year. In addition to this, it has recently set up three specialized skill training centres with the help of commercial banks. For synchronized training of large number of participants through satellite based state-wide classrooms it relays training programmes for 3,000 to 4,000 participants simultaneously. This involves identification of 150-200 training rooms equipped with direct receiving systems, television sets and telecommunication facilities spread over the State and training of a large number of master trainers. Although this scale is probably not viable in the short term for the Buduan district, some lessons could be learned from this project when incorporating a training facility in the cluster.

A mix of methods is obligatory to solve intricate problems such as poverty. The use of present structures and the formation of new edifices have to be coordinated. Economic and social issues are evenly important if poverty is to be understood. Unless a sense of ownership is infused into any program, participants will not demand accountability or feel accountable. Involving people

at every level of decision making within the program transforms beneficiaries into participants and ultimately everyone benefits. This may be part of the reason for the slow progress seen in the cluster of the five core villages.

Sustainability assessments of self-help-groups should always be carried out with regard to the long term. Most SHGs are not sustainable once the supporting entity withdraws, which is particularly relevant when observing the role of TCSR. Group meetings of the SHGs studied in the Babrala region dealt with savings and credit issues only without discussing other matters like awareness generation, literacy, health, sanitation, and issues affecting livelihoods. In such a situation, meetings are just a ritual without any significance. Nearly all responsibility of maintaining records, collection of savings and repayments, etc. falls on the TCSR coordinator.

Takhar and Tiwari<sup>iii</sup> state that an SHG has to fulfil following six criteria for its long term sustainability: it should establish proper processes, be financially viable, there should be a critical mass of SHGs in the village, it should become part of a larger federation, its members should be involved in some community action and the SHG should be able to access few regular schemes of the Government. The formation of a cluster can be seen as the first step towards fulfilling the three latter criteria. Nevertheless, there are still many external impediments to the development of the Babrala region such as poor transport infrastructure, great distances to larger markets, unreliable electricity, irrigation issues, illiteracy and a lack of skills. In that sense, TCSR's services are invaluable.

### **The Indian Milk Industry & Cooperatives**

Hemme et al.<sup>iii</sup> give a short overview of the Indian dairy industry in 2003. The data is a little outdated but the general picture still hasn't changed. India first became the world leader in milk production in 2001, with a volume of 84 million tons. The United States is a close second, even though farmers keep 3 times less milk producing cattle than in India. On average, Indian milk producers keep a number of two cattle, 40 times less than in the United States and over 100 times less than in New Zealand. Factors such as genetics, nourishment, management, animal husbandry practices, technology and others seem to be much more favourable in the US and New Zealand. Data from 2001 suggests that Indian dairy animals produce 10 times less than in the US and 5 times less than in New Zealand. India has a low per capita milk production, which can be

explained by the vast population and low milk yield of the animals. The opposite is true for New Zealand, where the population is small but the productivity is high.

Before the rise of cooperatives, the rural population's income came almost entirely from seasonal crops, as selling milk was unreliable<sup>iv</sup>. The marketing and distribution system for the milk was controlled by local vendors and middlemen. As milk is perishable, farmers did not have much bargaining power, such that private traders benefitted greatly. Farmers started realising that this situation would not change unless they start to market their milk themselves. This resulted in the set-up of the Kaira District Cooperative Milk Producers' Union Limited (popularly known as Amul) in 1946. In the 1950's Amul built plants to produce milk powder, butter, cheese and baby food. In the 1970's, it started acting as a marketing agency to market dairy products. Generally, the Indian cooperative structure of choice is the Anand model (see figure on the right).

Karki<sup>v</sup> defines a cooperative as a user-owned and user-controlled business that distributes benefits on the basis of use. Cooperatives differ from other businesses by three principles. First of all, the people who own and finance the co-operative are those who use it. Second, control of the cooperative is exercised by those who use it. Finally, benefits of the cooperative are distributed to its users on the basis of their use. Cooperatives are typified by a democratic process, the distribution of modern technologies, women empowerment and fair treatment. The system succeeded mainly because it provides an assured market at remunerative prices for producers' milk besides acting as a channel to market the production enhancement package. In addition, it does not disturb the agro-system of the farmers. On the contrary, profits are ploughed back into the rural sector for the common good and betterment of the member producers.

Indian cooperatives do not just face competition within the country, but also internationally. Dairies in other countries often enjoy higher productivity, lower cost of production and higher quality. Karki also identifies limited resources, a lack of skilled workforce, high establishment



costs, low margins, unprofessional management, administrative inefficiency and illiteracy as other weaknesses of the Indian cooperatives.

India is one of the countries with the highest production of buffalo milk in the world. However, productivity remains low, hence increasing the cost of production. Karki explains that the introduction of high yielding and efficient milch breeds, the arrangement of quality feeds and fodders, control over disease, fixation of optimum herd size, financial assistance to farmers, organisation of adequate training programmes, and the improvement of housing condition of the milch animals can be adapted to increase production volume of milk.

### **The Babrala region**

Two TCSR-D-TISES projects in 2008 identified the need for the formation of a cluster or a cooperative; Jackson and Rosado & Wilcox.

Jackson (2008)<sup>vi</sup> is perhaps the most relevant paper for this study. The research is conducted by a TCSR-D intern in the same area as the cluster is based, and the topics are practically interrelated. Much of the initial background check on animal husbandry in the 5 core villages<sup>1</sup> came from this paper, and some data and findings will be quoted and commented on throughout this study. Jackson describes the milk market in India by stating that 80% of it is represented by the non-organized sector which is traditional and fragmented. The organised dairy industry exists through three different segments: the government, the cooperative and the private. The cooperative sector has provided a significant contribution in the reduction of poverty among the rural population, whereas the opposite is true for the private sector where large profits go to the middle men. He also notes that the cooperative movement in the Babrala region is poorly established which is particularly important for this project.

Jackson found that within the Babrala region the small scale farmers are the main stakeholders in the local dairy industry. They hold on average 2.83 milk producing animals, but get relatively low revenue from their milk as they sell their milk to private milk vendors within the villages. A lack of knowledge of alternative routes of milk sales, a monopoly and exploitation by the local

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<sup>1</sup> Note: There are actually 7 villages in the core command area of TCSR-D, but some villages are counted together. Furthermore, one of the core command villages is currently not involved with the cluster.



private dairies and poor animal husbandry techniques were seen as the main reasons for the stagnation of the local milk industry.

Jackson finally proposed that TCSR D start a new cooperative society as he found it unfeasible for farmers to sell to the existing private dairies and the local cooperative. The private dairies gave the farmers little control over the price they got for their milk, and the middle men took large cuts of the profit away from the farmers. The existing cooperative in the region was an unfeasible option as well due to the level of corruption existing at the local level, and the poor prices the farmers were receiving due to this dishonesty.

A more immediate solution was pursued by TCSR D rather than starting a cooperative from scratch. Mother Dairy, a Delhi-based cooperative, has opened several milk collection & chilling centres in the region, most notably in Bakhroli and Sirorakagi. The nearby villagers are able to supply their milk directly to Mother Dairy, but this is not the case for the rest. At the time of this paper, only Kail Ki Marhiyan had a direct link to Mother Dairy. A project was set up by the Animal Husbandry & Income Generation coordinators of TCSR D to link the rest of the core command area to Mother Dairy by setting up its own chilling plant in Mehua Hasanganj and setting up collection centres in each of the villages.

Rosado and Wilcox (2008) dealt with a project aiming to improve the livelihood of the villagers in the Babrala region through agricultural interventions. The main recommendation of the paper is that TCSR D should expand upon the current self-help group model (see appendix) and encourage farmers to participate in a group based agricultural venture. It is claimed that farmers are willing to form larger groups to join economic resources, assist farmers with their input needs, and go longer distances to sell crops. This research is greatly reflected in the set-up of the Sewarhi Sangh cluster, which is the focus of this paper.

## **Mother Dairy**

### **Company Profile**

Mother Dairy is one of the most successful brands of milk in India, selling over 2 million litres of milk a day. Mother Dairy is known for its quality in both products and service, resulting in a significant market share in the organised sector in and near Delhi. The National Dairy Development Board (NDDB) commissioned Mother Dairy in the first phase of Operation Flood in 1974. The company is a highly regarded household name for its wide range of products like liquid milk, flavoured milk, ice cream, butter, and Indian dairy products such as dahi, lassi, and ghee.

Mother Dairy is not driven by profit-maximising objectives. Rather, it tries to ensure that the welfare of its main stakeholder, the rural milk producer, is ensured. Mother Dairy strives to provide farmers with a fair price for their milk. This is an unusual approach as the price given to the milk producers is not seen as a cost but as an objective. According to its website, Mother Dairy's main objective is to 'carry out activities for the economic development of agriculturists by efficiently organizing marketing of milk and dairy produce, agricultural produce in raw and/or processed form and other allied produce'. This is achieved through organised and centralised processing, quality control, administration and marketing.

### **Financial and Social Analysis**

The analysis of Mother Dairy has been conducted through a modified version of the RISE Social Venture Rubric. The RISE SVR is a diagnostic tool that was developed at Columbia Business School to aid the in-class evaluation of social ventures. It was designed to stimulate for discussion and to help a student, entrepreneur, investor or consultant identify points of relative strength or weaknesses of a social venture. At Columbia, a social venture is defined as a non-profit or for-profit venture that explicitly aims to achieve two kinds of returns: financial return through earned income or revenue, and social returns by creating tangible positive impact on society at large. Typically, bullet points are employed in a rubric to provide a quick overview and evaluation of the rubric. The topics are discussed in more depth here in order to provide the reader a better understanding of Mother Dairy's operation. Scores are given for each category, but this should merely be seen as an indicator rather than an in-depth evaluation.

## Market Potential and Rate of Return (5 out of 10)

*What is the financial return?*

In 2009, expected turnover was 40 billion Rs. In 2008, actual turnover was 32 billion Rs.<sup>vii</sup> However, profitability seems to be unstable at best. For example, in 2007 Mother Dairy posted an operating loss of 230 million Rs in its dairy segment<sup>2</sup>.

*How large is the target market? What percentage of total market is it?*

Mother Dairy Milk has a market share of 66% in the branded sector in Delhi where it sells 2.3 million liters of milk daily and undertakes its marketing operations through around 14,000 retail outlets and 845 exclusive outlets of Mother Dairy. The percentage of the total market is quite small for the milk category since it only focuses on 4 areas. Similarly, the product category was largely based in Delhi, although expansion to other locations has been stronger in recent years.

*What are the economic risks for Mother Dairy?*

Two critical risks can be identified; insufficient supply and increasing competition. Procurement of milk can be particularly difficult in rural areas due to a lack of infrastructure and awareness, bad animal husbandry practices, etc. Irregular weather conditions have also caused a slump in milk production. Mother Dairy has been facing very slow growth in its milk procurement operations, leading to an increasing reliance on expensive alternatives such as skimmed milk powder from abroad. Compounding this problem is the fact that Mother Dairy faces stiff competition (both in procurement and distribution) from cooperatives and private dairies.

## Product/Service (9 out of 10)

*Define all product/service lines, now and in future.*

Mother Dairy markets & sells dairy products under the Mother Dairy brand (like Liquid Milk, Dahi, Ice creams, Cheese and Butter), Dhara range of edible oils and the Safal range of fresh

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2 A lack of financial reports on the NDDB and Mother Dairy websites prevent a more thorough analysis.

fruits & vegetables, frozen vegetables and fruit juices at a national level through its sales and distribution networks<sup>viii</sup>.

*How strong is demand for these? Will it grow or change over time?*

Annual growth has consistently been 20-22 percent over the last few years. Demand is very strong; in 2009 MD announced a Rs 1 billion expansion plan to add 4000 points of sale and double the number of pushcarts<sup>ix</sup>. There is a strong growing demand for milk, which is projected to be 180 million tonnes per annum by 2021-22 as against 105 million tonnes in 2010<sup>x</sup>.

*What is the lifecycle of this venture? Is demand aligned with pace of growth and return expectations?*

Mother Dairy has been running since 1974, and does not seem to reach the end of its lifecycle any time soon. Growth in the first two decades of its life was particularly slow as it largely focused on selling milk in Delhi. The growth of MD's operations has accelerated rapidly in the past decade, but demand for milk and dairy products still exceeds supply. Furthermore, there are still many areas in which procurement can be intensified. Five northern States — Uttar Pradesh, Rajasthan, Punjab, Haryana and Madhya Pradesh — produce almost half of India's milk. But their share in total cooperative milk procurement is slightly over 17 per cent. In Uttar Pradesh, this number is a low 1.58%<sup>xi</sup>.

*Are lines of business complementary, aiding in cashflow, or disjointed and irregular?*

The different product lines are essential to MD's growth and cashflow. Mother Dairy only sold liquid milk until it expanded its product portfolio in 1996. Its product category grew at approximately 30 percent in the past few years, compared to 10 percent in the milk category. Its plans for expansion are limited in the liquid milk category, as strong cooperative brands are already established. Only Delhi, Ahmedabad, Mumbai and Hyderabad. Dairy products are less established in India, so Mother Dairy's strategy has a strong focus on this segment.

**People (2 out of 10)**

*Are the people involved capable of running the venture?*

It is particularly evident in the 5 core villages that Mother Dairy is too understaffed, leading to ineffective procurement. Local villagers could be trained to play the roles of Mother Dairy staff as a form of wage employment, but this can be difficult due to low literacy and numeracy skills in the area. Little improvement will happen without the intervention of TCSR D.

### **Competitive Insulation (6 out of 10)**

*Are there clear barriers to entry?*

The first barrier to entry is the presence of many established cooperatives and private dairies. Although the market is far from saturated in some areas, new entrants are unlikely to make an impact. Brands and reputations are important in this product category. Mother Dairy has been building trust with its Delhi customer base for nearly four decades now, but it might experience difficulties getting the same result in locations where its competitors are already present. The second barrier to entry is the difficulties involved with procuring milk from rural producers. The Amul model has already been copied successfully, but it requires enormous time and effort.

*Who are competitors, now and in the future? Any threats/opportunities?*

The biggest threat comes from the top 2 dairy brands in India; Amul and Nestle. However, competition is stiffening from other players as well. Purnendu Kumar of Technopak, a prominent retail consultancy firm, is of the view that the foray of large companies such as Reliance Retail and Birla Retail, and that of local progressive dairy farmers' unions in various pockets who, with the assistance of nationalised banks are mulling to set up retail outlets, might be a cause of concern for Mother Dairy<sup>xii</sup>. In terms of procurement in the rural areas, Mother Dairy experiences competition from private dairies such as Pars Dairy and Heinze.

### **Mission Context/ Theories of Change (8 out of 10)**

*What is/are the venture's mission(s)? How important is this mission? To whom?*

MD's mission is to carry out activities for the economic development of agriculturists by efficiently organizing marketing of milk and dairy produce, agricultural produce in raw and/or processed form and other allied produce. This is of great importance to rural milk producer, who will not get a fair price in the unorganised dairy sector.

*What are the theories of change of this venture? What are its key assumptions?*

If we provide milk producers the opportunity to join the cooperative, they will enjoy economies of scale and scope (marketing, distribution, procurement, transport, product diversification, etc.) which will allow them to receive a higher price for their milk.

*Is the mission or leveraging strategy unique?*

This strategy is known as the Anand cooperative model. By building village level collection centres, it is possible to collect raw milk from a large pool of rural milk producers. Decentralized procurement is then followed up by centralized processing and marketing.

*Are there potential competitors/partners in this area?*

At the national level, most of the competition comes from Amul and Nestle. In the area surrounding Babrala, the main competitors are local milk vendors who sell to private dairies. Although they offer significantly lower prices, they are able to procure milk from farmers who are not aware of or do not have easy access to a Mother Dairy milk collection centre. Mother Dairy cooperates with TCSR in Babrala.

*Are there any likely political risks in this market?*

The revival of the milk industry is a result of a high degree of government intervention. Many policies have been introduced and/or modified since the start of Operation Flood in 1974, and this is unlikely to cease. Therefore Mother Dairy is always subject to potential political risks at the national level. Political risk also exists at the village level, since it is not always easy to convince the producers of the benefits of a cooperative. In some cases, it takes several months to convince the local decision makers to form linkages with Mother Dairy.

### **Social/Financial Alignment (5 out of 10)**

*Where in the venture does the social mission occur (product, supplier, profit donations, workforce etc.) What are the key drivers of desired social outcomes?*

The social mission is focused on benefiting the suppliers; by giving them a fair price it is possible to reduce poverty in rural areas while at the same time satisfying the demand for milk in India. The key driver is an efficient supply chain from the village level to the national level.

*Where are the alignments and friction points between this mission and financial return?*

From a financial point of view, it is obviously better to keep the price given to suppliers as low as possible. Since the price for the producers is the social mission, one can easily spot a serious friction point. Cost savings need to be found elsewhere, but often a price hike is just being pushed onto the end-consumers. The economies of scale and scope, as well as the efficient supply chain, can be seen as the major alignment between social and financial return,

### **Metrics (4 out of 10)**

*Has venture clearly defined success on its mission? Has the venture distinguished outputs or outcomes? Targets for those? How credible are its metrics or goals?*

Little information could be found on the precise metrics Mother Dairy employs since annual reports were not available on the website at the time of research. Presumably, outputs include the price of milk for producers, the consumer price of milk, cost savings, the number of producers reached, procurement rates, and so on. Outcomes were not clearly defined; little was mentioned about poverty reduction in specific terms.

*How feasible it is to collect information to know when and how org is successful? Are systems in place?*

Collecting information on the outputs should be fairly easy to achieve. Each milk producer is registered at the collection centre, so Mother Dairy knows how much milk is collected, how many producers are benefiting (and to what extent), and so on. However, it is unclear whether any effort is made in measuring success in terms of outcomes.

*If successful, is there significance for this venture at the scale at which it is operating?*

Mother Dairy is certainly making an impact, but it needs to scale up its procurement operations. Local procurement barely seems to increase, such that currently a large proportion of its milk comes from (expensive) imports. Furthermore, it does not seem to provide animal husbandry

services as other cooperatives do. These inconsistencies can most likely be blamed on the large scale on which Mother Dairy operates on and to the lack of infrastructure in rural India.

TCSR's efforts of building a cluster to provide market linkages and animal husbandry services would probably not have been necessary had it not been for Mother Dairy's inefficiency at the villages in Badaun.

### **Pace of Growth (7 out of 10)**

*Is venture growing slow/medium/fast. Why?*

In the nearly four decades that Mother Dairy exists, growth has been relatively slow due to its immobility and inflexibility in terms of location and product portfolio. Since it is based in Delhi, it has become the largest player there, but it has captured little to none of the other markets in India. It also lags behind Amul when comparing product portfolios, but it does experience fast growth in this category. In more recent years, growth has been approximately 10 percent in the milk category and 30 percent in the dairy product category.

*Is the pace of growth correct for this venture?*

The first-mover advantage is critical in the dairy market, since cooperation with local organisations and governments is necessary to succeed. Furthermore, it takes time to build a brand which consumers trust. Mother Dairy's still has the opportunity to catch up since the market is largely unsaturated, and its expansion plan should go a long way in doing that.

### **Legal Form (10 out of 10)**

*Is venture correctly incorporated to achieve its financial and social goals? Should the venture change form in any way?*

Mother Dairy is structured as a cooperative, which is a business organization owned and operated by a group of individuals for their mutual benefit. They can be defined as autonomous associations of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through jointly-owned and democratically controlled enterprises. This is a tried and tested model which Mother Dairy has no reason to stop following.



## Sewarathi Sangh Cluster

### **Overview**

The Sewarathi Sangh cluster was set up in February 2009, with 16 SHGs as its initial members. To date, 4 SHGs have dropped out, such that only 12 groups deposited 50 Rs per month, adding up to approximately 10,000 Rs. Another 3,000 Rs was earned through interest from inter-lending and an outsourced assignment<sup>3</sup>, such that the total funds available currently stand at 13,000 Rs. The cluster has not received any additional external funding till date.

The legal form of the cluster hasn't officially been determined yet, but plans have been made to register it under the Society Registration Act of 1860. The cluster also does not have a physical space (yet), instead the executive board meets every month in the TCSR village house on the third Wednesday of the month. The executive board consists of one representative for each of the twelve SHGs active in the cluster. Out of the 12 representatives, 3 have been elected for the positions of president, secretary and treasurer.

The purpose of the cluster formation is six-fold:

1. To nurture the SHGs; if successful the cluster will take over (some of) TCSR's role as facilitator in the development of the rural population through SHGs.
2. To act as a conflict resolution body for SHGs and its members. Although the executive body has no formal or law enforcing power, it can exert social pressure to straighten out any issues. For example, one of the issues it had to sort out in the past was the financial irregularities one of SHGs experienced. The board discussed the solution to the problem and exerted peer pressure to enforce its decision,
3. To provide a forum for the sharing of technical knowledge, information on government schemes, and so on. At every monthly meeting, the executive body invites an expert on animal husbandry, seed production, government schemes, horticulture, or other topics. Since one representative from each SHG is present, they will be able to disseminate the information they received to their respective SHG peers.

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<sup>3</sup> Serb UP Gramin Bank employed TCSR to perform a financial inclusion study on payment basis. In turn, TCSR outsourced the assignment to the cluster.

4. To develop the capacities of SHGs. Training programmes on auditing, animal husbandry, healthcare, agriculture practices, and so on complement the knowledge sharing forum discussed in point (3). It also uses the same dissemination principle.
5. To improve the microfinance possibilities for SHGs. Most of the SHGs in the cluster are already linked with banks if they need financing. However, inter-loaning could be encouraged among cluster members in order to keep a significant margin of the loan interest within the cluster. Bank linkages are important, but if SHGs can organise themselves to match supply and demand of their collective funds, they are better off.
6. To provide SHGs (and the rest of the local farmers) with market linkages. The ultimate goal of the cluster is to be able to reach markets all over the Buduan District. One of the main reasons for the low price milk producers received is the fact that they were not aware of alternative markets for their product. Linkages to Mother Dairy and other markets expand their options dramatically. Similarly, individual farmers generally sell their crops in local markets at relatively low prices. By cooperating through the cluster, transportation costs can be split amongst all the farmers to reach larger markets.

## Sustainability Assessment

<b>Overview</b>	Name	Sewarathi Sangh	
	# SHGs	12	
	Location	6 villages	
	Gender	4 male & 7 female	
	# Members	166 members	
	# years active	2-8 years	
<b>Financial</b>	Savings	12 out of 12	691775 Rs
	Bank loan	8 out of 12 (all female)	597000 Rs
	Interloaning	12 out of 12	2836510 Rs
	# loan receivers	122 out of 166	
<b>Processes</b>	Meeting Frequency	Monthly	
	TCSR presence	10 out of 12	Not for Arya & Shri Gangey KKM
	Avg. attendance	82%	
	Saving frequency	Monthly	

Knowledge sharing	Yes, through TCSR
Skill training	Yes, through TCSR
Leadership rotation	Not unless necessary      Only 1 SHG rotated
Audit	Yes, through TCSR

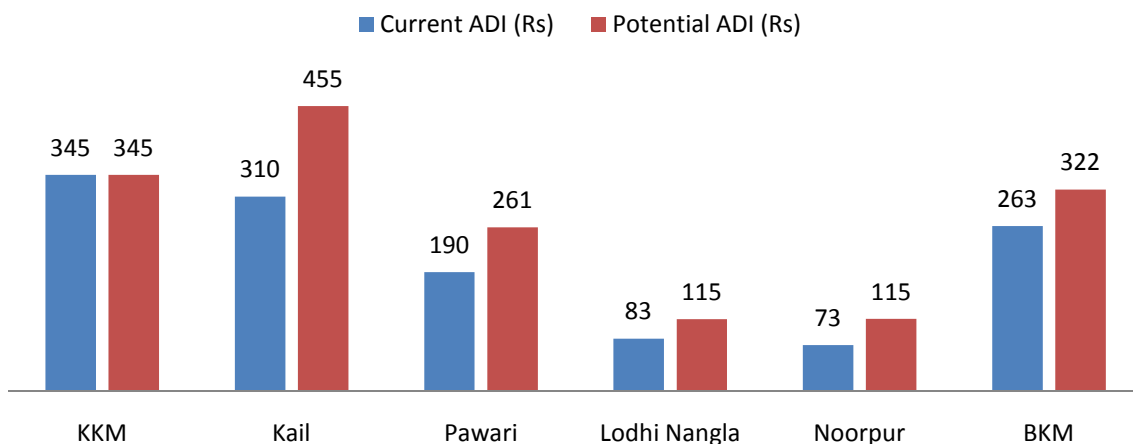
## Livelihood

# Income generators	133 out of 166
Community action	3 out of 12 SHGs
Government schemes	Yes, through TCSR
Networking w/ SHGs	Mostly at cluster meeting
Can read	m = 75%, f = 15%
Can write	m = 75%, f = 10%
Can do calculations	m = 90%, f = 50%
Use mobile phone	m = 95%, f = 70%

## Dairy Production

<i>Avg. Daily Income</i>	Current (Rs per member)	Potential (Rs per member)
KKM	345	345
Kail	310	455
Pawari	190	261
Lodhi Nangla	83	115
Noorpur	73	115
BKM	263	322

## Avg. Daily Income from Milk Sale



The sustainability assessment report shows that the SHGs involved are typically resourceful, have access to bank loans, and show adequate loan rotation. The SHGs are well run in terms of processes, but this is very much dependent on the presence of a TCSR D coordinator (especially the female groups which have lower literacy and numerical skills). Only two SHGs run independently, both male. It should be noted that one of these independent SHGs, namely Shri Gangey KKM, has achieved 100% attendance by conducting its meetings in the evenings. Typically, attendance problems in the other groups occur due to members' obligations in their agricultural occupations. Moving SHG meeting to a later hour has been beneficial for SG KKM, but this cannot be replicated for the other SHGs until they are able to run without a TCSR D coordinator. Of course, this should not be seen as the main reason for seeking independent meetings as it is in itself a desirable goal for empowerment purposes. Also, the less TCSR D has to micro-manage the SHGs, the more it can focus on the development of Sewarthy Sangh or other projects. Another notable point is the room for income enhancement of the villagers when linked to Mother Dairy (see graph above). The map below allows us to understand why only KKM villagers receive a fair rate for their milk.

Criteria	Performance
Processes	 Well run, but depends too heavily on TCSR D micro-management
Financial	 Savings: 7 Lakhs - Bank Loans: 6 Lakhs - Inter-lending: 28 Lakhs - Repayment: 100%
Critical mass of SHGs	 At least 150 SHGs in region
Federation membership	 Membership, but ineffective cluster
Community action	 3 out of 12 SHGs
Access to government schemes	 Yes, but dependent on TCSR D

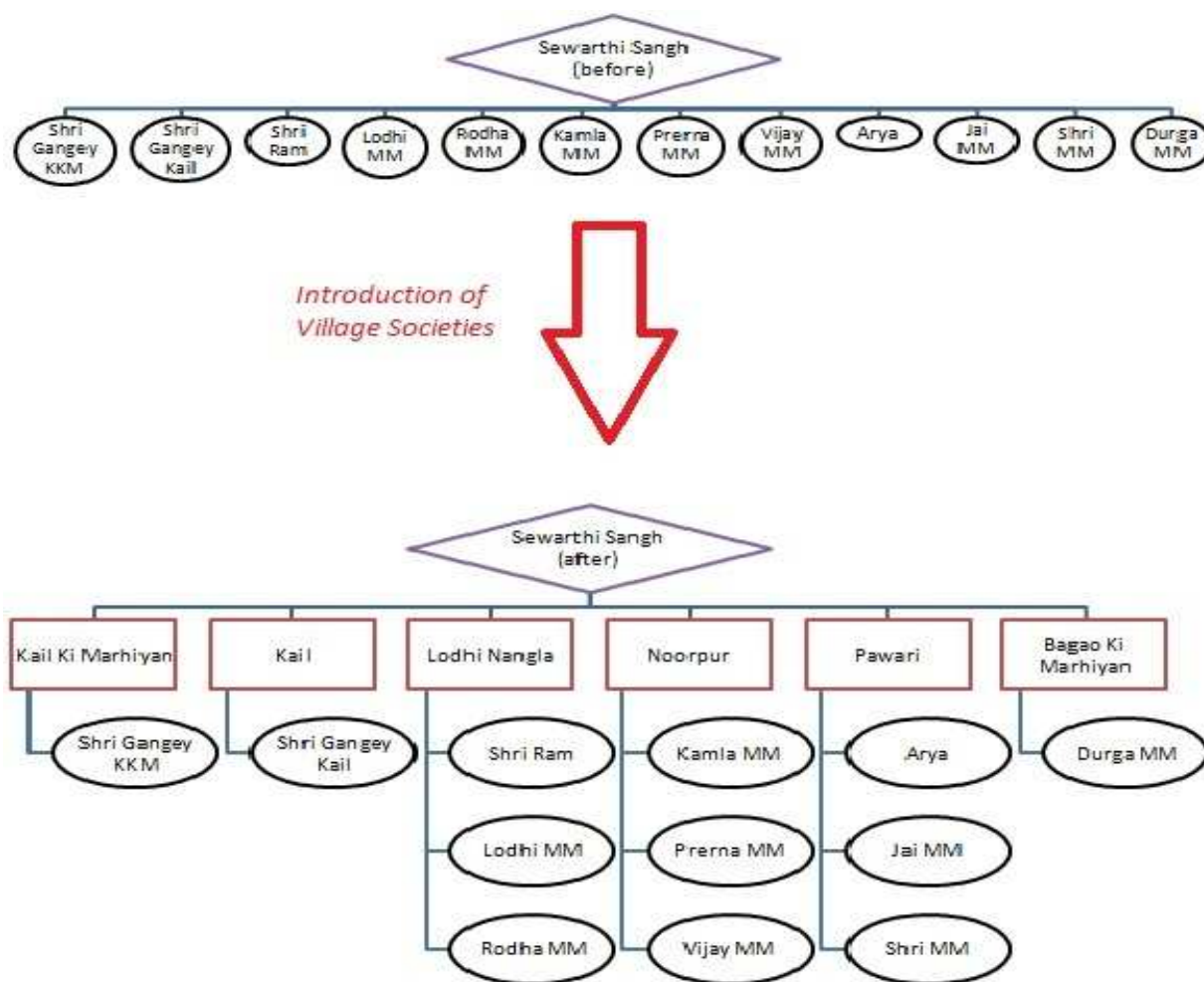
## **Problem Analysis & Recommendations**

### **Problem 1: No presence at the village-level**

The current physical structure of the cluster is two-tiered; the cluster works at the community-level and at the group-level (SHGs). The absence of a village-level entity is striking, and may explain a great deal of the slow progress that has been made in the cluster's 18-month existence. Sewartha Sangh lacks a physical presence in each village such that no one feels involved with it. At the present only 12 members are actively involved each month with the cluster (in reality, only 8 out of 12 attend the monthly meeting on average), the rest does not get involved and is rarely aware of the discussions held during the monthly meetings.

#### **Recommendation: Use village milk collection centres as Village Organisation**

Knowledge sharing as well as service delivery can be enhanced by introducing a village-based entity. The need for village-based centres has also been established by Dayanand Kumar<sup>xiii</sup>, a management trainee at TCSR, who proposed the set-up of Agricultural business centre with facilities of chemicals, small equipments and a trained person in each village. The introduction of village societies will prove to be instrumental to the scaling capacity of the cluster as it will increase non-member exposure to the benefits of joining a cluster. If business centres are being built as per Kumar's project proposal, then the cluster could be run from there. In the immediate absence of such locations, village societies should be run in the same location as the village milk collection centres, as farmers will come to these locations twice a day. This will prove to be a more cost-effective strategy, as all that will be required is the selection, training and wages for one Village Society Worker. The VSW will be employed by the cluster to promote and sell its services and goods during the same time that milk producers supply their milk, 2 hours in the morning and 2 hours in the evening. In addition, the trained worker could also become a source of information for the villagers. A disadvantage of using a milk collection centre as Village Society is that it will limit the number of services the cluster can provide to those which do not require extensive storage. This can be circumvented through appropriate supply management. For example, fodder and supplements can be ordered in the morning, delivered in the afternoon by Mother Dairy (or picked up by the VSW) and sold in the evening in order to avoid storage-related issues.



An estimate of the cost requirements for a 1 year trial of this Village Society Worker programme can be seen below:

VSW requirements for one village	Costs (Rs)
Training (1 week)	5000
Stipend	300
Honorarium	24000
Notebooks, pens, etc.	100
<b>Total</b>	<b>25400</b>

## **Problem 2: Lack of participation of the Executive Board members**

Knowledge sharing and capacity building of the SHGs can only be achieved if all SHG representatives are present at the monthly meetings, but attendance has been abysmal. A 10 Rs penalty fee is imposed on absentees, but this does not deter the representatives from ignoring their responsibilities. Over the past year and a half, 63 instances were recorded of absenteeism. Some other system is required to restore the participation rates, as the nominal penalty fees are clearly not working. The SHG representatives that were present at the August meeting suggested that a solution to this problem could be to increase the penalty to make the consequences of absenteeism for significant, but this would not be a good course of action. This could prove to deter other SHGs from joining, or could even push existing members to quit.

Behavioural economics studies show that imposing the penalty fee system transforms a social transaction into a financial transaction, which often causes adverse results. For example, consider a case in Israel where a nursery started imposing a penalty fee system for parents who were late to pick up their children<sup>xiv</sup>. As soon as the social transaction was transformed into a financial transaction, more parents came late. Similarly, by imposing a 10 Rs penalty fee, representatives are presented with a choice between two financial actions with different expected values:

1. Lay down the agricultural work and come to the meeting ( $EV = 0$  Rs)
2. Continue with the agricultural work [AW] and pay the 10 Rs penalty ( $EV[AW] - 10$  Rs)

If the expected value of doing agricultural work  $EV[AW]$  is greater than 10 Rs, then the rational action of the representative would be to not attend the meeting and continue to work in the field.

*Recommendation: Remove the penalty system & emphasise the representative's social obligation*

By removing the penalty system, it may be possible to restore the meeting's image as a social obligation, rather than as a choice between two financial alternatives. This can be difficult in the initial stage, as was proven in the nursery's case. After removing the penalty system, parents still kept coming late as they were still seeing their actions as a financial rather than a social transaction. Therefore, it might take some time and effort to increase attendance. What is important is that TCSR makes it clear to the SHG representatives that by not showing up, they are doing wrong to both the other representatives as well as to their peers in their respective SHG. One suggestion could be to install a pledge, like in the case of the Lijjat Papad cooperative in Mumbai. Every member who joins pledges, ". . . we will make all-round effort to ensure that

the bens get real fruit of their labour and we will not allow to happen any type of economic loss to the Institution knowingly, unknowingly, directly or indirectly. We are aware that it is one of the very important traditions of our Institution that neither sister-member nor employees take away wrongfully any money or material from the Institution. Those who take away money or materials wrongfully from the Institution are either beggars receiving alms from the bens or thugs and robbers extricating bread from a sister's mouth." Something similar could be introduced for Sewartha Sangh. Ideally, this would also be done in writing, as behavioural studies suggest this will make a more lasting impact.

### **Problem 3: Cluster membership has no real benefits (yet)**

The main impediment on Sewartha Sangh's scaling potential is the lack of benefits members get from joining the cluster. Participants in the focus group identified two main reasons why they joined the group; getting access to an additional source of finance in case of emergencies and getting outsourced assignments from TCSR. Extra financing is beneficial, but it hardly solves a problem in the region as all SHGs have received cash-credit limits from a bank. In addition, only one outsourced assignment has been provided to the cluster members so far.

#### *Recommendation: Cheaper inter-lending + marketing outsourcing*

Most of the cluster members from the six focus groups indicated that they joined the cluster to have an additional source of funding should the need arise. What they did not seem aware of, was that inter-lending also has other benefits. When SHGs get Cash-Credit Limits awarded from the bank, they are allowed to take up loans up to 25-30 times their savings at 12% per annum. The interest rate on savings is 3.5% per annum. If the SHGs of the cluster start lending amongst themselves, the cluster benefits from that 8.5% margin between loans and savings rate. If a SHG has surplus funds which it is willing to loan to a needy SHG, it will receive 7% per annum on the funds it provides, double the bank savings rate. The initial plan was for the SHG that takes on the loan to pay the same 12%, such that the cluster gets 5%. However, it is my recommendation that the rate would be adjusted to 10%, in order to increase the appeal of taking a cluster loan compared with a bank loan. By bypassing the banks and replacing them with SHGs, all members of the cluster benefit.

Following discussions with 6 focus groups, as well as an analysis of the TCSR animal husbandry services, it is my recommendation that the cluster initially focuses on promoting cattle



financing as well as insurance services on behalf of TCSR in the core command area. These services have proven to be very important to local farmers, but hard to get by or expensive if pursued on their own. Few interest-free loans have been provided for Murrah purchase by TCSR, whereas only 21 animals have been insured for the year 2009-2010. The reason for this low intake is the time and effort it takes to promote these services adequately, rather than a lack of interest from the local farmers. Since the cluster members are expecting to get income generating activities outsourced to them, this suggestion presents a win-win situation for both TCSR and the cluster members.

#### **Problem 4: SHG dependence on TCSR coordinators**

Most SHGs in the core command area still rely on TCSR to manage their meetings. The TCSR often plays the role of president, secretary and treasurer, hence transforming the monthly meetings into a meaningless ritual of depositing 50 Rs and signing their name. Account maintenance and the calculation of interest are all done by the coordinators due to the difficulties SHG members experience. Even in the few cases where SHGs are able to run their meetings individually, TCSR still has to collect the data from them to ensure that account maintenance is done correctly. Since data is processed manually, a lot of time has to be dedicated to the digitisation of the accounts. This is not done immediately, making data analysis very difficult. Since TCSR coordinators of the Income Generation department spend a lot of time on micro-managing the self-help-groups, they are not able to contribute as much as they could on a larger scale.

*Recommendation: see Pragathi project proposal in subsequent chapter*

#### **Problem 5: Slow inter-loaning process**

Although inter-loaning is still not available at the cluster-level, it is already evident that the current process design is slow and inefficient. Consider the following fictional case. Akash, a male member of the Shri Ram SHG in Lodhi Nangla, needs an urgent loan to buy pesticides for his vegetable farm. After meeting with his SHG, he finds out that there are not enough funds available to provide him with a loan. Under the current plan, he would have to wait until the next cluster meeting in order to request funding from other SHGs. Let's assume that the representative from Jai Mahila Mandal, a female SHG from Pawari, mentions at the cluster

meeting that the group has funds available, but she is unable to provide him with a direct answer as she would have to meet with her SHG peers to discuss whether they are willing to provide a loan. In the worst case scenario, this process can take up to three months, which is too late to save Akash's vegetable farm. Information asymmetry in this case has been costly to both the individual searching for funding as well as for the SHG which could have earned 7% interest, double the savings rate. The only thing Akash can do to speed things up is to call emergency meetings for his SHG and the cluster, and hope that the Jai Mahila Mandal representative calls for an emergency meeting as well. Since attendance problems are already present at scheduled monthly meetings, it is doubtful that this would effectively happen.

*Recommendation: see Pragathi project proposal in subsequent chapter*

### **Problem 6: Lack of transparency can result in dairy intervention failure**

The current plan for the dairy intervention seemed very solid; little room for improvement is available. In every village, there seemed to be an interest to start a milk collection centre similar to that in KKM. There may be some difficulties to start up a milk collection centre in Noorpur through the existing SHGs, so other SHGs might have to be recruited at a later stage. The focus groups conducted made it very clear that the main risk to the dairy intervention is mistrust, which can be found on several levels. Some villagers pointed out that they cannot trust the milk collection centre operator to provide them a fair rate. The SHG which already was linked to Mother Dairy mistrusted the cooperative, and felt that the Mother Dairy managers might use unfair practices to underpay the farmers. One member from Shri Gangey Kail, who used to be a milk vendor, explained that much of the mistrust is not misplaced. He stated: "as long as the supply chain of milk procurement is not fully transparent and accounted for, suppliers will keep adding water to their milk and buyers will keep cheating the farmers out of their money".

Whether that statement is accurate or not will be difficult to prove, but the consequences of mistrust are clear. As long as the farmers cannot trust the cooperative system to treat them fairly, they are likely to keep supplying their milk to the local vendors.

One of the possible solutions would be to follow the same model as can be found in Amul Cooperatives: testing and payment is done immediately at the village-level. Mother Dairy already employs Automatic Milk Collection Stations at their collection centres in Bakhroli and Sirorakagie. The Automatic Milk Collection Station is an integrated unit which automatically

measures the weight, fat and SNF content, as well as calculates the price output of the milk supplied. The equipment also helps the milk society in maintaining records of suppliers, milk collected and past price data. The equipment operates both on battery and main and is able to process and record data in less than 30 seconds. Typically, such a system comprises of a Milk Weighing Unit, an Electronic Milk Tester and a computer (including receipt printer). The main issue is that the total package is too expensive to be placed in each village; Mother Dairy is simply not willing to pay that much. A more cost-effective solution is required.

*Recommendation: see Pragathi project proposal in subsequent chapter*

## Pragathi

### **A mobile based system as solution to Problem 4, 5 & 6**

A mobile based system is suggested to manage the transactions and proceedings of SHG meetings. In addition, the system can be used to disseminate information from the cluster to all of its members, as well as replace expensive components of the Automatic Milk Collection Stations to enable village-level testing. A whole dissertation can be (and has been) written about Pragathi. The chapter in this paper is aiming to introduce and recommend the concept to TCSRDR, rather than provide an in-depth analysis. For more details about the project, see footnote<sup>4</sup>.

Specifically, a project called Pragathi should be considered for this. Pragathi is a shared mobile system (one or more phones per group) to document the SHG transactions and for efficient account management. The system operates over online network with data sharing capabilities across the hierarchy (i.e. TCSRDR and the cluster) for monitoring the quality of SHG operations. This project suggests the use of a shared mobile phone in Self-Help-Groups which can verify the user's identity through fingerprints and which uses a mobile printer to produce receipts. There are several benefits to this system:

- Simplifying the account maintenance and reducing dependency on TCSRDR (see problem 4) and thereby enhancing group's freedom. This can be done by displaying the group financial statistics and digitizing data entry, which can help in preventing duplicate entry of data and can help in building transparency and trust across the system.
- Making every member aware of his/her financial situation. Members generally have difficulties understanding how much interest they need to pay and how much in return they are gaining for their savings.
- Reducing dependency on the treasurer by making the account information viewable for all members at any point of time. Although no individual alone should be allowed to

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<sup>4</sup> Vijay Pavan, 'Technology bases system to support women Self-Help Groups of Andhra Pradesh, India.' National Forum on Mobile Applications for Inclusive Growth and Sustainable Development. 08 April 2010, New Delhi. Contact details have been provided to TCSRDR.

edit/enter the account information, accessing the same for planning and visualizing personal expenditures should be an objective.

- Information dissemination to the members. Pragathi could be designed to send loan information, employment opportunities, market rates and weather information etc. These can be achieved through periodical alerts to group or members. This is a particularly interesting solution for problem 5, as it removes the information asymmetry and the lack of communication among cluster members. By equating supply and demand, it will be possible to reduce effective loan rates and increase effective saving rates of cluster members.
- Pragathi could also make it easier to manage rural villagers who aim to invest the loans for income opportunities. Expenditures can be tracked for every member and trends can be analysed to identify threats and opportunities.
- Finally, the technology system can also be used to replace the computers necessary for village-level testing of milk (see problem 6). The same level of functionality is maintained, whereas this solution is more cost-effective as it replaces the cost of a computer and electricity generator by the cost of a mobile phone.

See below for an approximate budget for the development of a prototype for the cluster (12 SHGs):

Items	Cost (Rs)
<b>Mobiles &amp; Finger Printers</b>	40,000
<b>Production of lockets</b>	30,000
<b>Application coding and scripting</b>	60,000
<b>Travel &amp; accommodation costs</b>	40,000
<b>Miscellaneous expenditure</b>	10,000
<b>Cost for additional application</b>	20,000
<b>Total</b>	<b>2,00,000</b>

See below for sample pictures of how the application works.



Financial status  
At group level  
Savings in bank  
Amount in hand  
Interest over savings  
Savings in VO

Financial status gives an out look of group's financial reserves & commitments by that month



Bank loan register  
For a member (name & no.)  
Total loan value  
**This month's installment to be paid**  
(blinks)  
Break up of amount to be paid as Principal + Interest  
Next month's installment

Application by default goes to the option where the member has to enter the amount for the month and it blinks the amount that is supposed to be paid. Application also displays the breakup of the installment

## **Focus Groups**

### **Focus Group 1: Shri Gangey SHG from Kail Ki Merdhiga (30/07/10)**

Shri Gangey is a male SHG with 20 members from the Kail Ki Merdhiga village, also known as KKM. Overall, the SHG owns 40 local buffalos, 15 Murrah buffalos, 4 cross-bred cows and 7 local cows. The Murrah buffalos are the most productive cattle breed as they produce a yearly average of 7 litres a day. Next are the cross-bred cow (6 litres), the local buffalo (4 litres) and the local cow (3.5 litres). On average, each milk-producer has a daily production of 15.7 litres, of which he keeps up to 2 litres for his own consumption. Since the group sells its milk to Mother Dairy, each member can get up to 300 Rs a day (depending on the fat and SNF %). This is a significant improvement on their situation last year, when they were dependent on local milk vendors which paid 14 Rs per litre.

Shri Gangey is the only SHG from the cluster which is linked to Mother Dairy at the time of writing. Twice a day a MD employee, who is paid a commission dependent on the amount he collects, brings the milk from the KKM collection centre to the Mother Dairy collection & chilling centre. The employee essentially acts as the SHG's representative; he drops off the milk, receives a receipt, and takes it back to the SHG. Payment is made three times a month. For some reason, the milk producers do not get their receipts promptly, but often have to wait up to 3 days. This leads to a lot of mistrust in Mother Dairy, and some members even claimed that they are not getting paid for the full amount they supply. This reflects the sentiment observed two years ago<sup>xv</sup> by TCSR intern G. Jackson, who concluded that the existing co-operative structure in the region is not a viable model as the existing management had too high a level of corruption for the small-scale farmers to see any benefits from the society. It is difficult however to observe whether the accusations of corruption are accurate or not. Even if the corruption were non-existent, it is clear that the current procurement system does not instil trust with the farmers. This is regrettable as Shri Gangey could have functioned as a model group to convince the other SHG's in the cluster to link up with the market as well. In order for this to work, satisfaction levels need to be much higher.

The SHG members were also asked about the animal husbandry services they currently receive. This was done in order to establish the degree to which they are dependent on TCSRDR for the well-being of the cattle and the prosperity of their small enterprise.

*Cattle acquisition:* Over the past two years, 3 trips to a cattle market in Etah (200 km distance from KKM) were organised by TCSRDR. Twenty cattle were purchased during that period. The cost of transport, accommodation and food were fully accounted for by TCSRDR.

*Fodder:* The farmers did not seem to purchase any external fodder. When asked why, they replied that there was no need for it.

*Artificial Insemination:* Over the past two year, artificial insemination was used for 70 of the farmers' cattle. This was organised by TCSRDR at the Block Office at 2 km distance from KKM. For each cattle, the price of artificial insemination is usually 100 Rs, but TCSRDR subsidies half of the cost.

*Medical Treatment:* The farmers also relied on TCSRDR when it came to medical services such as vaccinations, check-ups, and so on. Health camps are visited twice a year in Babrala, where farmers can get their animals treated for a nominal fee of 20 Rs per animal. All other costs are borne by TCSRDR.

*Cattle Insurance:* Out of the 66 cattle owned by the SHG members, only 10 were insured. When asked about the low ratio, the farmers stated that the process of insuring animals is lengthy and expensive. District officers, who are responsible for the insurance services, rarely visit the village. The annual insurance cost comes down to 5% of the value of the animal. No subsidies are provided for this service.

*Food Supplements:* Oil cakes, calcium, mineral mixture and salt are the most common types of supplements used by Shri Gangey members. They usually get them for free from TCSRDR at animal health camps. When they run out of these supplies, they usually buy it from the local market in Babrala (7km distance). The farmers are aware that Mother Dairy sells supplements at a lower price, but they do not purchase them since they are unsure of the quality. Two conclusions can be drawn from this observation; farmers do not just care about price but also about quality, and they do not trust the quality of the supplements offered by Mother Dairy. The latter conclusion reinforces the notion of mistrust in Mother Dairy.



*Information Services:* The milk producers do not have access to any information services such as ITC's e-choupal, EID Parry, Reuters Market Light, or India Agri Line. All information and education about animal husbandry and its best practices comes from TCSR.D.

Finally, the SHG members were asked about the cluster they were part of. Two statements were particularly striking. First, they considered the cluster as an additional way of saving. The members did not seem to realize the benefits of the cluster in terms of economies of scale, cooperation, stronger market linkages, and so on. Second, they recognised that the cluster was not making much progress, which they blamed on illiteracy, inefficiency, and disinterest among the members.

### **Focus Group 2: Kamla Mahil Mandal, Prerna Mahil Mandal & Vijay Mahil Mandal from Noorpur (11/08/10)**

The three SHGs linked to the cluster in Noorpur are all female, with the number members ranging from 10 to 11. The 34 women together possess 41 local buffalos and 4 local cows, showing that TCSR.D's policy of 'one Murrah, one Jersey (CBC)' has not been implemented here at all. The average SHG member sells approximately 4 litres a day to a local vendor for 12-16 Rs per litre. The combination of low yield and low sales prices results in a low supplemental income of 48 to 64 Rs per day, significantly less than the income generated by the Shri Gangey SHG members observed in Focus Group 1.

When asked about the initial expectations when the SHGs joined the Sewartha Sangh cluster, they stated that they envisioned the start-up of a group enterprise, an increase in self-reliance (i.e. a less active role for TCSR.D), and linkages with a 'big bank' (they were linked to a local Babrala bank at the time). However, 18 months later, they hardly notice any difference other than a change in bank account. The reasons for this are:

1. There is no consensus as to what type of group enterprise they should start. One member did not want to start a new income generating activity, the other was interested in a

paper-plate making business, the next one was willing to start a milk collection centre, etc.

2. There is no trust, even among the SHG members themselves. Even if they were to reach a consensus on the type of project they wanted to undertake, the likelihood of implementation is close to zero due to a fear of financial mismanagement. 'Who is responsible if our money disappears?' was a common sentiment in the room. No-one is willing to take that responsibility, nor delegate it to someone else. The need for financial transparency and clear definition of roles and responsibilities are clear.

The participants were then asked if they were aware of the village milk collection centre in KKM, and whether they would like to do the same in Noorpur. The respondents indicated that they were indeed aware of KKM's linkage with Mother Dairy, as this was discussed during one of the cluster's meetings. They would like to have the same facilities in Noorpur, but no one was willing to be responsible for it. Most of the SHG members felt that the male SHGs should start the village milk society, since women were busy with household work. Upon further interrogation, it became clear that Urmela Sharma, the president of Perna Mahil Mandal - a hard-working and dependable lady according to the TCSR staff - was willing to be responsible for starting and running the milk collection centre. However, no-one was supporting her since she was of the Brami caste, whereas the majority of the villagers are Yadavs. Internal politics seemed to play a significant role in the slow development of the self-help-groups.

Finally, the SHG members were asked to name and rank animal husbandry related services by importance. The results are as follows: 1. Food Supplements 2. Medical Services 3. Cattle Acquisition services 4. Artificial Insemination 5. Cattle Insurance

### **Focus Group 3: Arya, Shri Mahil Mandal & Jay Mahil Mandal from Panwari (13/08/10)**

In Panwari, one male (Arya) and two female SHGs are involved with the cluster. Together, they own 95 local buffaloes, 12 Murrah buffaloes, 4 cross-bred cows and 3 local cows. On average, Panwari SHG members sell 9.9 litres of milk to a local vendor who pays them 16 Rs per litre, thus earning approximately 158 Rs a day from milk production activities.

The SHG members joined the cluster in order to benefit from outsourced assignments (which only occurred once in the 18 months of the cluster's existence) and to be able to count on an additional source of loans.

The female SHGs were aware of the linkage between KKM and Mother Dairy, and expressed an interest in managing such a milk collection centre to improve their income. The main hurdles they identified was the identification of the collection centre operator (although they did not shun responsibility) and the seasonality of milk production. Since the vast majority of the cattle consist of local buffaloes, they would have to wait for two more months until lactation starts again at a reasonable volume. The male SHG, Arya, did not seem to be aware of the KKM – Mother Dairy linkage, which is odd given that this was discussed in a cluster meeting by the TCSR coordinator for income generating activities. When the situation in KKM was explained, the SHG members indicated that they would be interested in supplying their milk this way, but that it would be impossible for any of them to manage a collection centre. This is because the men are too busy with their agricultural work, which is their main activity. One of the barriers both the men and women mentioned was that they receive advance payments from the local milk vendors in exchange for the exclusive right to the supply of milk. These advances would have to be paid off before they would be able to supply their milk to another source.

The participants were then asked to name and rank animal husbandry services they found important that the cluster provide. In order of importance, they are: 1. Food Supplements 2. Cattle Insurance 3. Cattle Acquisition. The men also indicated an interest in information services.

#### **Focus Group 4: Shri Gangey Kail from Kail (16/08/10)**

Shri Gangey Kail is a male SHG with 11 members, owning in total 42 local buffaloes, 8 Murrah buffaloes and 1 local cow. All members sell their milk (except for 2 litres for consumption) to the local milkman, who pays them 15 Rs per litre. This was odd given that the KKM milk collection centre is only 1 kilometre away, and the milk producers could get an average price of 22 Rs/l there. The participants were aware of the collection centre and how it works, but explained that in the kharif season, their cattle do not produce enough milk to warrant a trip to KKM. However, they also pointed out that even in the lactation seasons, they would probably be

wary of using the milk collection centre as they do not trust each other to transport the milk and return with the correct amount. Instead, they are willing to open their own collection centre in Kail if it is supported by TCSR and Mother Dairy. They are currently looking for the right person to operate the centre and transport the milk.

Shri Gangey joined the cluster for two reasons; financing and access to income generating activities. Specifically, they are looking to participate in SHG-formation activities (sponsored by NABARD), the marketing of cluster projects, and the supply of materials to TCL. They are not satisfied with the cluster's performance to date, as none of their expectations have been met. Some of the services they think the cluster should provide are help with the purchase and financing of new cattle, as well as insurance (they are all interested in insurance but do not know how to acquire it).

#### **Focus Group 5: Shri Ram, Lodhi Mahila Mandal and Rodha Mahila Mandal from Lodhi Nangla (17/08/10)**

The Lodhi Nangla SHGs connected to the cluster together own 45 local buffaloes, 8 Murrah buffaloes and 1 local cow. They sell their milk at 16 Rs/l to the local milkman, who in turn sells it to different shops in the Babrala market at 20 Rs/l. The members expressed a great interest in starting a milk collection centre, and are thinking of finding a young unemployed man to run the operation. They do not fear any pressure from the middleman, as he does not give them advance payments (on the contrary, he typically owes them money).

The members joined the cluster in order to have an extra source of financing as well as to get some assignments outsourced to them. They were initially apprehensive of the cluster; they were worried about where the money would go. It was not until guarantees were made by TCSR that they agreed to participate.

The participants placed great importance on breed improvement; they think the cluster should help with the financing and acquisition of cattle. None of them have cattle insurance, but they wish they did.

### **Focus Group 6: Durga from Baghao Ki Marhiyan (17/08/10)**

The 13 members from Durga own 30 local buffaloes, 5 Murrah, and 10 local cows. They sell their milk to the local vendor at 18 Rs/l, who then in turn sells his milk to TCL or on the Babrala market for 20-22 Rs/l. They are ready to manage a collection centre in their village, but are still looking for a suitable operator.

When they joined the cluster, the participants were hoping for more knowledge sharing amongst the nearby villages in order to improve their livelihoods. Furthermore, they were attracted by the promise of better financing and more job opportunities. They are disappointed that little of those prospects have come through.

The group places the most importance on cattle acquisition and medical services. They also think that insurance is important but have no access or information.

## Interviews

### **Mother Dairy collection & chilling centre manager (27/07/10)**

The initial stage of information collection was done through a visit of the Mother Dairy collection and chilling centre in Sirorakagie. A questionnaire was prepared for both the centre's manager we met that morning. The information set is compiled below.

#### *Product*

- 250 litres collected daily (150 in the morning, 100 in the evening)
- Maximum chilling capacity is 1000 litres
- No distinction is made between the types of milk (buffalo, cow, etc.)
- Uttar Pradesh: milk surplus, India: milk deficit
- Mother Dairy's products include liquid milk, flavoured milk, ice cream, cheese, butter, and other dairy products
- Unhealthy, synthetic milk is being sold in Aligarh, a nearby city. This is a well known problem to Mother Dairy but no measures are being taken.

#### *Price*

- Price is determined by the milk's fat and solid-non-fat content (SNF)
- A fixed milk rate is announced every 10 days
- Milk producers get paid 3x a month
- On average, producers get 22 Rs per litre of 6.5% fat and 8.5% SNF
- Local vendors gave a rate of approximately 14 Rs/l and sometimes postponed payments for up to two months
- Seasonal fluctuation: Rabi (20 Rs/l) < Kharif (21 Rs/l) < Zaid (23 Rs/l)
- No bonus incentives are given to the producers

#### *Place*

- Location of collection centre/chilling plant: Sirorakagie
- 4 month old operation (since March 2010)
- The collection centres cover villages within a 2-3 km radius
- Milk is being collected from the village level collection centre every two days.
- The main competition comes from local milk vendors who sell to PRS Dairy, Gopalgi and Heinze (private dairies)
- Coverage of the villages is still limited. It would not be difficult for Mother Dairy, new entrants or existing competitors to install new collection centres in other areas. All that is needed is a small dedicated space, measuring & chilling machinery, and 1-2 staff members.

### *People*

- 150 registered members in Sirorakagie centre
- No registration fee
- Every member sells its own milk directly, no local vendors are involved
- Producers typically keep 20% of the production for own consumption
- Generally, the man of the household brings the milk to the collection centre. If he is busy (due to agricultural work) his wife or children will fill in

### *Promotion*

- Initially, there were some difficulties in attracting the producers. Local vendors increased their prices once they were under pressure. An information session was held to inform the villagers of the benefits they can expect from the collection centre
- Unlike in other villages, the Sirorakagie producers were not indebted to local vendors (forcing an exclusivity contract), which made it easier to attract the producers.
- The collection centre offers cattle feed and food supplements at a cheaper rate. No other services (such as medical aid, breed improvement, etc.) are provided
- TCSR played no role in setting up the centre or promoting its activities

## *Procedure*



*Step 1: The milk is poured into a bucket, where it is measured for weight. A sample is collected for testing.*



*Step 2: Fat and SNF % are measured and recorded. A receipt is provided to the producer.*



*Step 3: The milk is deposited into a chilling tank. The contents are collected every two days.*

## **Milk producers at the MD collection & chilling centre (27/07/2010)**

The producers we talked with at the collection & chilling centre listed four advantages of the Mother Dairy collection centre/chilling plant. In order of importance, they are:

1. Higher milk rate than the alternative options
2. Stable payment; there are no uncertainties about when the producers get paid
3. The pricing procedure is fair and precise
4. The centre provides cheaper cattle feed & supplements

The milk producers could not think of any disadvantages; they were clearly satisfied with the service. However, an obvious disadvantage compared to the local vendors is the lack of a pick-up service. Producers who live further away either have to spend time away from their crops to deliver the milk, or just do not come at all. Medical services, cattle insurance, loans and animal



husbandry advisory services are some of the services which some cooperatives provide but Mother Dairy doesn't.

### **Local Milk Vendors in Panwari (13/08/10)**

An interview with three local milk vendors was held after the SHG focus group in Panwari. On average, the vendors collect 150 litres of milk per day, which they then supply to Pars Dairy, a private dairy 25km from Panwari. While the vendors buy the milk at 16 Rs per litre, Pars Dairy typically pays 21 Rs per litre, depending on the fat and SNF content. The local vendors do not transport the milk themselves to the dairy, but use a transportation service which charges them 2 Rs per litre. Therefore, the local vendors earn 3 Rs per litre which they handle, and hence make a daily profit of 450 Rs. In addition, they receive a 4% commission from the private dairy.

Although they are aware of the Mother Dairy collection centre in Bakhroli, which is 4 km away, they insist on working for Pars Dairy since they have done so for over five years and have a good experience with it.

## Appendices

### **TCSRSD Self-Help Group (SHG) Model**

#### *Purpose*

TCSRSD defines the objectives of self-help groups (SHGs) as follows:

- To increase cooperation among farmers
- To make poor people self-sufficient
- To reduce the exploitation by the village money lenders
- To improve the entrepreneurship skills of the members

#### *Process of group creation*

- TCSRSD holds open awareness meeting with all villagers in which procedures are disclosed
- People from the village show interest and begin to form their own groups
  - Because villagers create their own groups, SHG members are usually of the same economic level and are on good terms with one another. Also people form groups with people of the same interests.
- Group contacts TCSRSD facilitator who takes group through the creation process, which begins with an in depth meeting about the concept of the SHG and the opportunities, involved.
  - During this meeting, a group contract is created and rules are agreed upon, and officers are elected.

There are two main bottlenecks in the formation of an SHG group: The first is illiteracy and the ability to sign and the second is saving for the initial minimum bank deposit.

#### *Group Structure and Logistics*

- Each SHG has 10 to 20 (same gendered) members and 3 officers. Officers are elected by the group and are change every year. Officer positions include:

- President
- Secretary
- Treasurer
- Officer positions include: These three officers are all signatories of the group. At least 2 signatories need to sign off on any financial transactions.
- Each SHG meets once a month in which all three officers and the TSRD facilitator must be present.

#### *Role of TCSR and TCSR facilitator*

- Help women become comfortable making transactions and signing in the bank (accompanies women to the bank during the initial stages)
- Teach women how to sign (can take anywhere from 3 days to 3 months)
- Provide clear-cut stationery including a large group ledger, small individual savings books, and three copies of the group contract (one for the Bank, TCSR, and the group).

#### *Sources of group funding*

1. Savings: The group savings is the total amount saved by each individual in the group. This amount is added together and then inter-loaned among group members as necessary.
  - The amount of monthly savings is a fixed rate determined by the group. Payments are collected on a monthly basis. There may be a penalty for late monthly savings deposits depending on the group contract. This amount may increase after the group has been established.
  - The total group savings is deposited into a bank and earns an annual interest of less than one percent. Money is deposited for 6 months to 1 year before it is loaned out among group members.
  - Inter-loans taken from the group's savings is loaned to individual members at a 2% interest rate and is to be paid back at a time determined by the members of the group.

2. Bank Loan: Once the SHG has sufficient amount of savings, it may take out an additional loan from the bank.

- This loan is generally 25,000 rupees and must be returned at a 1% interest rate.
- This loan is also distributed to members at a 2% interest rate. The group is thus earning an additional 1% in repaid interest.
- After 5 years of on time payments the group gets 10,000 rupees awarded as a subsidy (in which the group does not have to pay interest)

#### *Distribution of Loans*

- Loans are distributed on a need basis and are approved by the group as a whole. Loans are used spent on needs, consumption, and investment, such as:
  - Building, fixing the home (i.e. leaking roofs)
  - Marriage ceremonies
  - The purchasing of buffalo and other livestock
- There are generally no rules on what the loan can and cannot be used for. The group determines if there is a legitimate need for the loan

#### *Income Generation*

Once the stage is reached where bank loans are distributed, SHG members are encouraged to participate in income generating activities. The vast majority of members are already active in agriculture or animal husbandry, but there are other activities which are promoted. These include paneer making, Karjobi (clothing), paper plate and candle manufacturing, and so on.

## SHG Data

<u>SHG #</u>	1	2	3	4
<u>SHG name</u>	Shri Gangey KKM Kail Ki	Shri Gangey Kail	Arya	Shri Ram Lodhi
<u>Village</u>	Marhiyan	Kail	Pawari	Nangla
<u>Gender</u>	Male	Male	Male	Male
<u># Members</u>	20	11	14	17
<u># years active (08/10)</u>	6	4	2	2
<u>Savings (Rs)</u>	155400	46000	25700	32300
<u>Bank loan (Rs)</u>	0	0	0	0
<u>Interloaning (Rs)</u>	1000000	58500	20000	35000
<u># loan receivers</u>	19	6	3	12
<u>Meeting Frequency</u>	Monthly	Monthly	Monthly	Monthly
<u>Attendance</u>	100%	60%	80%	90%
<u>Saving frequency</u>	Monthly	Monthly	Monthly	Monthly
<u>Knowledge sharing</u>	Yes	Yes	Yes	Yes
<u>Skill training</u>	tcsrd	tcsrd	tcsrd	tcsrd
<u>Leadership rotation</u>	no	no	no	no
<u>Audit</u>	tcsrd	tcsrd	tcsrd	tcsrd
<u># Income generators</u>	19	11	14	7
<u>Community action</u>	no	no	no	yes
<u>Government schemes</u>	yes	yes	yes	yes
<u>Networking w/ SHGs</u>	yes	yes	yes	yes
<u># can read</u>	75%	60%	70%	90%
<u># can write</u>	75%	60%	70%	90%
<u># can do calculations</u>	100%	60%	100%	100%
<u># use mobile phone</u>	95%	100%	100%	100%

<u>SHG #</u>	5	6	7	8
<u>SHG name</u>	Lodhi MM	Radha MM	Kamla MM	Prerna MM
<u>Village</u>	Lodhi Nangla	Lodhi Nangla	Noorpur	Noorpur
<u>Gender</u>	Female	Female	Female	Female

<u># Members</u>	14	15	11	13
<u># years active (08/10)</u>	8	6	6	6
<u>Savings (Rs)</u>	69300	57900	31790	51220
<u>Bank loan (Rs)</u>	80000	70000	79200	87000
<u>Interloaning (Rs)</u>	287000	124000	155700	160000
<u># loan receivers</u>	14	13	10	10
<u>Meeting Frequency</u>	Monthly	Monthly	Monthly	Monthly
<u>Attendance</u>	90%	80%	90%	90%
<u>Saving frequency</u>	Monthly	Monthly	Monthly	Monthly
<u>Knowledge sharing</u>	Yes	Yes	Yes	Yes
<u>Skill training</u>	tcsrd	tcsrd	tcsrd	tcsrd
<u>Leadership rotation</u>	no	no	yes	no
<u>Audit</u>	tcsrd	tcsrd	tcsrd	tcsrd
<u># Income generators</u>	7	15	6	8
<u>Community action</u>	yes	no	yes	no
<u>Government schemes</u>	yes	yes	yes	yes
<u>Networking w/ SHGs</u>	yes	yes	yes	yes
<u># can read</u>	20%	15%	20%	20%
<u># can write</u>	10%	15%	10%	0%
<u># can do calculations</u>	90%	35%	45%	90%
<u># use mobile phone</u>	90%	65%	65%	45%

<u>SHG #</u>	9	10	11	12
<u>SHG name</u>	Vijay MM	Jai MM	Shri MM	Durga MM
<u>Village</u>	Noorpur	Pawari	Pawari	Bagao Ki Marhiyan
<u>Gender</u>	Female	Female	Female	Female
<u># Members</u>	10	15	14	12
<u># years active (08/10)</u>	6	6	6	8
<u>Savings (Rs)</u>	31760	58500	54400	77505
<u>Bank loan (Rs)</u>	79200	100800	100800	0
<u>Interloaning (Rs)</u>	110000	279010	220000	387300
<u># loan receivers</u>	8	15	12	12
<u>Meeting Frequency</u>	Monthly	Monthly	Monthly	Monthly

<b><u>Attendance</u></b>	70%	80%	80%	75%
<b><u>Saving frequency</u></b>	Monthly	Monthly	Monthly	Monthly
<b><u>Knowledge sharing</u></b>	Yes	Yes	Yes	Yes
<b><u>Skill training</u></b>	tcsrd	tcsrd	tcsrd	tcsrd
<b><u>Leadership rotation</u></b>	no	no	no	no
<b><u>Audit</u></b>	tcsrd	tcsrd	tcsrd	tcsrd
<b><u># Income generators</u></b>	10	15	14	7
<b><u>Community action</u></b>	no	no	no	yes
<b><u>Government schemes</u></b>	yes	yes	yes	yes
<b><u>Networking w/ SHGs</u></b>	yes	yes	yes	yes
<b><u># can read</u></b>	10%	15%	10%	20%
<b><u># can write</u></b>	10%	15%	10%	0%
<b><u># can do calculations</u></b>	10%	35%	35%	75%
<b><u># use mobile phone</u></b>	100%	100%	85%	100%

	KKM	Kail	Pawari	Lodhi Nangla	Noorpur	BKM	Yield
# members	20	11	42	46	34	13	
Local Buffalo	40	42	95	45	41	30	4
Murrah Buffalo	15	8	12	8	0	5	7
Cross-breed							
Cow	4	0	4	0	0	0	6
Local Cow	7	1	3	1	4	10	3.5
Current Rate							
Rs/l	22	15	16	16	14	18	
MD Rate Rs/l	22	22	22	22	22	22	
Current ADI	345	310	190	83	73	263	
Potential ADI	345	455	261	115	115	322	

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