



Goat livelihood program – Mid Term Evaluation Implemented by SIPA in MP- Sehore district Supported by ITC – Mission SunheraKal



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February 27, 2022

Presented to
ITC Sunahara Kal

Supported by ITC Sunahara kal

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Acknowledgements

I would like to thank and express my gratitude to Samarth in participatory Action Society (SIPA) for giving me this opportunity to work on this assignment. My special gratitude to the project team comprising of Mr Gyas Mirza, Ms Sarita Malviya, Ms Sakun Suryavanshi and Mr Dharmendra Tyagi for providing all information during the field visit and answering all my queries with a smile and eagerness to learn.

I would especially like to thank Mr Jeet Parmar, COO, SIPA who keenly participated in all meetings and discussions and supervised the whole study and made excellent logistical arrangements for the study. My special thanks to Mr Badri Nath Tiwari, who accompanied me during the study, coordinated the quantitative field survey and helped in writing the quantitative survey report. I would also like to thank Mr Pankaj Pandey and Mr Yogesh Kumar from Smarthan for giving an overview of the project, planning the study with me and for all the support provided during the mission.

I enjoyed working with hard working and committed Smarthan and SIPA teams and wish all the best for future. I hope that this report will be useful in learning and planning future projects.

Warm Regards

Sanjeev K Gupta
27th February 2022

List of Abbreviation

CRP-	Community Resource Person
FGD-	Focus Group Discussion
FPO-	Farmer Producer Organisations
MGNREGA-	Mahatma Gandhi National Rural Employment Guarantee Act
MIS-	Management Information System
MTR-	Mid Term Assessment
PS-	Pashu Sakhi
SHG-	Self Help Groups
SIPA-	Samarth in participatory Action Society
SRLM-	State Rural Livelihood Program
TGT-	The Goat Trust

Executive summary

Mid Term Assessment report of Goat Based Livelihood Program

1 Introduction to the project

ITC-- MSK is working with its Social Investment initiatives in Sehore district and Goat Based Livelihood program is one of those initiatives. The livestock (goat) management program was started in Sehore district in 2016-17 to promote the livelihood of poor marginalized women engaged in goat rearing. The Goat livelihood program is being implemented by SIPA under the banner of "ITC Mission SunheraKal" since 2016-17. The project aims to promote improved Goat rearing practices on scientific lines as alternate livelihood option through creating appropriate institutional framework and community managed service delivery systems.



Recent census shown that the population of goats in the state stood at around 81.4 lakhs, with only 30 % of the respondents having knowledge of balanced feed, 28.33% knew about how to make silage, around 11.66 % had knowledge of disposal of animal waste and just 20 % had knowledge about the vaccination of livestock.

To tackle this issue, SIPA provides training to rural women, elected from their villages. These women are skilled in the 16 best practices enlisted by The Goat Trust with focus on four major areas of Primary Healthcare, Herbal treatment, Vaccination and Profit Making by selling grains. Each of the current 48 Pashu Sakhis cater to around 350 goats, providing them an additional monthly income of around INR 3000 /-.

Project has expanded from 10 villages to 90 villages in 6 years and currently covers 3560 goat rearers. Project has followed a multi pronged strategy to implement the project. Most important focus of project implementation strategy is to work through a network of Pashusakhis, all women, who are identified based on their education, attitude and entrepreneurial skill and trained intensively to provide multitude of extension services i.e like forming goat rearers group, conducting monthly meetings, provide primary care services to goats, vaccination, deworming, improve feeding habits, provide improved feed, Provide advice on improving goat shed and other extension related services. All pashu sakhis have been provided training by "The Goat trust" an expert organisation on goat livestock based in Lucknow and they are provided support, mentoring and supervision by cluster level managers and project coordinator. At the time of evaluation, project had a network of 48 Pashu Sakhis, 3 cluster level managers and one coordinator. Since inception of the project six years back, a total of 35.8 lakhs have been spent with an average annual budget of approximately Rs 6 lakhs.

Specific project objectives are: Women empowerment through goat--based livelihood promotion, set up system of providing veterinary services, reduce mortality rate, Improve breed and increase income of goat farmers through the above interventions



85% reduction in
goat mortality
rate



Additional
monthly income of
INR 3000/ month
to PS

Objective of this programme:

- Specific project objectives of the goat livelihood program are mentioned below:
- 1. Women empowerment through goat--based livelihood promotion.
- 2. Increase veterinary service providers.
- 3. Reduce mortality rate in goats.
- 4. Breed improvements for high quality goat rearing.
- 5. Ensure availability of fair market and fair price.
- 6. Increase income of goat farmers through the above interventions

2 Mid Term Assessment:

As six years of project has passed, SIPA decided to conduct a Mid Term Assessment (MTR) of the project, to understand what has been the impact of interventions undertaken on the goat rearers livelihood, what has worked, what can be improved and to suggest what strategies SIPA could follow in future for expansion and better impact on improving goat rearing in the region and improving livelihood of goat rearers in particular.

3 Methodology of MTR

Evaluation was done in two phases. In the first phase focus was to undertake a qualitative assessment by meeting team members, interacting with Goat rearers, FGDs with pashu sakhis, analysing project MIS reports, Followed by interaction with senior team to share findings, get feedback and also take feedback on suggestions for future expansion and consolidation of the program. In the second phase a quantitative assessment was conducted with a detailed. questionnaire, 229 goat rearers were interviewed, data was collated and analysed. Overall approach followed in the evaluation was collaborative, participatory and learning approach with SIPA team members. SIPA team members accompanied the external consultant all the time. This was done so the team members reflect and learn during the evaluation process itself.



vaccination increased from 27% to 90%



Deworming increased from 40% to 86%



25% Mix feeding with mineral increased



Feeding techniques improved by 74% of goat rears



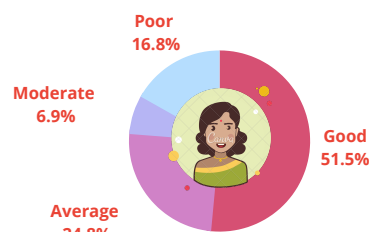
White washing of goat sheds increased from 29 to 52%



Avg. herd size increased by 16%

4 Summary of key findings:

1. Project has worked mostly with small goat rearers and with extremely poor families.
2. Vaccination, de-worming and marketing services were the most neglected before the project interventions. Setting up system of extension services through Pashu Sakhis (PS) is a significant pillar of the project. As shown from the findings below extension and rearing services have significantly improved through the network of PSs:
 - As of now approximately 90% farmers are vaccinating their goats, three years back only 27% of the goat rearers were vaccinating their goats;
 - Similarly 86% farmers are de-worming their goats currently, three years back only 40% of the goat rearers were de--worming their goats;
 - Goat rearers generally use to feed a single grain feed. But the intervention changed this practice and now many feed mineral mixture/goat feed to their goats. Current rate of mix feeding is 49% and earlier it was 24%;
 - In a major shift in feeding techniques, earlier mostly fed their goats on the floor. Now 32% of goat rearers are using manger (feeding tubs), 76% hanging on rope and only 14% still feeding on floor. This practice reduces the chances of stomach worms in goats;
 - 52% of goat rearers are white washing their goat sheds earlier only 29% used to;
 - 13% of goat rearers have built pakka shed now. Earlier 7% used to have a pakka shed. This is an area of improvement and more funds could be sought from government and panchayat resources i.e. MGNREGA funds to build more pakka sheds; and
 - 52% members rated pashu sakhi services as good, 25% very good, 7% moderate and 16% poor.
 - Average herd size has increased by 16%



Source: Feedback from PS by Goat rearers about their services

3. PSs felt happy that their work has increased confidence amongst goat rearers, which has helped in goat rearers expanding their business. PSs felt good that their community, family and neighbors respect them. They felt confident and happy that they are part of this program.

4. Average monthly income of PSs, is more than Rs 3000 per month. Average monthly income of Rs 3000 per PS is a good level for PS to continue working for long term. They want to increase this average income to Rs 5000 per month in future;

5. Areas where PS need more support are refresher training in technical areas, advice on planning and analyzing monthly income, record keeping, guidance and support in breed improvement and marketing of goats.

6. Project has resulted in increasing goat rearer's income by 18%.

7. As an approximation total annual income earned by 3560 goat rearers is Rs. 8.5 Cr annually for 3,560 goat rearers with average income per goat rearer of Rs. 24,000. Of this Rs. 1.5 Cr (18%) has been contributed by this project. This is also confirmed by quantitative survey of 229 goat rearers, where in average annual income from sales of all goat rearers is Rs. 26,408.

8. As an approximation in older villages (4 years old) no of goats increased in the villages by 20 to 25% due to project intervention.

9. Currently 229 goat rearers surveyed have an average herd size of 6.7. They want to increase average herd size to 14.2 in future.

In summary project is highly successful and has worked with limited budget and staff resources. It is clear that there is a huge scope of building on this program in the region and also expanding in more SIPA working areas. Due to the multi sectoral system of services provided by SIPA, confidence of the goat rearing families has increased and they feel that they can benefit more if they put more time and resources into goat rearing. This is a significant contribution by the project. Recommendations for next phase are mentioned in the next section.

5 Recommendations with suggested strategies for future

Goat livelihood Program implemented by SIPA and supported by 'ITC Mission SunheraKal' has been successful, with high impact in increasing poor families income substantially and at a low overall investment. Network of Pashu sakhis are providing multi sectoral services to goat rearers leading to increased confidence of goat rearing families, which has helped goat rearers to expand and other families to start goat rearing as an alternative option. Both SIPA and ITC mission Sunherakal must be congratulated for implementing a highly effective project at a low cost with good commitment of staff.



Increased 3000/month to 48 PS and want to increase it to 5000/month



3560 Goat Rears increased average tannal income upto 26400 Rs.



Increased income of goat reares by 18% i.e 1.5 Cr annually



No. of Goats increased by 20-25%



Parameter of Pashu Sakhi Evaluation:

Feed back taken from Goat rears on below mention point

- Knowing about their Pashu shakhi
- Access to services from Pashu sakhi
- Pashu Sakhi services quality Rating (%)

However, there is significant scope to build on these foundation and consolidate the gains. It is **recommended** that SIPA and 'ITC Mission SunheraKal" should try to further **consolidate goat livelihood program** in current geographic area and also consider expanding in other geographies. Following interventions are suggested for the next phase:

1. **At Goat rearers level:** It is advised that SIPA should target an average herd size of 10-15 goats in three years from about 7 currently and an average sale of 5 goats per year. This will provide an average income of about Rs 40000 per year, thereby contributing significantly to the family income basket and taking these families out of extreme poverty. SIPA should target minimum ideal herd size for small goat rearers at 5. This will provide average annual income of about Rs. 10000 to 15000 per year and fulfills emergency cash needs of poor families.
2. **At Pashu Sakhi's level:** SIPA has done good work on promoting a sustainable network of PS. At least half of the PSs are earning more than average monthly income of Rs. 3000. It is advised that SIPA should target an average monthly income for PSs to be Rs. 5000 and minimum average income of Rs. 3000 per month per PS. This will create sufficient interest in PSs to continue their work for long term. For this SIPA should focus on following:

2.1 There is already significant income from selling mineral mixture, primary treatment and through kid nursery. This should be strengthened. New source of income for PSs are marketing of goats, herbal medicines and goat manure. This should be strengthened. It is advised that break up of income analysis from various activities for each PS should be done at quarterly interval with PSs and strong and weak areas should be identified. Strong areas need to be consolidated and mentoring support and training should be provided to improve in weak areas.

2.2 Robust and objective criteria should be developed for ranking PSs. This ranking exercise should be done on a six monthly basis and training, mentoring and business development support should be provided to take them to the next level continuously.

2.3 More exposure needed within project with older / better functioning PSs.

2.4 Refresher training on technical aspect needs to be provided regularly after training need assessment.

2.5 One important area where PSs need more training and supervision is in record keeping. Many of them are not educated enough or do not have time to write minutes of meetings with goat rearers and also fill various formats to monitor goat rearing at village level. In many cases, children of PSs provide this service. Project should find a way to address this gap to the extent possible. May be a quick literacy course for PS will help. SIPA team should also provide more support, training and supervising support to PS to fill these forms. Also SIPA team should put more effort in analysing the data coming out of these formats in PS meetings, so that PSs learn from it and work towards increasing their activity, business and income. These formats are also critical to monitor project progress on key parameters e.g. mortality, animal health, tracking progress of various activities and income through these activities. Project will need more staff and budget to be able to do this. Monthly meetings such as PSs's with goat rearers at village level and CLMs with PSs of the region needs to be better planned, documented and monitored.

2.6 Promoting kid nursery is a good activity to increase PS's income but is a personal business by PS. Kid nursery does act as a demonstrable model to existing and potential goat rearers for goat rearing. However PSs services being of service provider in nature, PSs income should be analysed without income from kid nursery to get a better picture of PS's role as a service provider. Income from Kid nursery should be analysed separately.

2.7 Pashu Sakhis should also be provided training on understanding livelihood and poverty profile of families in the village and various livelihood options pursued by families including existing and potential goat rearers. This will help them understand, plan and expand their goat rearing business.

3.FPO promotion:

SIPA is already considering converting GRC (Goat Resource Center) into a formal FPO. Promoting FPO is a good idea and should be explored. It should be kept in mind that it is a long--term project requiring financial support at least for three years. Creating sustainable FPO has been a challenge in the sector and needs to be undertaken after feasibility analysis, staff capacity and secured funding. It is recommended that exposure visit to some of the already existing FPO on goat rearing existing in Maharashtra and one in

MP in Khandwa district be visited and their functioning and challenges understood well before formally registering FPO Based. on the exposure visits and after extensive consultations, business plan for FPO should be developed. FPO could focus on

- At scale, organised marketing of goats;
- At scale, organized manufacturing and marketing of mineral mixture and herbal medicines;
- Improving provision of technical services i.e. vaccination, de--worming, treatment, and other goat rearing services
- Breed improvement and AI;
- Provide mentoring, training and supervisory support to PSs; and
- Facilitating loans to goat rearers, willing to expand herd size.

4 Access to loans: To increase the herd size of willing goat rearers, more efforts should be made to provide access to loans including subsidized loans. Possible sources of collaboration are SHGs in the villages and SHG federations. Formal collaboration with SRLM and SHG federations and with government veterinary department should be explored.

5 Breed Improvement: More work needed on breed improvement – feasibility study and plan to be developed by The Goat Trust. Collaboration with government and other agencies working on artificial insemination to be explored and developed.

6 Collaboration with government and Panchayats: More collaboration to be explored with Government veterinary department for services to goat rearers and SRLM for loans to goat keepers to expand. Idea of PSs to be designated as Goat CRP by SRLM should be explored. MGNREGA funds through Panchayats could be explored for improving goat sheds.

7 Increased human and financial resources needed: Project is working with limited budget and human resources. While project's working area has scaled up four times, budget has stayed at the same level of approximately Rs 6 lakhs per year. It was felt many times during the assessment that the project is working with significant lack of human and financial resources. This is a crucial aspect and should be addressed in future programming. Cluster level managers cover a large area. In addition two of them also themselves act as PS. So

they have to work in their own area as PS and also play the role of guiding, supporting and supervising other PSs. This leaves a gap in terms of supporting, training, mentoring and supervising other, newer, weaker PSs. In future programming this aspect of project implementation needs to be looked at and addressed.

8 Other areas: Exploring goat insurance and imparting knowledge on other government schemes regarding goat rearing and other related areas.

9 Expansion: It is suggested that a larger proposal to be developed by SIPA to expand the project in 500 or 1000 villages including in other districts where SIPA / Samarthan is working.

Mid term Assessment report- Goat Based Livelihood Program implemented by SIPA

1 Introduction to the project

ITC-- MSK is working with its Social Investment initiatives in Sehore district and Goat Based Livelihood program is one of those initiatives. The livestock (goat) management program was started in Sehore district in 2016--17 to promote the livelihood of poor marginalized women engaged in goat rearing. The Goat livelihood program is being implemented by SIPA under the banner of "ITC Mission SunheraKal" since 2016--17. The work was initiated in 10 villages, whose selection was carried post a baseline survey. Goat rearing is mostly managed by women in the communities. A quick diagnostic study carried by The Goat Trust (TGT) in the initial phase revealed some of the key issues of the goat rearers like a) Poor quality of the breed of goats. b)

Improper Feed and Feeding pattern c) High incidence of goat(kids) mortality d) Housing and sanitation facilities were not proper e) Lack of appropriate marketing practices. The purpose of the intervention is Goat Rearing promotion on scientific lines with community managed service delivery systems. The project aims to promote improved Goat rearing practices on scientific lines as alternate livelihood option through creating appropriate institutional framework and community managed service delivery systems.

Project has expanded from 10 villages to 90 villages in 6 years and currently covers 3560 goat rearers. Project has followed a multi pronged strategy to implement the project. Most important focus of project implementation strategy is to work through a network of Pashusakhis, all women, who are identified based on their education, attitude and entrepreneurial skill and trained intensively to provide multitude of extension services i.e like forming goat rearers group, conducting monthly meetings, provide primary care services to goats, vaccination, deworming, improve feeding habits, provide improved feed, Provide advice on improving goat shed and other extension related services. All pashu sakhis have been provided training by "The Goat trust" an expert organisation on goat livestock based in Lucknow and they are provided support, mentoring and supervision by cluster level managers and project coordinator. At the time of evaluation, project had a network of 48 Pashu Sakhis, 3 cluster level managers and one coordinator. Since inception of the project six years back, a total of 35.8 lakhs have been spent with an average annual budget of approximately Rs 6 lakhs.

1.1 Project objectives:

Specific project objectives of the goat livelihood program are mentioned below:

1. Women empowerment through goat--based livelihood promotion.
2. Increase veterinary service providers.
3. Reduce mortality rate in goats.
4. Breed improvements for high quality goat rearing.
5. Ensure availability of fair market and fair price.
6. Increase income of goat farmers through the above interventions



2 Mid Term Assessment:

As six years of project has passed, SIPA decided to conduct a Mid Term Assessment (MTR) of the project, to understand what has been the impact of interventions undertaken on the goat rearers livelihood, what has worked, what can be improved and what strategies SIPA follow in 10 future for expansion and better impact on improving goat rearing in the region and improving livelihood of goat rearers in particular. Specific objectives of mid term assessment are as follows:

2.1 Objectives of Mid Term Assessment :

Specific objectives of MTR are as follows:

1. Income level of Pashu Sakhis and their capacity to provide business services
2. To analyze the socio - economic impact of goat-based livelihood intervention in the life of beneficiaries participating in the programme.
3. To analyze the quality and variety of services delivered by the Pashu Sakhi to the beneficiaries.
4. Change in herd size of goats and mortality of goats and kids.
5. Breed Improvement practices and AI adoption by beneficiaries.
6. Adoption rate of improved practices by beneficiaries.
- 7.To analyze the potential and recommendations on the future programme strategies and design for the district.

3 Methodology of MTR

Evaluation was done in two phases. In the first phase focus was to undertake a qualitative assessment by meeting team members, interacting with Goat rearers, FGDs with pashu sakhis, analysing project MIS reports, Followed by interaction with senior team to share findings, get feedback and also take feedback on suggestions for future expansion and consolidation of the program. In the second phase a quantitative assessment was conducted with a detailed questionnaire, goat rearers were interviewed, data was collated and analysed.

Overall approach followed in the evaluation was collaborative, participatory and learning approach with SIPA team members. Senior SIPA team members accompanied the external consultant all the time. This was done so the team members reflect and learn during the evaluation process itself. In consultant's experience this is a very useful and effective approach to make the evaluation process effective, meaningful and to ensure that learning from the process stays with the project team and can be incorporated in future programming. This collaborative approach and constant feedback from the team on the ground that findings are close to ground reality.

3.1 Qualitative assessments:

Following steps were undertaken for qualitative assessment:

- 1)Desk review of proposal, progress reports, MIS reports and other background documents.
- 2)Detailed Presentation by project team followed by intensive discussions and planning for field assessments.
- 3)Three Focus Group Discussions (FGDs) were conducted with Pashu Sakhis covering 19 Pashu Sakhis. One personal interview was also conducted with a pashu sakhi.
- 4)Meeting and interacting with approximately 60 goat rearers in 4 project villages.
- 5)Brief meeting with the district veterinary department and talking with Ujjawal Sarkar, senior staff of The Goat Trust.
- 6)Analysis of data and interaction with team to firm up conclusions
- 7)Making a presentation of findings and future suggestions with SIPA and Samarthan project team and taking the team's feedback.

3.2 Quantitative assessments:

Following qualitative assessment, quantitative assessment was conducted. This was done in collaboration with SIPA team. Following specific steps were undertaken for the quantitative assessment:

1) A newly hired senior staff from SIPA team worked with external consultant to work on the quantitative assessment. This was done to keep objectivity with the evaluation process, as there has not been direct involvement of this person with project implementation.

2) A detailed questionnaire was designed and tested (Annexure 1–last page of this report)

3) It was decided to do survey interviews with 240 goat keepers in 30 villages. Finally 229 goat rearers were surveyed.

4) As this was an impact assessment exercise, 30 survey villages were selected from older 50 villages on a random basis, in which the goat livelihood program has been running for more than 3 years.

5) Similarly in each village it was targeted to cover 8 goat rearers in all survey villages with different herd sizes.

6) Questionnaire was put on Mwater and independent evaluators took the responses.

7) Data was exported in excel, collated and analyzed.

A separate report was prepared on the findings from the quantitative assessment (emclosed in Annex A) and key findings were combined in the consolidated report.

4 Objective wise key observations and findings are as below:

Objective No. 1 Income level of Pashu Sakhis and their capacity to provide business services

4.1.1 Pashu Sakhis capacity to provide business services-

I.PSs mentioned that key activities done by them are following:

- Organizing health camps.
- Providing preventive vaccination and de--worming thereby improving health and preventing sickness.
- Providing improved feed and improving feeding practice.
- Better management of goats at home and improving goat sheds.
- Support in improving breed.
- Providing emergency treatment.
- Sale and purchase of goats.
- Training on goat manure
- Providing herbal medicines to goat rearers.



New Pashu Sakhi Training



Pashu Sakhi Visit to Goat Rears

II. Key findings from quantitative survey regarding PS's services are mentioned below:

- As of now approximately 90% farmers are vaccinating their goats, three years back only 27% of the goat rearers were vaccinating their goats.
- Similarly 86% farmers are de--worming their goats currently, three years back only 40% of the goat rearers were de--worming their goats.
- Goat rearers generally use to feed a single grain feed. But the intervention changed this practice and now many feed mineral mixture/goat feed to their goats. Current rate of mix feeding is 49% and earlier it was 24%.
- In a major shift in feeding techniques, earlier mostly fed their goats on the floor. Now 32% of goat rearers are using manger (feeding tubs), 76% hanging on rope and only 14% still feeding on floor. This practice reduces the chances of stomach worms in goats.
- 52% of goat rearers are white washing their goat sheds earlier only 29% used to.
- 13% of goat rearers have built pakka shed now. Earlier 7% used to have a pakka shed. This is an area of improvement and more funds could be sought from government and panchayat resources i.e. MGNREGA funds to build more pakka sheds.
- 94% of goat rearers know about PS.
- 62% are accessing first aid and primary care services through PSs
- 52% members rated PS's services as good, 25% very good, 7% moderate and 16% poor.

Vaccination, de-worming and marketing services were the most neglected before the project interventions. First aid and treatment services were provided by the practitioner at high rates. Setting up system of extension services through pashu sakhis is a significant pillar of the project. As shown from the findings above, extension and rearing services have significantly improved through the network of PSs. One area of improvement needed is expansion of marketing services. The SIPA team is aware of this and is planning this in the next phase of the project.

III. PSs felt happy that their work has increased confidence amongst goat rearers by decreasing mortality of goat, improving overall health and income of goat rearers. They think that this increased confidence has helped in expanding the goat rearing activity in two ways: One by increasing herd size of existing goat keepers and second by motivating other poor families start goat rearing as an alternative livelihood option.

IV. PSs mentioned that all goat keepers they reached out to, are poorer families of the village.

4.1.2 Income Level of Pashu Sakhis

I. PSs mentioned that key activities done by them are following:

- Average monthly income of the 20 PSs, we met was about Rs 3400 with income ranging from Rs 6000 per month to Rs 1200 per month. This income also tallies with the MIS database kept by the project. As shown in the table below the average monthly income of 42 PSs during the year 20-21 is Rs 3269 after including income from kid nursery and Rs 2816 after excluding income from kid nursery. Maximum and minimum range is approximately Rs 4800 per month to Rs 700 per month.
- Promoting kid nursery is a good activity to increase PS's income. This acts as a demonstrable model to existing and potential goat rearers for goat rearing. However PSs being service providers in nature, PS's income should be analysed without income from kid nursery to evaluate PS's role as a service provider. Income from Kid nursery should be analysed separately.
- 20 of the PS's average monthly income last year was more than Rs 3000. This is a good level of income as a service provider and will ensure that they continue to work as PS. PSs looked confident, motivated and happy about being involved with the project and mentioned they would ideally like to reach a level of income more than Rs 5000.
- PSs felt that they have learnt a lot, feel empowered, can speak out and are helping out in expanding the goat livelihood program in their village and with their neighbours and increasing their income. PS felt good that their community, family and neighbors respect them. They felt confident and happy that they are part of this program.



Survey of Goat rearers



Selling of Mannure



Bakari Palan Pathashala



Herbal Medicine

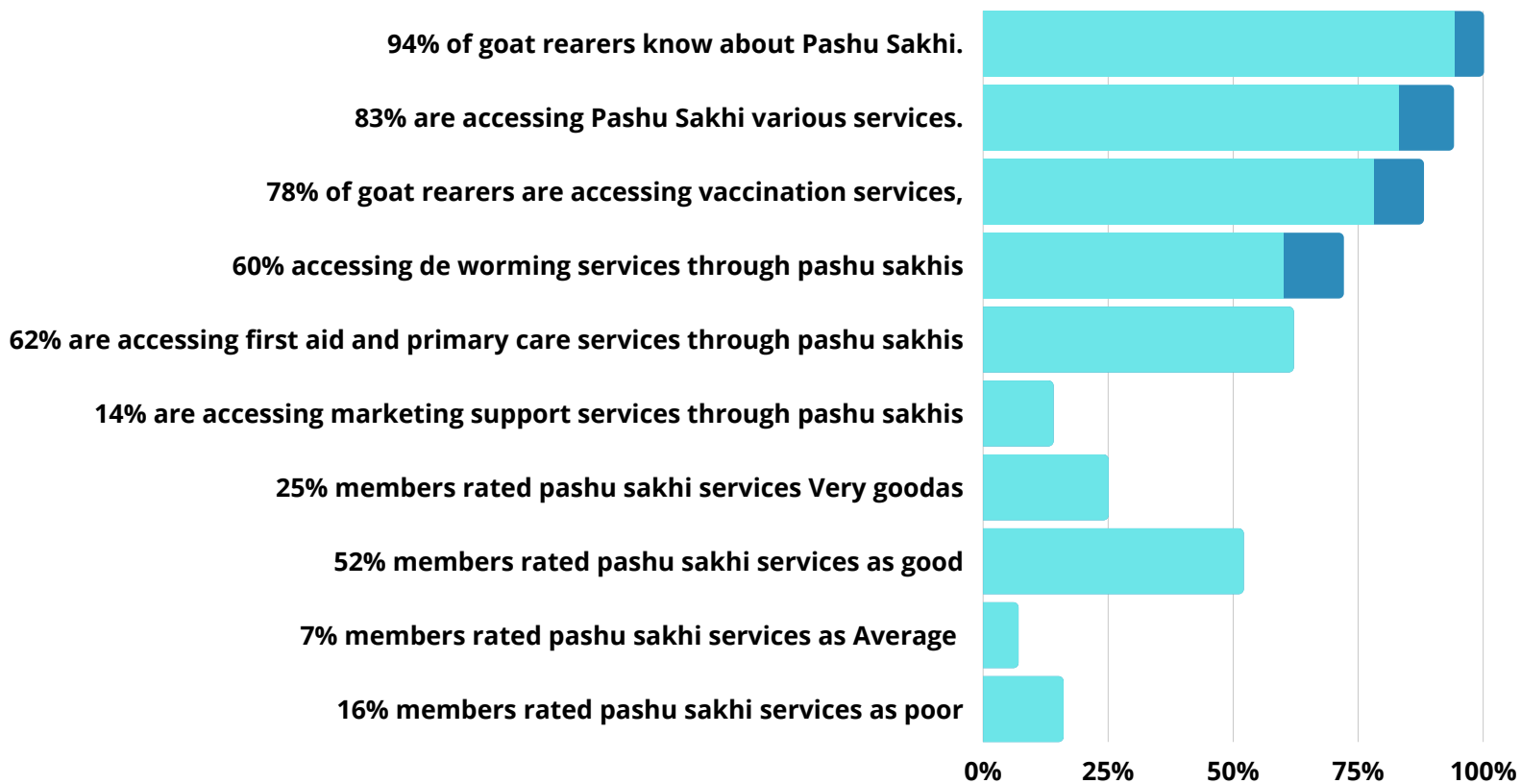
4.1.3 Pashu Sakhi income from various activities:

Component wise income of Pashu Sakhis is analysed in the table below. Key observations are:

- Primary treatment and selling feed mixture contributes maximum (22% each) to the total income of PS.
- Income from managing kid nursery is 17% of the total income of PS. As mentioned above, PS's income from kid nursery needs to be treated separately as it is not a service provided by PS to goat keepers. However helps in creating an example for other goat keepers to expand and start goat keeping. But is a significant activity in increasing PS's income
- Marketing goats is relatively new activity and contributes 11% to the total income of PS.
- De-worming contributes 10% to the total income of PS and vaccination contributes 3% to the total income of the PS.
- Selling herbal Medicine contributes 7% to the income of PS and selling goat manure contributes 4% to the total income of PS
- Many of the PS do not do castration and are not confident of it. Hence income contribution is also low.



Pashu*sakhi*Ac/vity*wise*income*analysis*620621					
S.No	Particulars	Amount	% activity wise	No of activities	Per unit income
1	Health'Camp	0		527	
2	Mineral'Mixture/Supplement	367781	22%	26115	14
3	Primary'Treatment	359475	22%	5371	67
4	Kid'Nursery	283026	17%	146	1939
5	Goat'Sold'(Incen?ve)	188460	11%	1808	104
6	Dewormer	172718	10%	26627	6
7	Herbal'Medicine	118425	7%	987	120
8	Goat'Manure	71000	4%	7075	10
9	Vaccina?on	48631	3%	8936	5
10	Castra?on	19300	1%	193	100
11	Stall'Feed'Stand	19000	1%	259	73
	Total	1647816	100%		
	Total'Pashu'Sakhi	42			
	Average'income'	39234			
	Average'income'per'month'	3269			



It can be inferred from above that there is significant income from selling mineral mixture, primary treatment and through kid nursery. New source of income for PSs are marketing of goats, herbal medicines and goat manure. It is advised that this above break up of income analysis should be done for each pashu sakhi atleast at quarterly interval and strong and weak areas should be identified. Strong areas need to be consolidated and mentoring support and training should be provided in weak areas.

Socio-economic impact on beneficiaries:

- During the discussion with goat reares and PS; we got to know that before this programme they are bound to do unskilled labor to fulfill their basic need. Programme has given support to the beneficiaries to sustain this business and minimize the risk and losses, now they are not bound to get into the unskilled labor. Now they are going this work as a sustainable livelihood.
- With the support of this incremental income goat reares and PS have admit that now they are enable to continue the education of their children. Some of PS also has told us that with this assured income our children are able to get admissions in Navoday Vidhyal, private schools and colleges.
- Some of the women beneficiaries told us that now after ensuring the food and other basic need now they are growing through taking loan from SHGs and assured their livelihood. For example- They are involving in dairy, open their shops, involved in Public Distribution System(Raipur nayakhed and Daboti).
- Some of the cases are example like- Pashu Sakhi of Village - Sherpur, Ashma Bi - who have no source of income when her husband passed away in 2021. In this difficult situation because of having skills of Pashu Sakhi; she is able to manage responsibility of her family.
- Chandani Bai (PS of Bijon) told that with the support of this income she was able to get a lapto for his son who is persuing a diploma course in Software coding.
- Some of the case studies are attached with this report

Objective no. 4.2 To analyze the socio - economic impact of goat--based livelihood intervention in the life of beneficiaries participating in the programme.

4.2.1 Socio-economic impact of goat Reares (Beneficiaries)

Findings from meeting and interacting with Goat rearers:

During four days of field work, we met about 60 goat rearers with various herd sizes. Following are the key observations from such meetings:

- 1. Most goat keepers felt happy about services provided by PSs. Having a PS nearby to provide health care and address any emergency increased their confidence. This helped existing goat rearers to increase herd size of goats.**
- 2. Many families we met, started goat keeping as a new activity after seeing Pashu Sakhi's income and as her technical support is available easily. Personal connection and relations with PS facilitated a lot especially for new goat rearers.**
- 3. Goats given by ITC - Bandhan project about 5/6 years back helped a lot in many families starting goat keeping activities - Services provided by PS and project helped them in scaling up goat keeping program and enhancing income.**
- 4. Few goat keepers also were able to take loans from SHGs and SRLM program to expand goat--keeping activities. However there is need to scale up further linking up goat rearers with various loan options to enable scaling up the goat--rearing program.**
- 5. As an approximation in older villages (4 years old) no of goats increased in the villages by 20 to 25% due to project intervention.**
- 6. Average herd size has increase by 16%**

Many old goat rearers who were working before the project and were doing goat rearing at scale, did not accept services of PSs but some of them later accepted the services and some of them on need basis but not all the services. This is understandable as these old goat rearers feel that they know more and do not need PS's services. It is expected that some of them too will change as PS's services improve with time

4.2.2 Income assessment of goat rearers:

This assessment is based on meeting with about 60 goat rearers, 20 PSs and project team. Project has worked with 3560 goat keepers. It is estimated that

- 25% (890) of the goat rearers have herd size of 1--2 goats with average yearly income of Rs. 5,000.**
- 35% (1246) of the goat rearers, have herd size of 3--5 goats with average yearly income of Rs. 15,000.**
- 30% (1068) of the goat rearers, have herd size of 6--10 goats with average yearly income of Rs. 35,000**
- 10% (356) of the goat rearers, have herd size of more than 10 goats with average yearly income of Rs. 70,000.**

4.1.4 Income distribution of Pashu Sakhis:

Based on the income table above, following summary can be made of Pashu Sakhis average monthly income during 20-21.

Distribution of Pashu Sakhi income(FY20-21)		
S.no.	Income Range	No. of Pashi sakhis
1	More or equal then 4000	5
2	3000-4000	15
3	2000-3000	10
4	1000-2000	7
5	Less then 1000	5
Total		42

Following could be inferred from above:

- Income of 20 PS is more than Rs 3000 per month in FY 20--21. This is a good level of monthly income and good enough to continue as PS for long term. Their aspiration is to reach above Rs 5000 per month average income. It is achievable and future projects should facilitate this by working closely with PSs, mentoring them both in technical and business development area.
- For others PSs, similar planning should be done to take other PS beyond Rs 3000 of average income per month initially and than higher later.

4.1.5 Ranking pashu sakhis:

Project staff and team was asked to rank PSs based on their knowledge, commitment to developing goat keeping in her work area and enterpreneurial nature. Out of 42 PS, 10 were ranked in A and B rank, 17 in C rank and 5 in D rank.

PASHU SAKHI RANKING	NO.
A	10
B	10
C	17
D	5
Total	42

More robust and objective crieteria should be developed for ranking the pashu sakhis. Similar ranking exercise should be done on a six monthly basis and training, mentoring and business development support should be provided to take them to the next level on a continuous basis.

**Table for assessment of income
Total Income of goat rearers**

No. of Goat per Family	%	Numbers	Average income perm family	Total income
> 10	10%	356	70000	24,920,000
<5-10>	30%	1068	35000	37,380,000
<3-5>	35%	1246	15000	18,690,000
<1-2>	25%	890	5000	4,450,000
Total		3560		85,440,000

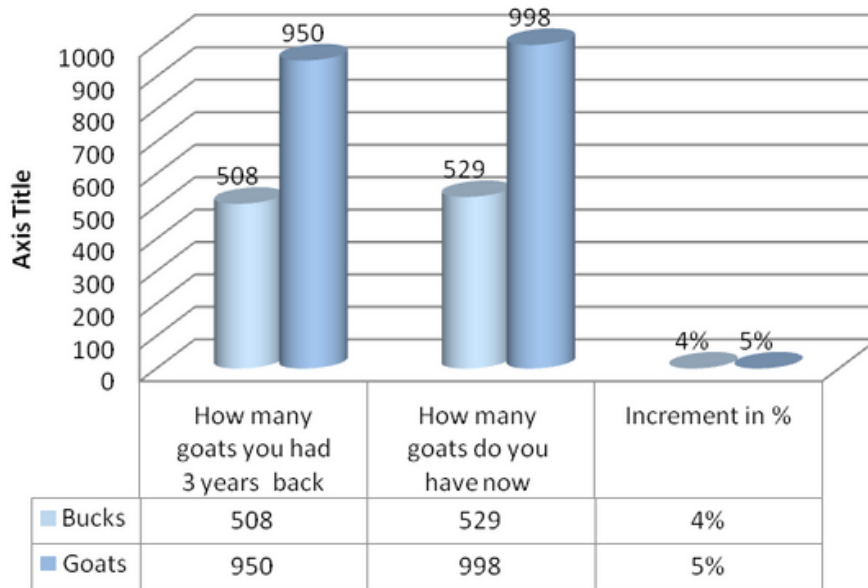
This results in total income of Rs. 8.5 Cr annually for 3,560 goat rearers with average income per goat rearer of Rs. 24,000. This is also confirmed by quantitative survey of 229 goat rearers, (as shown in table on page 23 of this report, row 11) where in average annual income from sales of all goat rearers is Rs 26,408 .

Further it is estimated on the basis of discussions with goat rearers, PSs and project team that project has conservatively helped in graduating 30% of these goat rearers into the next category

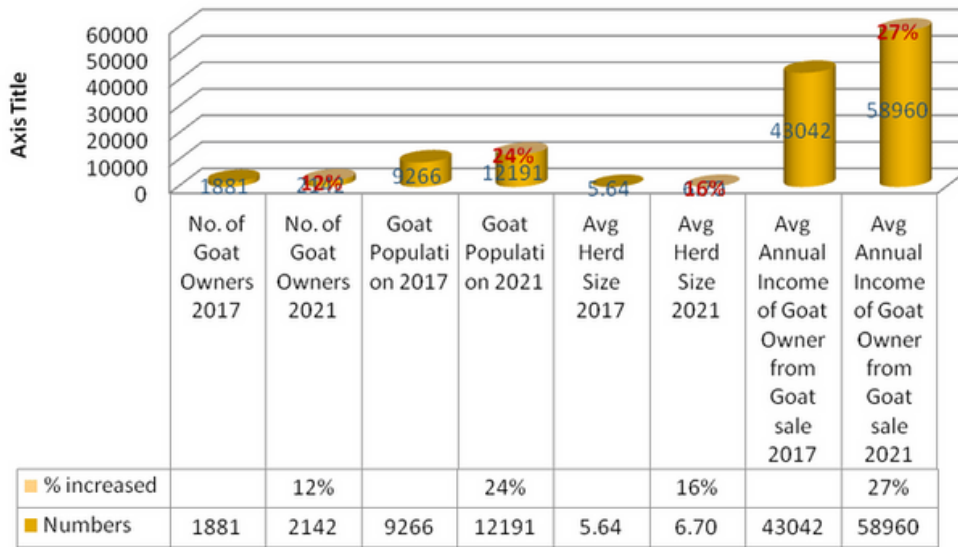
**Project impact in improving income Assumption:
30% graduation into next category**

No. of Goat per Family	Numbers	Average income perm family	Total income
> 10	107	35000	3,738,000
<5-10	320	20000	6,408,000
<3-5>	374	10000	3,738,000
<1-2>	267	5000	1,335,000
Total	1068		15,219,000

Goat Holding Pattern



Goat owner analysis



- Project has helped in graduating 107 goat keepers from a level of 5--10 goats to more than 10 goats thereby increasing average annual income by Rs. 35,000 (from Rs. 35,000 to Rs. 70,000) of these 107 goat keepers.
- Project has helped in graduating 320 goat keepers from a level of 3--5 goats to 6--10 goats thereby increasing average annual income by Rs. 20,000 (from Rs 15,000 to Rs 35,000) of these 320 goat keepers.
- Project has helped in graduating 374 goat keepers from a level of 1--2 goats to 3--5 goats thereby increasing average annual income by Rs. 10000 (from Rs. 5,000 to Rs. 15,000)of these 374 goat keepers.
- Project has helped in introducing goat keeping to 267 new goat keepers increasing their average annual income by Rs. 5000 and creating potential to further scale these up.

We can conclude that (shown in table above), of the total income of Rs. 8.5 Cr by 3560 goat rearers, Rs. 1.5 Cr (18%) has been contributed by this project, benefiting 1068 goat keepers. This estimation is on conservative basis.

In summary Project has increased goat rearers's income by 18% during the project period.

4.2.3 Goat rearers vision for future:

As of now the majority of goat rearing families (76%) have 1--10 goats and 13% have more than 11 and less than 20 goats. Only 5% have more than 20 goats and 6% have no goats. Due to service provided by the project there is interest in large no of goat rearers to increase their business. Currently 229 goat rearers have total of 1527 goats with an average herd size of 6.7. They want to increase total goats to 3245 with an average herd size of 14.2. Significantly 15% want to increase their goat herd size to more than 20 from current 5.4%. Most significant change is in category 11--20 goats, where 28% of the goat keepers want to increase their herd size between 11--20 from current 13%. 32% of the goat rearers want to increase their herd size to 6--10 from 19% currently. As of now there are 57% goat rearers in 1--5 range and it is these goat rearers that want to increase their business and in future only 12% want to be in this range. (See section 4.7 of quantitative report for details)

It is clear that there is a huge scope of expansion and continuing the program. We assess that due to the multi sectoral system of services provided by SIPA, the confidence of goat rearing families has increased and they feel that they can benefit more if they put more time and resources into goat rearing. This is a significant contribution by the project.

4.2.4 Suggestion by goat rearers for improvement:

During quantitative survey goat rearers were asked for suggestions to improve the goat rearing in future. 94 (41%) of 229 respondents could answer this question. 43% of goat rearers suggested that Pashu sakhi's services should be further improved. They should be trained better and extension services provided are to be improved. 26% of the goat rearers want access to loans / subsidized loans for expanding their business. 12% mentioned that they should get more training and knowledge on better goat management. 11% mentioned that more work is needed on breed improvement. Other areas to improve as mentioned by goat keepers are: more knowledge on government schemes, improvement in goat shed, work on removing feed shortage, goat insurance and free medicines for goat (See section 4.8 of quantitative report for details)

Objective No. 4.3 To analyze the quality and variety of services delivered by the Pashu Sakhi to the beneficiaries.

Summary of key findings are presented below:

1. Project has worked mostly with small goat rearers and with extremely poor families.
2. Vaccination, de-worming and marketing services were the most neglected before the project interventions. Setting up system of extension services through Pashu Sakhis (PS) is a significant pillar of the project. As shown from the findings below extension and rearing services have significantly improved through the network of PSs:
 - **Vaccination:** As of now approximately 90% farmers are vaccinating their goats, three years back only 27% of the goat rearers were vaccinating their goats.
 - **De-worming:** 86% farmers are de-worming their goats currently, three years back only 40% of the goat rearers were de-worming their goats.
 - **Feed mineral Mixture:** Goat rearers generally use to feed a single grain feed. But the intervention changed this practice and now many feed mineral mixture/goat feed to their goats. Current rate of mix feeding is 49% and earlier it was 24%.
 - **Feeding Technique:** In a major shift in feeding techniques, earlier mostly fed their goats on the floor. Now 32% of goat rearers are using manger (feeding tubs), 76% hanging on rope and only 14% still feeding on floor. This practice reduces the chances of stomach worms in goats.
 - **White washing of Goat Shed:** 52% of goat rearers are white washing their goat sheds earlier only 29% used to.
 - **Pakka Shed:** 13% of goat rearers have built pakka shed now. Earlier 7% used to have a pakka shed. This is an area of improvement and more funds could be sought from government and panchayat resources i.e. MGNREGA funds to build more pakka sheds.
 - **Satisfaction Level of Goat rearers on PS services:** 52% members rated pashu sakhi services as good, 25% very good, 7% moderate and 16% poor.
3. PSs felt happy that their work has increased confidence amongst goat rearers, which has helped in goat rearers expanding their business. PSs felt good that their community, family and neighbors respect them. They felt confident and happy that they are part of this program.
4. Average monthly income of PSs, is more than Rs 3000 per month. Average monthly income of Rs 3000 per PS is a good level for PS to continue working for long term. They want to increase this average income to Rs 5000 per month in future.
5. Data of avg. annual income of our all 3560 Goat rearers as per our MIS has shown Rs. 24000/rearers and total is 8.5 cr annually. And the sample surveys of 229 farmers have also confirmed average income of Farmers around 26000 Rs. Avg annual Income of HHs is increased by 18% from goat has increased as they have increased their herd size with the support of the project activities. Baseline shows the average income of 1068 goat rearers were 12200 Rs.
6. As an approximation in older villages (4 years old) no of goats increased in the villages by 20 to 25% due to project intervention.
7. Currently 229 goat rearers surveyed have an average herd size of 6.7. They want to increase average herd size to 14.2 in future.

In summary project is highly successful and has worked with limited budget and staff resources. It is clear that there is a huge scope of building on this program in the region and also expanding in more SIPA working areas. Due to the multi sectoral system of services provided by SIPA, confidence of the goat rearing families has increased and they feel that they can benefit more if they put more time and resources into goat rearing. This is a significant contribution by the project. Recommendations for next phase are mentioned in the next section.

Objective 4.4 Change in herd size of Goat and Mortality of goats and kids

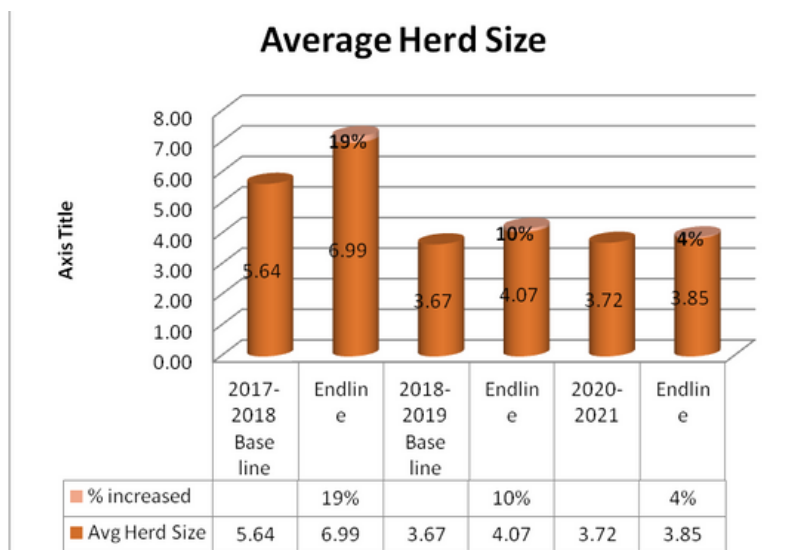
4.4.1 Herd size of Goat:

Project has worked mostly with goat rearers having small herd size as we found:

- 58% of surveyed families have 1 to 5 goats,
- 19% have 6 to 10 goats,
- 7% have 11 to 15 goats,
- 7% have 16 to 20 goats and only
- 3% having more than 20 goats and
- 6% have no goats.

Due to service provided by the project there is interest in large no of goat rearers to increase their business. Key findings are as follows:

- Average herd size has increased by 16%
- Currently 229 goat rearers have total of 1527 goats with an average herd size of 6.7. They want to increase total goats to 3245 with an average herd size of 14.2
- Significantly 15% want to increase their goat herd size to more than 20 from current 5.4%
- Most significant change is in category 11-20 goats, where 28% of the goat keepers want to increase their herd size between 11-20 from current 13%.
- 32% of the goat rearers want to increase their herd size to 6-10 from 19% currently.
- As of now there are 57% goat rearers in 1-5 range and it is these goat rearers that want to increase their business and in future only 12% want to be in this range.
- Interestingly there are 12% who want to get out from the goat rearing business. This could be due to many reasons: lack of human resources, fodder, shift to alternative livelihood or migration. Project teams could find more about them

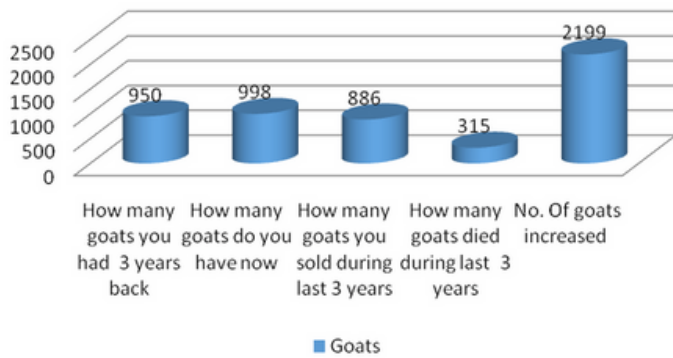


Year wise Herd size of Goat

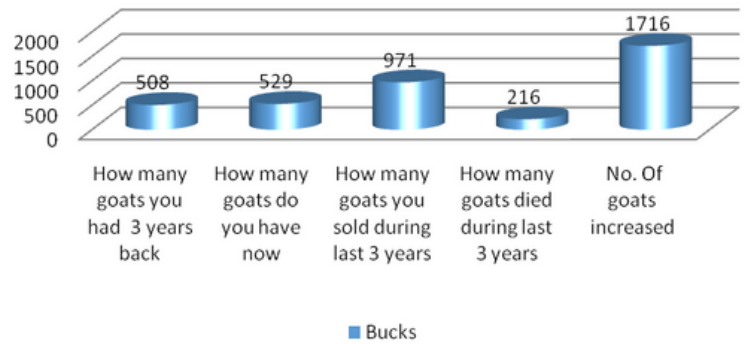
4.4.2 Change in herd size of Goat and Mortality of goats and kids

Comparison with Baseline and end line

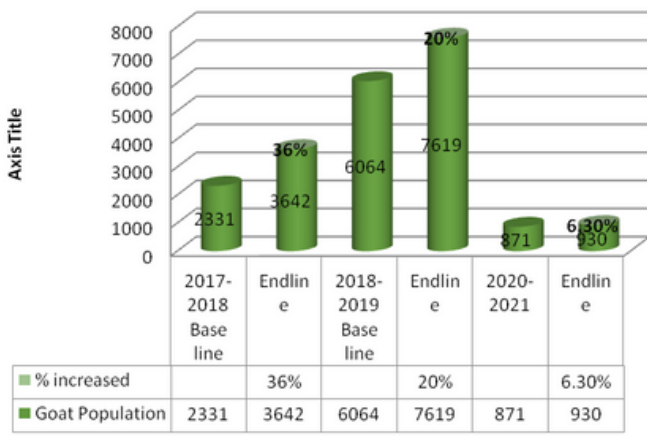
Goats



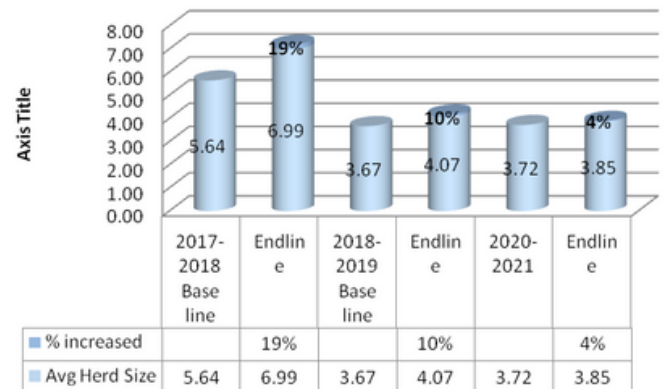
Bucks



Goat Population



Avg Annual Income of Goat Owner from Goat sale



Objective No. 4.5 Breed Improvement practices and AI adoption by beneficiaries.

4.5.1 Impact on Breed: Breed improvement is a slow process and is a long-term phenomenon. However the project has shown good progress on this front. Castration and use of improved breeding bucks change the composition of herds. 29% farmers started using improved breeding bucks and 12% started castration as compared to 4% earlier and 26% farmers adopted culling the stock practice. As a result, following small but significant changes have resulted in breed improvement, as shown in table below.

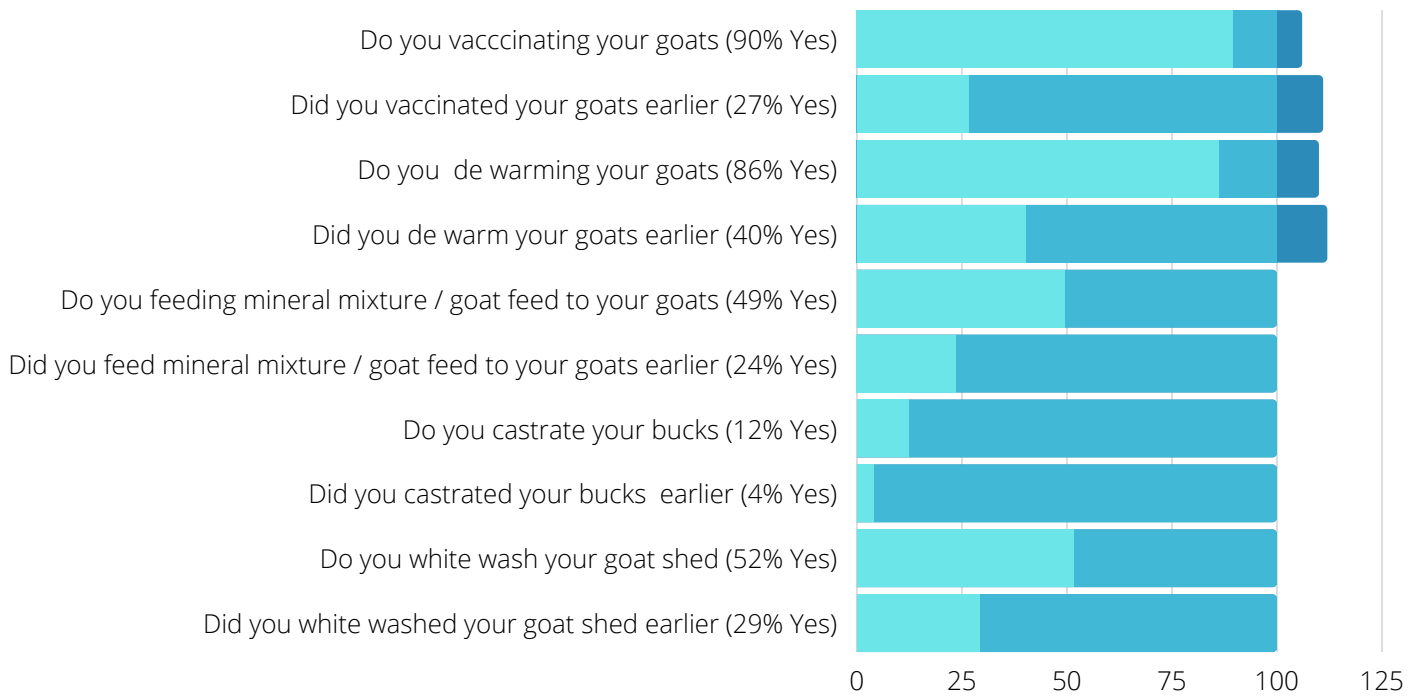
Breed type	Breed 3 year before	Breed now	% change
Mix Breed	77%	68%	- 9%
Barbari	20%	25%	+ 5%
Jamunapari	3%	6%	+ 3%
Sirohi		1%	+ 1%

Mixed goats stock has reduced by 9% and better breeds such as Barbari, Jamunapari and Sirohi have increased by 9%. As breed improvement is a long-term effort, this aspect has further potential to be looked at in the next phase of the project.

4.5.2 AI Adoption by beneficiaries:

More work needed on breed improvement – feasibility study and plan to be developed by The Goat Trust. Collaboration with government and other agencies working on artificial insemination to be explored and developed. Plan to train PS for build their capacity on the Artificial insemination at The Goat Trust Lakhanau.

Objective no.4.6 Adoption rate of improved practices by beneficiaries.



Objective no.4.7 To analyze the potential and recommendations on the future programme strategies and design for the district.

4.7.1 Recommendations with suggested strategies for future

Goat livelihood Program implemented by SIPA and supported by 'ITC Mission SunheraKal" has been successful, with high impact in increasing poor families income substantially and at a low overall investment. Network of Pashu sakhis are providing multi sectoral services to goat rearers leading to increased confidence of goat rearing families, which has helped goat rearers to expand and other families to start goat rearing as an alternative option. Both SIPA and ITC mission Sunherakal must be congratulated for implementing a highly effective project at a low cost with good commitment of staff.

However, there is significant scope to build on these foundation and consolidate the gains. It is recommended that SIPA and 'ITC Mission SunheraKal" should try to further consolidate goat livelihood program in current geographic area and also consider expanding in other geographies. Following interventions are suggested for the next phase:

1 At Goat rearers level: It is advised that SIPA should target an average herd size of 10--15 goats in three years from about 7 currently and an average sale of 5 goats per year. This will provide an average income of about Rs 40000 per year, thereby contributing significantly to the family income basket and taking these families out of extreme poverty. SIPA should target minimum ideal herd size for small goat rearers at 5. This will provide average annual income of about Rs. 10000to 15000 per year and fulfills emergency cash needs of poor families.

2 At Pashu Sakhi's level: SIPA has done good work on promoting a sustainable network of PS. At least half of the PSs are earning more than average monthly income of Rs. 3000.It is advised that SIPA should target an average monthly income for PSs to be Rs. 5000 and minimum average income of Rs. 3000 per month per PS. This will create sufficient interest in PSs to continue their work for long term. For this SIPA should focus on following:

2.1 There is already significant income from selling mineral mixture, primary treatment and through kid nursery. This should be strengthened. New source of income for PSs are marketing of goats, herbal medicines and goat manure. This should be strengthened. It is advised that break up of income analysis from various activities for each PS should be done at quarterly interval with PSs and strong and weak areas should be identified. Strong areas need to be consolidated and mentoring support and training should be provided to improve in weak areas.

2.2 Robust and objective criteria should be developed for ranking PSs. This ranking exercise should be done on a six monthly basis and training, mentoring and business development support should be provided to take them to the next level continuously.

2.3 More exposure needed within project with older / better functioning PSs.

2.4 Refresher training on technical aspect needs to be provided regularly after training need assessment.

2.5 One important area where PSs need more training and supervision is in record keeping. Many of them are not educated enough or do not have time to write minutes of meetings with goat rearers and also fill various formats to monitor goat rearing at village level. In many cases, children of PSs provide this service. Project should find a way to address this gap to the extent possible. May be a quick literacy course for PS will help. SIPA team should also provide more support, training and supervising support to PS to fill these forms. Also SIPA team should put more effort in analysing the data coming out of these formats in PS meetings, so that PSs learn from it and work towards increasing their activity, business and income. These formats are also critical to monitor project progress on key parameters e.g. mortality, animal health, tracking progress of various activities and income through these activities. Project will need more staff and budget to be able to do this. Monthly meetings such as PSs's with goat rearers at village level and CLMs with PSs of the region needs to be better planned, documented and monitored.

2.6 Promoting kid nursery is a good activity to increase PS's income but is a personal business by PS. Kid nursery does act as a demonstrable model to existing and potential goat rearers for goat rearing. However PSs services being of service provider in nature, PSs income should be analysed without income from kid nursery to get a better picture of PS's role as a service provider. Income from Kid nursery should be analysed separately.

2.7 Pashu Sakhis should also be provided training on understanding livelihood and poverty profile of families in the village and various livelihood options pursued by families including existing and potential goat rearers. This will help them understand, plan and expand their goat rearing business.

- **One area where PSs need more training and supervision is in record keeping. Many of them are not educated enough or do not have time to write minutes of meetings with goat rearers. In many cases children of PS provide this service. Project should find a way to address this gap to the extent possible.**
- **Cluster level managers cover a very large area. In addition two of them also themselves act as PS. So they have to work on their own area as PS and play their role of guiding, supporting and supervising other PSs. This leaves a gap in terms of providing support, training, mentoring and supervision to other, newer, weaker PSs. In future programming this aspect of project implementation needs to be looked at and improved.**
- **PS also need more specific advice and mentoring in improving their income. This is explained more later in the report**
- **It was also felt during these meetings that field visit and exposure is needed with older / better functioning PSs by newer PSs.**
- **It was also felt and mentioned by a few PSs in meetings that refresher training is needed on technical aspect regularly after training need assessment.**
- **More organized and planned work needed on the breed improvement. Project teams also need technical inputs on breed improvement component of the program. This requires external technical guidance and plan.**
- **Areas where PS need more support are refresher training in technical areas, advice on planning and analyzing monthly income, record keeping, guidance and support in breed improvement and marketing of goats.**

4.7 Year wise budget and staffing:

Year wise project coverage in terms of no of villages and goat rearers with budget and staff is shown in table below

Year wise Budget and Staff

Year	No. village	No. of Goat Keepers	Budget	Staff	CLM
2016-17				3.15	2
2017-18	24	910		5.29	2
2018-19	60	1738		9.53	2
2019-20	75	2594		4.27	2
2020-21	85	3351		6.98	1
2021-22	90	3560		6.56	1
2016-17				3.15	2

While the project has expanded significantly to 90 villages from 24 villages and goat rearers have increased from 910 to 3,560, no of project staff have reduced from a peak of 6 to 4. Project is being managed by support of one full time staff and 3 Cluster level managers, 2 of whom are promoted pashu sakhis and also engaged as PS. They need lot of support and hand holding to become effective cluster level managers. Similarly project is working with limited budget. While project working area has scaled up four time, budget has stayed at the same level of approximately Rs. 6 lakhs per year.

It was felt many times during the assessment that the project while being highly impactful and effective in increasing poor goat rearers income and setting systems for future veterinary services for goat rearers, is working with significant lack of human and financial resources. This is a crucial aspect and should be addressed in future programming.

4.8 MIS:

Project is using extensive and well developed MIS formats at PS level. Some of these formats are: P1 - Survey form, BI - Birth of Goat data, B2 - Death data, B5- tracking weight, B6 - Sale / Purchase of goat, Pregnant goat details > 3 months, Medicine summary, P3 - Upchar Vivran, P5

- Health camp data and Income summary. As of now only few of these forms are being filled by PS. One significant constraint is their low level of literacy. Many PS take help of their children to fill these forms.

Project should provide more support, training and supervising support to fill these forms. May be a quick literacy course for PS will help and should be considered. Also SIPA team should put more effort in analysing the data coming out of these formats in PS meetings so PS learn from it and work towards increasing their activity, business and income. These formats are also critical to monitor project progress on key parameters e.g. mortality, animal health, tracking progress of various activities and income through these activities. Project will need more staff and budget to be able to do this.

3. FPO promotion:

SIPA is already considering converting GRC (Goat Resource Center) into a formal FPO. Promoting FPO is a good idea and should be explored. It should be kept in mind that it is a long--term project requiring financial support at least for three years. Creating sustainable FPO has been a challenge in the sector and needs to be undertaken after feasibility analysis, staff capacity and secured funding. It is recommended that exposure visit to some of the already existing FPO on goat rearing existing in Maharashtra and one in MP in Khandwa district be visited and their functioning and challenges understood well before formally registering FPO. Based on the exposure visits and after extensive consultations, business plan for FPO should be developed. FPO could focus on 1) at scale, organised marketing of goats 2) at scale, organised manufacturing and marketing of mineral mixture and herbal medicines 3) improving provision of technical services i.e. vaccination, de--worming, treatment, and other goat rearing services 4) Breed improvement and AI 5) Provide mentoring, training and supervisory support to PSs 6) Facilitating loans to goat rearers, willing to expand herd size.

4. Access to loans:

To increase the herd size of willing goat rearers, more efforts should be made to provide access to loans including subsidized loans. Possible sources of collaboration are SHGs in the villages and SHG federations. Formal collaboration with SRLM and SHG federations and with government veterinary department should be explored.

5. Breed Improvement:

More work needed on breed improvement – feasibility study and plan to be developed by The Goat Trust. Collaboration with government and other agencies working on artificial insemination to be explored and developed.

6. Collaboration with government and Panchayats:

More collaboration to be explored with Government veterinary department for services to goat rearers and SRLM for loans to goat keepers to expand. Idea of PSs to be designated as Goat CRP by SRLM should be explored. MGNREGA funds through Panchayats could be explored for improving goat sheds.


7 Increased human and financial resources needed:

Project is working with limited budget and human resources. While project's working area has scaled up four times, budget has stayed at the same level of approximately Rs 6 lakhs per year. It was felt many times during the assessment that the project is working with significant lack of human and financial resources. This is a crucial aspect and should be addressed in future programming. Cluster level managers cover a large area. In addition two of them also themselves act as PS. So they have to work in their own area as PS and also play the role of guiding, supporting and supervising other PSs. This leaves a gap in terms of supporting, training, mentoring and supervising other, newer, weaker PSs. In future programming this aspect of project implementation needs to be looked at and addressed.

8. Other areas: Exploring goat insurance and imparting knowledge on other government schemes regarding goat rearing and other related areas.

9. Expansion: It is suggested that a larger proposal to be developed by SIPA to expand the project in 500 or 1000 villages including in other districts where SIPA / Samarthan is working.





Annex A
Summary report on Quantitative assessment

Conducted by SIPA team
Guided by evaluation advisor, Sanjeev Kumar Gupta

27 February 2022

Goat Project Midterm Assessment Report (Quantative survey)

1 Background of Goat based livelihood Initiatives:

In the year 2016- 17, SIPA started goat based livelihood interventions in 24 villages in Sehore district. This initiative is a part of Green Watershed Development initiative, aimed to address the issue of goat farmers' access and control over resources, which are vital for their goat-based livelihoods. The purpose of the intervention is women's empowerment through livelihoods promotion and strengthening. Another implementing agency was engaged to implement the same intervention in Ichchhawar block from 2016. In 2020 Ichchhawar block's intervention was handed over to SIPA. Currently the intervention covers 3560 families in 90 villages in Sehore and Ichchhawar blocks. During the project period total 90 Goat farmers' groups have been promoted and strengthened and 49 local women pashu sakhis were trained and placed to support and expand the goat livelihood program. The project aims to promote improved goat rearing on scientific lines as an alternate livelihood option through creating appropriate institutional framework and community managed service delivery systems. To strengthen the existing interventions and future road map, SIPA conducted an assessment of the said intervention to assess the impact of the intervention and emerging opportunities.

2 Methodology:

To carry out the assessment SIPA hired and engaged an external professional. The below mentioned methodology adopted for the purpose:

- (1) Desk review of proposal, progress reports, MIS reports and other background documents
- (2) Field visits and FGD / meeting with beneficiaries / goat farmers.
- (3) FGD / Meeting with Pashu Sakhi and farmers .
- (4) Random selection of 30 villages and 240 goat farmers in these villages for interviews.
- (5) Meeting and discussion with the technical service provider agency.

Specifically impact assessment followed following steps:

- Reading of background papers
- Presentation by Goat Project team followed by discussions.
- 3 FGDs with Pashu Sakhis covering 19 Pashu Sakhis.
- One personal interview with a Pashu Sakhi.
- Visit to 4 villages and briefly interacted with about 60 goat keepers.
- Brief Meeting with Veterinary department and talk with Ujjawal Sarkar from Goat trust.
- Analysis of data and interaction with team to analyze data.

- A quantitative survey with 229 goat keepers in 30 villages to validate and strengthen the findings from qualitative assessment.

3 Sample size and range:

To validate the data and information collected through FGDs with goat farmers and Pashu Sakhi, a quantitative survey conducted with 229 farmers in randomly selected 30 villages. As this was impact assessment evaluation, focus was on meeting most goat rearers who have been associated with the project for more than 3 years. 86% of those interviewed have been with associated with the project for more than 3 years. Only 14% were associated for less than 3 years.

4 Key findings from the quantitative survey:

4. 1 Herd size:

Project has worked mostly with goat rearers having small herd size as we found 58% of surveyed families have 1 to 5 goats, 19% have 6 to 10 goats, 7% have 11 to 15 goats, 7% have 16 to 20 goats and only 3% having more than 20 goats and 6% have no goats.

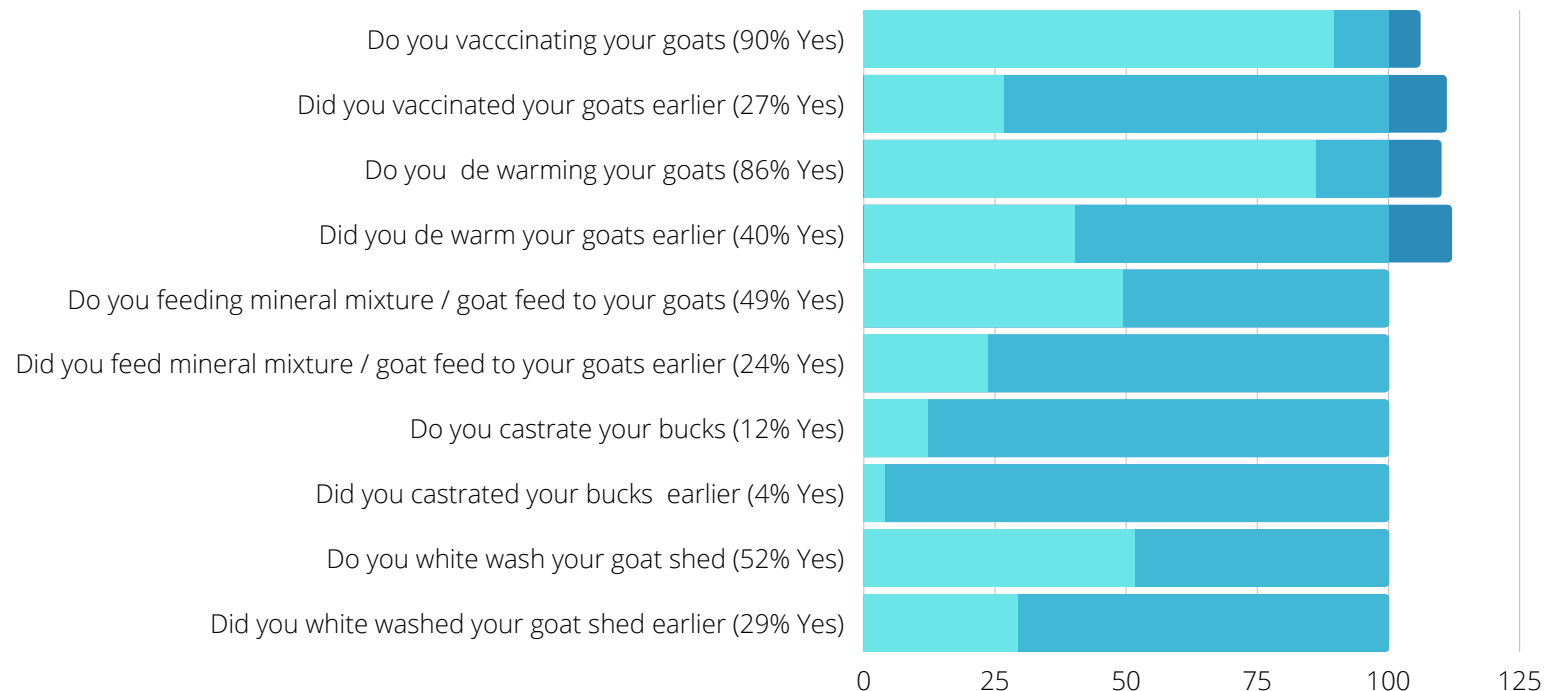
4.2 Impacts on husbandry practices:

The questionnaire tried to capture how project’s interventions especially Pashu Sakhi’s services impacted the goat husbandry practices in project area. During the last three years regular meetings with goat rearers and door to door follow up meeting by Pashu Sakhi and cluster level managers resulted in a lot positive impact on goat husbandry. These practices reduced morbidity and mortality of goats and improve the income. Following was found from the survey:

10 As of now approximately 90% farmers are vaccinating their goats, three years back only 27% of the goat rearers were vaccinating their goats.

11 Similarly 86% farmers are De-worming their goats currently, three years back only 40% of the goat rearers were de-worming their goats.

12 Goat rearers generally use to feed a single grain at a time. But the intervention changed this practice and now they many feed mineral mixture/goat feed to their goats. Current rate of mix feeding s 49% and earlier it was 24%.



13 In a major shift in feeding techniques, earlier mostly fed their goats on the floor. Now 32% of goat rearers are using manger (feeding tubs), 76% hanging on rope and only 14% still feeding on floor. This practice reduces the chances of stomach worms in goats.

14 52% of goat rearers are white washing their goat sheds earlier only 29% used to. This is a significant achievement.

15 13% of goat rearers have built pakka shed now. Earlier 7% used to have a pakka shed. This is an area of improvement and more funds could be sought from government and panchayat resources i.e. MGNREGA funds to build more pakka sheds.

Improved vaccination and de-worming practices, better feeding practices and improved shed management has a positive impact by reducing morbidity, mortality and enhancing growth of goats.

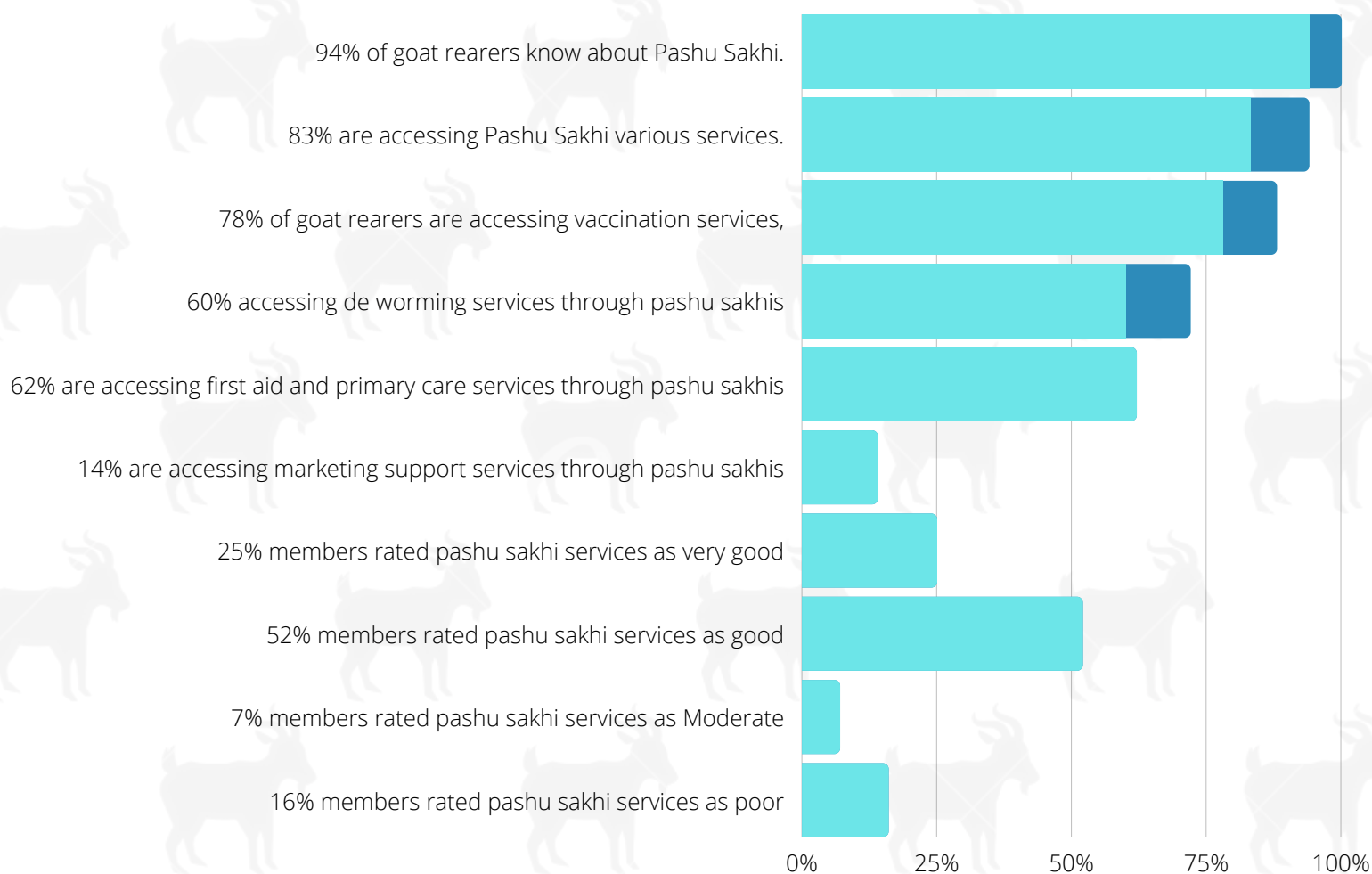
4.3 Pashu Sakhi Services:

Pashu Sakhi emerged as the most important pillar of the intervention. She conducts awareness meetings and door to door follow up to push best husbandry practices. Following was found from the survey.

Vaccination, de-worming and marketing services were the most neglected before the project interventions. First aid and treatment services were provided by the practitioner on high rates. Setting up system of extension services through pashu sakhis is a significant pillar of the project. As shown from the findings above, extension and rearing services have significantly improved through the network of pashu sakhis. One area of improvement needed is expansion of marketing services. SIPA team is aware of this and are planning this in the next phase of the project

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Parameter of Pashu Sakhi Evaluation:

Feed back taken from Goat rearers on below mention point

- Knowing about their Pashu shakhi
- Access to services from Pashu sakhi
- Pashu Sakhi services quality Rating (%)

Vaccination, de-worming and marketing services were the most neglected before the project interventions. First aid and treatment services were provided by the practitioner on high rates. Setting up system of extension services through pashu sakhis is a significant pillar of the project. As shown from the findings above, extension and rearing services have significantly improved through the network of pashu sakhis. One area of improvement needed is expansion of marketing services. SIPA team is aware of this and are planning this in the next phase of the project

4.4 Impact on Breed:

Breed improvement is a slow process and is a long-term phenomenon. However the project has shown good progress on this front. Castration and use of improved breeding bucks change the composition of herds. 29% farmers started using improved breeding bucks and 12% started castration as compared to 4% earlier and 26% farmers adopted culling the stock practice. As a result, following small but significant changes have resulted in breed improvement, as shown in table below.

Breed type	Breed 3 year before	Breed now	% change
Mix Breed	77%	68%	- 9%
Barbari	20%	25%	+ 5%
Jamunapari	3%	6%	+ 3%
Sirohi		1%	+ 1%

Mixed goats stock has reduced by 9% and better breeds such as Barbari, Jamunapari and Sirohi have increased by 9%. As breed improvement is a long-term effort, this aspect has further potential to be looked at in the next phase of the project.

4.5 Analysis of no of goats sold:

The above shows that the program implemented by SIPA addresses small goat rearers. Analysis of no of goats sold by respondents is shown in Table below. Following could be inferred from the table:

- 32% of the goat keepers sold between 5 and 10 goats in three years and 22% sold between 10 and 20 goats
- Only 12% sold more than 20 goats in three years
- 25% of goat rearers sold between 1 and 5 goats in three years and 10% sold no goats

The above shows that the program implemented by SIPA addresses small goat rearers.

Sr. No.	No. of goats sold range	No. of goat keepers	%
1	Less than 50 goats more than 30 goats	6	3%
2	Less than 30 goats more than 20 goats	21	9%
3	Less than 20 goats more than 10 goats	60	
4	Less than 10 goats more than 5 goat	73	32%
5	Less than 5 more than 0	57	25%
6	No. sales	22	10%

4.6 Impact on Income :

Table below shows the summary of income earned by goat rearers in the last three years. Following could be inferred from the table:

- Total sales by 207 goat rearers is Rs 1.64 in three years, selling total of 2002 goats
- Average income per goat rearer is Rs 79.2 thousand in three years and Rs 26.4 thousand annually
- Average sale price per goat is Rs 8.2 thousand and on average every goat keeper is selling about 3.2 goats
- There are 8 goat keepers (3%) with average annual income of Rs 1.2 lakhs and 9 goat keepers (4%) with average annual income of Rs 77 thousand.
- 40 goat rearers (17%) are making an average income of Rs 45.8 thousands. It is advised that this is an ideal category which SIPA should aspire for for most goat rearers and should plan accordingly.
- 48 goat reares (21%) are making an average income of Rs 22.4 thousand and 51 (22%) are making an average income of Rs 12.5 thousand annually.
- 43 goat rearers (19%) are realising an average annual income of Rs 5.4 thousand and 8 (3%) are making an average annual income of Rs 2.2 thousand

It is advised that SIPA should target an average sale size of 15 goats in three years / and an average sale of 5 goats per year. This will provide an average income of about Rs 40000 per year, thereby contributing significantly to the family income basket and taking these families out of extreme poverty.

Analysis of income by goat rearers

Sno	Amount Range(Rs)	No. of goat keepers	Total sales	Average sale in(three years)	Average sale In oneyear	%
1	Less than 5 lakhs, more than 3 lakhs	8	2927000	365875	121958	3%
2	Less than 3 lakhs, more than 2 lakhs	9	2078000	230889	76963	4%
3	Less than 2 lakhs, more than 1 lakhs	40	5505000	137625	45875	17%
4	Less than 1 lakh, more than 50 thousand	48	3228000	67250	22417	21%
5	Less than 50 thousand, more than 25 thousand	51	1906000	37373	12458	22%
6	Less than 25 thousand, more than 10 thousand	43	702000	16326	5442	19%
7	Less than 10 thousand	8	53500	6688	2229	3%
8	No sales	22	0			10%
	Total	229				100%
9	Total sales by 207 goat rearers	16399500				
10	Average sale in three years	79225				
11	Average sale per year	26408				
12	Total no of goats sold	2002				
13	Average goat sale price	8192				
13	Average sale K no of goats in 3 years	9.7				
14	Average sale K no of goats in 1(year	3.2				

4.7 Goat rearers wanting to expand:

As of now the majority of goat rearing families (76%) have 1-10 goats and 13% have more than 11 and less than 20 goats. Only 5% have more than 20 goats and 6% have no goats. Due to service provided by the project there is interest in large no of goat rearers to increase their business. Key findings are as follows:

- Currently 229 goat rearers have total of 1527 goats with an average herd size of 6.7. They want to increase total goats to 3245 with an average herd size of 14.2
- Significantly 15% want to increase their goat herd size to more than 20 from current 5.4%
- Most significant change is in category 11-20 goats, where 28% of the goat keepers want to increase their herd size between 11-20 from current 13%.
- 32% of the goat rearers want to increase their herd size to 6-10 from 19% currently.
- As of now there are 57% goat rearers in 1-5 range and it is these goat rearers that want to increase their business and in future only 12% want to be in this range.
- Interestingly there are 12% who want to get out from the goat rearing business. This could be due to many reasons: lack of human resources, fodder, shift to alternative livelihood or migration. Project teams could find more about them

No of goats desired in future - comparisons with today					
Frequency distribution					
		21-22	%	In future	%
>50		1	0.4%	28	12%
<21-50>		11	5%	8	3%
<11-20>		30	13%	65	28%
<6-10>		43	19%	73	32%
<1-5>		131	57%	28	12%
No Goats		13	6%	27	12%
Total		229	100%	229	100%
Total goats		1527		3245	
Average herd size		6.7		14.2	

No of goats desired in future - comparisons with today					
Frequency distribution					
		21-22	%	In future	%
>50		1	0.4%	28	12%
<21-50>		11	5%	8	3%
<11-20>		30	13%	65	28%
<6-10>		43	19%	73	32%
<1-5>		131	57%	28	12%
No Goats		13	6%	27	12%
Total		229	100%	229	100%
Total goats		1527		3245	
Average herd size		6.7		14.2	

It is clear that there is a huge scope of expansion and continuing the program. We assess that due to the multi sectoral system of services provided by SIPA, the confidence of goat rearing families has increased and they feel that they can benefit more if they put more time and resources into goat rearing. This is a significant contribution by the project.

4.8 Suggestion by goat rearers for improvement:

Only 94 (41%) of 229 respondents could answer this question. Below are the key findings:

- 43% of goat rearers suggested that PS's services should be further improved. They should be trained better and extension services provided are to be improved.
- 26% of the goat rearers want access to loans / subsidized loans for expanding their business. We also agree that this should be an area to focus on in future. Increased number of SHG groups in the region and their integration with SRLM and their enhanced resources does provide a significant opportunity in future.
- 12% mentioned that they should get more training and knowledge on better goat management.
- 11% mentioned that more work is needed on breed improvement.
- Other areas to improve as mentioned by goat keepers are: more knowledge on government schemes, improvement in goat shed, work on removing feed shortage, goat insurance and free medicines for goat.

Suggestions by goat rearers to improve Goat rearing program		
Suggestions be goat keepers	No of respondents	%
Improvement in services provided by Pashu Sakhi	40	43%
Access to loan / Subsidized loan for goat purchase	24	26%
More training / Awareness and knowledge	11	12%
More work needed on breed improvement	10	11%
Training on government schemes	3	3%
improvement in goat shed	2	2%
Face Feed shortage	2	2%
Goat insurance	1	1%
Free medicines for goat	1	1%
Total responses	94	100%

Summary of key findings:

1. Project has worked mostly with goat rearers having small herd sizes and has worked with extremely poor families.
2. Extension and rearing services have significantly improved through the network of Pashu Sakhis. Improved vaccination and de-worming practices, better feeding practices and improved shed management has a positive impact by reducing morbidity, mortality and enhancing growth of goats.
3. Average income per goat rearer is Rs 79.2 thousand in three years and Rs 26.4 thousand annually. On an average this is a good level of income achieved with limited financial and human resources.
4. It is clear that there is a huge scope of building on this program in the region and also expanding in more SIPA working areas. Due to the multi sectoral system of services provided by SIPA, confidence of the goat rearing families has increased and they feel that they can benefit more if they put more time and resources into goat rearing. This is a significant contribution by the project.
5. It is advised that SIPA should target an average sale size of 10 to 15 goats in three years / and an average sale of 5 goats per year. This will provide an average income of about Rs 40000 per year, thereby contributing significantly to the family income basket and taking these families out of extreme poverty.
6. Areas of improvement are expansion of marketing services, better implementation of breed improvement program, further training and improvement management of pashu sakhi services, access to loans for expanding goat rearing, more work on improving goat sheds by leveraging from government programs i.e MGNREGA and other government programs. The SIPA team is aware of this and are planning this in the next phase of the project.

cdjh ikyu O:oaki

का नाम							
1 बकरी पालक का विवरण							
बकरी पालक का नाम				पति / पिता का नाम			
बकरी पालक का नाम				का नाम			
तीपा दस्त		बकरी					
क्या आप निवसित जहाँ							
क्या आप सखी जानती							
सखी का नाम							
आप बकरी पालन क्या कर रही							
2 की बदलाव							
				पचस्क			
				बकरी	बकरा	बकरी	बकरा
3 साल आप प्राप्त कितनी		की					
आप प्राप्त कितनी							
3 साल आप की							
3 साल आप कितनी		करोड़ों					
3 साल कितनी							
3 साल कितनी		मरी					
3 नस्ल							
				मिक्स	बारबरी	अन्य	
आपकी का नस्ल क्या							
को							
आपकी का नस्ल क्या था							
को							

4 बकरी पालन व्यवहार							
क्या का टीकाकरण कराती		हां					
क्या भी टीकाकरण कराती		हां					
टीकाकरण सालकितनी बार करताया		1		2		3 4	
क्या का डी / की दवा करताती		हां					
क्या भी डी की दवा करता		हां					
डी / की सालकितनी बार करताया		1		2			
क्या मिनरल बकरी दाना आहार वा मिनरल मिक्सचर		हां					
क्या भी बकरी दाना आहार वा मिनरल मिक्सचर		हां					
आपका क्या तरीका		दाना	रस्ती	जटकाकर	जमीन पर	अन्य	
आपकी बकरी का बजआवस		कच्चा		पक्का			
आपकी बकरी का बजआवस		कच्चा		पक्का			
बकरी बाडा/आवस का करताती		नहीं					
क्या भी बकरी बाडा/आवस का करताती		नहीं					
का उपचार कराती		सखी		कितनी अन्य			
3 साल उपचार कराती थीं							
5 नस्ल व्यवहार							
क्या को हटाने कभी निकला		नहीं					
का बधियाकल		नहीं					
3 भी का बधियाकल		नहीं					
क्या अन्य का		नहीं					
5 बाजार व्यवस्था							
				पचस्क			
3 साल कितनी बकरी		बकरी	बकरा	बकरी	बकरा		
सखी माध्यम कितनी				0	0		
क्या बकरी का मिलाई खाद							
वदि कितना							
दाम क्या मिलता							

5	नस्ल	व्यवहार					
	क्या	को हटाने	कभी निकाला			नहीं	
		का	सधियाकतल			नहीं	
3	भी	का	सधियाकतल			नहीं	
	क्या	उन्नत	का			नहीं	
5	बाजार व्यवस्था						
					वचक		
	3 साल	कितनी	बकरी	हफरा	हफरी	हफरा	
	सबो	माध्यम	कितनी		0	0	
	क्या	बकरी	का	मिाडी	साद		
	चदि	कितना					
		दाम	क्या	मिलता			
6	बकरी क्रुण						
	क्या	कभी	हकरी	क्रुण	लिया	नहीं	
	कितना	लिया					
	स्वात	दर					
	क्रुण	लिया	सहा				किसी
7	सखी की जानकारी						
	क्या	सखी				नहीं	
	क्या	क्या	दोककल	डी	दाना	हफरी	अन्य
	सखी	की	अजसा	अजसा	दीक	दीक	सखी
8	भविष्य का						
	क्या	भविष्य	बकरी	पालन	बदना	चाहती	
	कितनी	हकरी	तक	बदना	चाहती		
	हकरी	पालन	सबो	की			
		आपका					

SUCCESS STORY

Chandini B lives in Bijouri village of Sehore district, where she lived in a kaccha house with her husband Aziz Qureshi. Chandni B's family has five members, two boys, and one girl, both husband and wife are engaged in the distribution of newspapers with the monthly income of Rs 3,000. The children's are still in school & the condition of their house was not good, So Chandni B started goat rearing activity after she received a goat from the organization named Bandhan back in 2017.



In 2018, under the ITC Mission Sunhere Kal project, implemented by SIPA. In this project, SIPA worked on capacity building of Pashu Sakhi & farmers who are engaged in goat rearing activity. SIPA had trained farmers & Pashu Sakhi on 16 practices at the village level. Chandini B, by working as a Pashu Sakhi in Panchayat she got enough experience to start a goat farm at home. In 2019, she purchased goat kids of good breed for her farm and started the activity. So far, she has sold goats amounting to Rs 2,50,000 with the help of the farm, and currently, she has 17 nos of goats worth Rs 2,00,000.