

1. EXECUTIVE SUMMARY

1. Karnataka State Rural Livelihood Promotion Society(KSRLP)&Karnataka Milk Federation(KMF) have entered into an MoU to implement Ksheera Sanjeevini project entitled “**Socio economic development of rural women through dairy farming**” to cover 250 Women Dairy Cooperative Societies (WDCS) of KMF spread over a period of three years starting from 2014-15 and ending in 2016-17 with focus on empowering women identified as Target Group Members(TGMs) of these WDCS, to produce milk as a source of livelihood. The project envisages that all these TGMs should own a cow and manage it well so that it will generate income for their livelihood on a sustainable basis.

2. For this project, KSRLP will provide a grant of Rs1485.15 Lakhs while KMF will provide a sum of Rs224.85 Lakhs so as to have a project outlay of Rs.1710Lakhs to be spent over a period of three years.

3. KMF through its internal system has identified 250 WDCS spread over all the 14 District Milk Unions (DMU) covering all the four revenue divisions of the state. In the firstphase (2014-15) of the project, 72 WDCS were selected and in second and third phases (2015-16 & 2016-17) 108 and 70 WDCS were selected respectively. The following are the stakeholders:

1. Karnataka milk federation, KMF
2. DistrictCo-operative Milk Producer SocietiesUnion, DMUs
3. Women Dairy Cooperative Societies, WDCSs
4. Women identified as Target Group Members, TGMs

4.As the focus of Ksheera Sanjeevini project was to provide livelihood for women belonging to backward castes, minorities, SC/STs, BPLs and other socially and economically marginalised and asset-less category, KMF carried out bench mark survey of their already existing members of these WDCSs to identify 40 Target Group Members (TGMs) of each of the 250 WDCS. This would result in benefitting 10,000 TGMs (250X40=10000) to achieve assured livelihood.

5. The KMF, through its Dairy cooperative societies and District milk cooperative Unions, was successful in producing 58.69 lakh liters per day (LKPD) during 2014-15 and in June 2015 it procured a record quantity of milk, 72.30 LKPD. KMF introduced Support to Training and Employment Programme (STEP) in different stages up to STEP-8 for women, a

Govt. of India programme, in the year 1986 to strengthen well-being of rural women focusing on dairying. Through this, KMF has extended training for up-gradation of dairy skills for sustainable milk production. So far 1924 WDCS have received the support from different phases of STEP.

6. The theory of change(ToC) envisaged in the project would provide livelihood to these TGMs by way of one-off assetization, that is to acquire a cow and sell milk to KMF. The stages involved in this ToC are making these women as members of WDCS, providing margin money to help them to link with financial institutions for a loan to buy a cow, training these women on how to manage these cows so that they will give milk uniformly throughout the year, selling of milk to WDCS, receiving payment on regular basis and receiving training on management of WDCS. In addition they will be sensitised on certain family, gender and legal issues so that they would be empowered to face any hardships during the process of livelihood. The indicators would be: the knowledge and skills they have acquired, quantity of milk produced and delivered to WDCS, increase in income levels and their confidence levels.

7.The project envisages the following budget allocation of Rs.4,54,000/- for each WDCS towards 1) Establishing community investment fund of Rs.1,20,000/-to provide margin money of Rs.10,000/- for purchase of milking cow for 12 TGMS to start with, on loan basis to be returned in monthly instalments and subsequently to others on revolving basis until all the 40 TGMS are provided with the margin money, to provide one time grant of Rs.1150/- per cow towards cattle insurance, to provide one time grant of Rs.400/- towards cattle transportation, to provide one time grant of Rs.200/- towards cattle feed and to provide a revolving fund of Rs.15,000/- for each SHGs, 2) Organizing capacity building activities such as Training to President, Secretary & office bearers, training on Computer operations, AI, First aid & Milk testing, training to all TGMs on cow management, training to all TGMs on SHG activities and arranging awareness/sensitization programmes on Nutrition & Health, Gender equality including male orientation, Legal literacy, infant & child feeding to all the TGMs, 3) Developing community Lady Resource Persons (LRP) for providing animal husbandry basic services, managing SHGs, converging with other line departments to the TGMs, providing AI services at the door step of TGMs, strengthening the operations of dairy cooperative societies, 4) for providing infrastructure support a sum of Rs.75,000/-for the procurement of Electronic milk tester, Electronic digital weighing scale & solar pack, Rs50000/-for the procurement of 5 electrical 2HP single phase operated chaff cutters for 5

TGMs per WDCS and Rs7,000/- for building one vermi-compost pit/bin to be placed with a TGM.

8. The objectives of the project are aimed at economic and social up-liftment of rural women with particular reference to 'NRLM Project Vision' such as 1) to identify women Target Group Members through Bench Mark survey according to below poverty line, asset less marginalized women with special focus on SC/ST, minorities and vulnerable groups at rural level, 2) to organize exclusive rural Women Dairy Co-operative Societies and to take up employment cum income generation activities, 3) to provide need based and extensive training for skill up gradation, 4) mobilizing women in formation of Self Help Groups as a tool for income generating activity and for easy access to credit, 5) to provide support services, backward and forward linkages and improving employment/ economic conditions of women, 6) to create awareness through designed programme, 7) to provide measures to build confidence among women and to generate leadership qualities and 8) to develop sustainability of the activity.

9. The project was evaluated by gathering qualitative and quantitative information through Focus Group Discussion (FGD) of TGMs, office bearers of WDCS, DMUs and KMF, by administering structured questionnaires to all the stake holders and from records, notifications, minutes of meetings and other published and unpublished reports. The use of questionnaires was considered appropriate as they give complete details of the stake holders in a systematic way. Further direct interaction with all the stakeholders would ensure that their views are heard and recorded. Through these questionnaires, it would be possible to elicit personal, family, social, economic and occupational details from TGMs in the most accurate way. Further these beneficiaries will feel proud to share their achievements, progress made, assets gained and money generated. It would also be possible to measure their confidence, feeling of happiness and a sense of satisfaction. It would also be possible to record that these changes are due to dairying and dairying has been the game changer in their life and attributing their transformation to dairying.

10. The sample selected is at the rate of two districts per revenue division. Within these, at least two WDCS are selected; one to be done randomly from the district having highest number of WDCs and the other from the district having only one WDC. If more than one

district has only one WDCS, the district is selected randomly. Following this principle, the selected WDCS were:

List of WDCS randomly selected for sample study

Sl. No.	District	Total WDCS	Sample WDCS (Minimum)	TGMs in Sample WDCS
1	Tumkur	10	Manangi	40
2	Chikkamagalur	1	Doddapattanagere	40
3	Mandya	6	Mananganahalli	40
4	Chamrajanagar	1	Nanajawodeyaradoddi	40
5	Bidar	5	Kollara (K)	40
6	Koppal	1	Kurubnal	40
7	Haveri	2	Akkur	40
8	Uttara Kannada	1	Basala	40
Total		72	8	320

11.The evaluation team consisting of Principal Investigator and field staff accompanied by the officers of DMUs visited these eight WDCS spread over the entire state and interacted with TGMs and office bearers of WDCS, individually and collectively during the months of March and April 2017. The dates for these visits were finalized in consultation with KMF, DMUs and WDCS office bearers so as to ensure that all the TGMs would be present when the team visits. Through Focus Group Discussion(FGD) and one-on-one with TGMs through questionnaires, the details, views, comments, suggestions, feelings were recorded then and there itself in their presence in Kannada language. The team also visited the HQs of DMUs and met with MDs, Extension officers, Core Team Leaders (CTL) and other staff involved in the implementation of Ksheera Sanjeevini project and recorded their views and collected relevant records, notifications and other published and unpublished documents.

12. All the details were subsequently tabulated according to TGMs, WDCS and DMUs and analysed using appropriate statistical tools.

13.Out of the 320 TGMs(8X40) covered in this evaluation, nearly 50% of the members have joined the WDCS after 2012-13 indicating that many of the TGMs are recently joined and may be many of them new to dairying also. Similarly nearly 50% of the TGMs live in the family as the family size is more than 4 members and large size family might ensure the success of dairying as more number of people will be available for continuing the dairy activity. More than 93% of the members are married and this will ensure the availability of some help for continuing the dairy activity and a small number, less than 7%, are widows and for them dairying may be an important activity to support their livelihood.

14. On analyzing the category status of these TGMs it was found that the majority of the TGMs belonged to backward castes (BCs), while SC/ST proportion was around 22.2% and the remaining belonged to minorities. It was also observed that less than 22% of the members were labourers who have taken up dairying to enhance their income levels and also to be self-reliant and to all of them, dairying is a survival livelihood. . However the majority of the TGMs were already practicing dairying to support their agricultural income and to them dairying provides the additional income. These TGMs are likely to move away from dairying if dairying is not a remunerative activity.

15. The majority of the TGMs (76.3%) have declared that their annual income was between Rs10,000/- and Rs.50,000/- while a small percentage(3.1%) of TGMs have said that their income was more than Rs.50,000/-. To the majority of them, income from dairying was very crucial for their livelihood. It was interesting to observe that nearly 30% of the TGMs were landless, while 51.6% have declared that they were small-land holders having 1 to 3 acres of land. Support to these land-less women would go a long way in making their dream of having a sustained livelihood come true as they don't have any other viable asset for their livelihood and these TGMs were passionate about dairying as they have begun to see how their lives have changed after adapting dairying.

16. A series of trainings were given to TGMs to inculcate the value of self-help and to enhance their knowledge and skills on dairying and these included 1) Dairy Animal Management(DAM) training to all the TGMs, 2) Secretary and President training on management of WDCS, 3) milk testing training for milk tester, 4) computer operation training for secretary/computer operator, 5) maintenance of accounts & book keeping training to secretary, 6) artificial insemination training and first aid training for AI tester, 7) Self-help group management training to lady resource person and AMUL exposure training to selected office bearers of WDCS.

17. In the project it was envisaged that all the 40 TGMs of each WDCS must compulsorily undergo this training for 3 days at KMF training centres located at different places. All the TGMs were provided with free transport, lodging and boarding for this training. It was the responsibility of WDCS to ensure that all the TGMs have undergone this training and provide the required guidance and other details of the training. All the WDCS were required to keep

records on this activity such as who has gone when, vouchers/acknowledgement for travel expenses and feedback on the usefulness or otherwise of the training.

18. More than 84% of TGMs have undergone DAM training indicating the interest shown by the TGMs to learn more skills and nearly all said that the training was useful. However on enquiry many could not answer specific questions on milking, clean milk and so on. This could be due to several reasons such as the training was given almost two years ago, not being practiced right now and so on. But the visit has certainly boosted their confidence to do better. Disappointed to see that nearly all the WDCS have not maintained feedback register to record the views/suggestions/relevance/thoughts about the DAM training the TGMs received. When enquired it was revealed that the feedback register was maintained at the training centre. While interacting with individual and group TGMs it was found that most of the time it was class room lecturing and they were not given hands-on-training and therefore they were disappointed.

19. All the presidents and secretaries were given training on acts and provisions of cooperatives, how to conduct a meeting of directors of the society, how to record the minutes of the meeting, how to pass a resolution and several other administrative procedures for smooth functioning of WDCS. Maintenance of records and other books were part of the training. The duration of the training for the president was 4 days while that for secretary was 10 days. During the visit of the team, many secretaries failed to show appropriate records and books citing that they do not know how to maintain them. Many a times all that was shown was a piece of paper or a scribbling book and left to our imagination to note what is recorded there. On enquiry we were told that there was no guidance on how to maintain them systematically although it was disputed by the extension officers of the Union.

20. There is a provision in the project to train secretaries/office bearers on computer operations. Some of them have undergone training on how to use computer for various applications in a WDCS. The duration of the training was 6 days. However at many WDCS computer was not there and where it exists the secretary/office bearer did not know how to operate it. It was learnt that they have not been properly given hands-on-training and therefore they were reluctant to handle fearing that it may go out of order.

21. The training for milk testing was given for a period of 3 days. At many WDCS, the secretary herself was doing the testing of milk also. The economics of any WDCS or Union is dependent on the accurate testing of milk quantity and its fat and SNF content. If the values

are higher/lower than the actual, both TGMs and Unions are likely to suffer a huge loss. In the market the milk rates are fixed based on the fat content and higher the fat content higher is the price of milk.

22. Artificial insemination and pregnancy testing are two important activities which together boost up the income of the cow owner. When the cow is in heat the cow is to be inseminated at the right time to ensure pregnancy. The semen to be used must be stored properly in straws in liquid nitrogen at minus 80 degree Celsius. The training was given for a period of 10 days. Further, in the project there is a provision to provide community AI training for 31 women testers and this training was given for selected WDCS and the training was for 30 days. Each of these WDCS gets a liquid nitrogen container and liquid nitrogen.

23. Nearly all the WDCS have at least two SHGs each and each of it has a prefix of NANDINI- to differentiate them from other several SHGs operated in the village. These groups consist of 20 members each with a leader representing the group. These leaders undergo training for 3 days. A sum of Rs15,000/- was given to them as a managerial grant. It was observed that there is a facilitator or coordinator at each Union level who organizes monthly meetings of all the representatives of SHGs.

24. To provide immediate medical relief to animals which are injured, inflamed or any other discomforts at each of these WDCS, a first aid provider is created who has been trained for 6 days on how to do dressing of wounds, pulling out of any insects, stopping of bleeding, cleaning of dirt and other unwanted materials from the body of the animal, how to give liquid medicines to cows and such other measure which will give relief to the animal until veterinary helps come.

25. From each WDCS, a group of 3 people consisting of President, Secretary and one director cum active member was sent to AMUL, Anand to understand the functioning of AMUL which is a citadel of successful dairy cooperative institution in the country. This group visits all the important places at AMUL and gets exposed to various activities of it. All the members who undertook this travel expressed their happiness and strongly confirmed that the visit was very useful as they learnt many new things from the visit.

26. As per the brochure made available to us, each WDCS has a Lady Resource Person (LRP) providing a wide variety of support to both WDCS and TGMs for successful operations.

27. The following awareness programmes were to be carried out by each WDCS in the Ksheera Sanjeevini project by organizing shibiras (Camps) where in experts from various fields were to be invited to explain and interact with them: 1) Health and Nutrition programme, 2) Gender sensitization including male orientation programme, 3) Infant and child nutrition and 4) legal literacy. From the records of the WDCS and the answers given by TGMs, it was seen that many awareness shibiras were organised and apart from TGMs, other members of the WDCS also attended these awareness shibiras. Further their views and what they learnt in these shibiras were also noted.

28. All the TGMs have been given a loan of Rs10,000/- at the first instance as margin money to help them to rise a loan from the bank to buy a cow. More than one third(38.9%) of TGMs have not taken margin money and this could be due to their inability to raise loan from the bank or they don't want to increase the cow numbers(herd size) as there may be constraints of space or manpower to manage more cows. Among those who have taken margin money, 37% of them did not get loan from the bank while the rest of them(63%) got bank loan of up to Rs50,000/-. The repayment of margin money appears to be hassle free as all the TGMs have paid various amounts depending on the margin amount taken and the year of releasing the margin money.

29. Nearly 44% of TGMs have not taken cow insurance and on enquiry many (70%) expressed that they are unaware of it. If they were made for existing animals or for animal born in their house known of its importance more number of TGMs would have preferred to take cow insurance. There appears to be a wrong belief amongst TGMs that insurance has to be taken for one cow only though some of them have more cows. It was informed to the team that KMF will soon make cow insurance compulsory to all its members.

30. A sum of Rs 50,000/- was given for selected WDCS for the purchase of five electrically operated chaff cutters and these chaff cutters were then given to selected 5 TGMs to be installed at their premises/land. It was observed that these chaff cutters were in private premises and they were being used for themselves.

31. A sum of Rs7,000/- was given as a grant for the construction of vermi-compost pit for generating vermin-compost which has a lot of manure value. Selected WDCS were given a grant of Rs7,000/- for the construction of the pit. These pits were found in the premises of private land of a TGM and the TGM was alone using it for herself. At some places this was built using cement concrete while at some places plastic sheets were used.

32. Selected WDCS have given a sum of Rs75,000/- as a grant for the procurement of Electronic milk tester, Electronic digitalweighing scale and solar pack. These instruments were installed at the Society office where milk is received from the members, tested and dispatched. At some WDCS solar packs have been commissioned while in some the instruments have arrived pending installation.

33. Cost benefit analysis were done at TGMs and WDCS levels. In the case of TGMs, the quantity of milk supplied by all the 320 TGMs (40X8=320) before the implementation of the project (2013-14) and after the implementation of the project (2016-17) was added up separately and the difference between the two was recorded as increase in milk production. This increase has been attributed to the intervention of the project. This intervention has resulted in an increase of 39.24%. This simplistic method was adopted to understand the effect of intervention. This method does not take into account for the natural growth in the milk production without the intervention.

34. In the case of WDCS, the milk procured by them from both TGMs and other members in the year 2013-14 and 2015-16, were obtained from the records maintained at WDCS/DMUs level and the difference between these quantities of milk were attributed to the project intervention. It was observed that the milk procurement increased by 62.10%. For comparison, the milk procured in 2013-14 and in 2016-17 by WDCS of Atthigere, which is not covered under Ksheera Sanjeevini was recorded and the increase in milk production was calculated. This increase was found to be 21.05%. The difference between the increase of Ksheera Sanjeevini covered WDCS and Atthigere WDCS, was 41.05 %. This increase can be directly attributed to the intervention of Ksheera Sanjeevini project.

35. Return on Investment (RoI) was calculated by the amount spent on each WDCS, which was Rs.4,54,000/-and the increase in revenue generated which was Rs.6,55,980/- by selling of excess milk generated due to the intervention of the project. In simple terms for every rupee spent by the project a sum of Rs.1.44 was generated and this has caused an appreciable increase in the income of the women dairy farmers. In addition to the price given by KMF, the State Govt..is also giving an incentive of Rs. 4/- per litre of milk supplied to KMF. This will further boost up the income of the farmers.

36. In conclusion it can be clearly declared that the project has transformed the lives of many women dairy farmers and has provided an assured source of livelihood. Apart from financial benefits, scores of other benefits were also gained by them as they were exposed to several new technologies and knowledge and boosted their morale to venture into other areas.

37. Apart from financial benefit which is clearly visible in terms of increase in income, there is a very big and invisible benefit accrued to these TGMs in terms of participation in the WDCS deliberations, standing in the queue along with other members while delivering milk, to be a proud owner of an asset-cow, boosting of self confidence by interacting with other members, by acquiring dairy management skills and displaying his membership badge. These qualitative and non-measurable values are very important in a rural set up.

38. Recommended that such interventions are to be extended to the remaining WDCS of the state so that more and more women dairy farmers will be benefitted. To speed up the process of transformation all the WDCS should be covered simultaneously.

39. Cost Benefit Analysis (at TGMs level)

1. Quantity of milk supplied by 320 TGMs before project	= 10,715 Litres of milk / week
2. Quantity of milk supplied after	= 14,920 Litres of milk / week
3. The difference	= 4205 Litres
4. Per cent increase $\frac{4205 \times 100}{10715}$	= 39.24
5. The total increase per year = 4205X 52 weeks	= 2,18,660 Litres
6. The total increase for each WDCS = <u>2,18,660</u>	= 27,333 Litres
8	
7. The value of 27,333 Lit X Rs24	= Rs.6,55,980/- .
8. Amount spent by Ksheera sanjeevini project	= Rs4.54,000/- for each WDCS
10. Net gain: Rs. 6,55,980 minus 4,54,000	= Rs2,01,980/-
11. Per cent gain	= 44.4

40. Cost benefit analysis at WDCS level(Both TGMs and other members)

1. Before the introduction of the project	=5,98,412 Litre of milk
2. After the introduction of the project	=9,70,212 Litre of milk
3. Net increase in milk production	=3,71,800 Litres
4. Gross Percent increase	= 62.1
5. Natural Increase	= 21.05

(As seen in Control counter
factual Attigere WDCS)

6. Net Percent Increase	= 41.05
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42. Recommendations – Both Short term & Long Term**Short Term Recommendations**

1. The project should be extended to all the remaining WDCS on fast track basis so that many more TGMs would have assured source of livelihood and in turn the milk production in the State would go up.
2. The identification of TGMs should be more rigorous as at present the bench mark survey has overlooked several parameters to confirm their category status. The guidelines issued by the Dept of social welfare of Govt..of Karnataka should be followed as far as possible. This will ensure social justice to all segments of the society.
3. All the TGMs should be given margin money in the beginning itself by pooling all the money earmarked for various sections of the Project. As and when repayments are received they may be used for meeting the expenses of various sections.
4. Cattle insurance must be made compulsory to all the animals owned by TGMs as this will ensure that the owner is not put into high risk in case of death /incapacitisation of the animal. Cow is an important asset for TGMs and under no circumstances she should lose the cow.
5. Hands-on-training is the only method of choice for imparting skills to all TGMs and office bearers of WDCS. Appropriate facilities need to be created/ established after taking inputs from experts and specialists. The women who are expert in dairy activities within the group

may also be identified for giving training. The training Centre to be a vertical of KMF and should have the freedom to charge fees for various trainings both for KMF and other programmes.

6. All WDCS must have electronic weighing scale which is linked to milk tester and computer to create data on quantity and quality of milk supplied by each member and then the entire data are uploaded immediately to Union office. The necessary hardware and software should be created for this operation. This will ensure minimum microbial contamination and longer shelf life of the milk and also this will give a true picture of the quantity and quality of milk supplied by each society.

7 The monitoring of Ksheera Sanjeevini project should be strengthened with appropriate staff and hardware at KMF and at Union levels so that real time monitoring can be done of the progress made by several WDCS and to guide them appropriately. It will be more effective if monitoring is done by an outside agency **concurrently** while the project is in operation so that changes if required can be suggested for effective implementation and for mid-course correction.

8. The Chaff cutter to be placed at a convenient location where it can be used by all the TGMs.

9. At each Union level a model WDCS is to be established by converting one of the WDCS where in all the activities are carried out systematically and scientifically so that the members from the other WDCS could come and have exposure to manage WDCS successfully. A model WDCS will serve as a demonstration unit to inspire others to emulate.

Long term recommendations

I. The success of KSHEERA SANJEEVINI rests on the effective ways of providing a variety of trainings to all the beneficiaries such as TGMs, Presidents, Secretaries, Milk testers, LRPs, computer operators, SHG facilitators, AI workers and First aid workers. Each of these training activities is in itself a specialised programme which requires a dedicated team of committed faculty who apart from having specialised qualification should have also worked in close association with members of DCSs. They should be in a position to explain each and every activity of dairying with scientific reasoning and field experience.

II. Apart from class room lectures which should be minimum and of not more than one/two hour a day, the trainees should be exposed to demos, models, videos and visits to cattle farms, fodder plants, feed mills, silage making units, fodder densification units, dry fodder enrichment and hands-on-training in respect of hand milking and machine milking, hygiene and sanitation, animal restraining, milk testing for fat and lactometer reading and such other activities which will help them to develop confidence in managing the animals.

III. Similarly training in computer operations, book keeping, maintenance of stock and ledger books, milk testing, first aid training and such other trainings should be as far as possible hands-on- training and should be done on work-shop mode.

IV. All the training should be carried out in two phases. The first stage is called sensitization training which will be carried out at Gram Panchayat level to motivate women to form Dairy Co-operatives. The second phase is a confirmation training which will concentrate on WDSCS.

V. The training centres are to be treated as independent vertical in KMF giving them autonomy to run independently. These centres must be allowed to charge fees for various types of trainings and the money so generated should be used for strengthening the infrastructure facilities of the centres. The centres must be encouraged to bring outside faculty also where there are no special faculty in the centre.

VI. The centres must tie up with one or two progressive dairy farmers through incentives/financial compensation so that the trainees can be taken to their farms and to give a demo of various activities.

VII. The contents of the various training modules are to be regularly updated incorporating the new and latest findings to ensure that the trainees are given the state-of-the-art technologies.

VIII. There is a need for optimization of human resources. There appears to be many people involved in carrying out several activities such as secretary, computer operator, milk tester, Lady Resource Person(LRP), AI and Pregnancy tester, SHG representative, NGO representative and so on. These personnel are being provided a small remuneration of up to Rs5000/-. It is suggested instead of so many personnel working, it is advantageous to retain only two personnel namely Secretary and milk tester cum LRP who will carry out all the

activities of WDCS. This will result in better utilisation of human resources and to reduce operational costs.

IX. At each Union level a model WDCS is to be established by converting one of the WDCS where in all the activities are carried out systematically and scientifically so that the members from the other WDCS could come and see to themselves how to manage WDCS successfully. A model WDCS would serve as a demonstration unit to inspire others to emulate.

X. There is a need to formulate an integrated Dairy development policy covering all the needs and requirements of the women in dairy industry. The capacity building should be a continuous process.